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Preface

This volume includes many of the papers submitted to the 50th International Conference on Salish and Neighbouring Languages, co-hosted by the University of British Columbia and Simon Fraser University and held on the University of British Columbia Vancouver campus on August 5–7, 2015. Several speakers also gave more informal presentations and did not therefore include a paper in this volume. Additionally, this volume includes a paper by Amy Rose Deal that was presented at the 49th ICSNL conference, held in 2014, and a paper by Nancy Mattina that was not presented at any ICSNL conference but offers a valuable contribution in the spirit of the conference.

Erin Guntly
on behalf of the UBCWPL Editors
Introduction for the 50th year

This conference marks the 50th anniversary of the International Conference of Salish and Neighbouring languages, and it is my pleasure to introduce this volume of proceedings of the conference. As those who have previously chronicled the history of what started out as the Salish Conference have noted, it began with a small group of linguists dedicated to the study of Salish languages gathering at the Seattle home of Laurence and Terry Thompson in 1965, and by the early 1980s had expanded to include “neighbouring” language families and isolates, including Wakashan, Chimakuan, Tsimshianic, Athapaskan, Chinookan, Penutian and Sahaptin languages, as well as the Chinook jargon and linguistic isolates of the area, including Haida, Kootenai and Tlingit (see icsnl.org). Throughout the decades, the conference became a “clearing house” and sharing forum for linguists who were carrying out long-term sustained work on languages of Northwest North America, along with past and present graduate students who were able to present work in progress, and the odd linguistic anthropologist who shared cross-over work into discourse and social theory. The annual papers, initially collected by the organizers of the year’s venue, were distributed, and since 2000 have been published through UBC Working Papers in Linguistics, now available as the On-Line Archive of ICS(N)L Papers. As Henry Davis noted, “…the Papers as a whole provide a unique perspective on the trajectory of linguistic investigation in the Northwest over the last half century, and as such form an important part of linguistic history in North America” (Introduction to the Kinkade Collection: The On-Line Archive of ICS(N)L Papers, icsnl.org).

With this introduction, I would like to honour the long-term sustained work of the founding members and early generation of linguists who convened the ICSNL, and for years shared their work through this venue. My colleague Henry Davis will speak to the invaluable and important contribution of M. Dale Kinkade, and to the legacy of linguistic research and linguistic training that he left. Several other linguists were regular and productive contributors to the conference: The Thompsons, Bill Elmendorf, Wayne Suttles, Dell Hymes, Aert Kuipers, Tom Hess, Brent Galloway, to name a few – sadly, along with Dale Kinkade, many of them have left us. As a student and speaker of Secwepemctsin (Shuswap), I would like to express my gratitude for Aert’s long and invaluable research with speakers of Secwepemctsin – although he also carried out important work with Squamish speakers. Like the work of many of the other linguists who contributed to the ICSNL, Aert’s work not only resulted in his 1974 publication The Shuswap Language, and a 1989 collection of transcribed texts, A Report on Shuswap, but in collaboration with speakers of Secwepemctsin, he co-produced a series of
practical works that include a Dictionary, still the foundation of the current Secwepemc language dictionary, as well as a practical language course, and a word list. Reviewing his 1967 version of *A Course on Shuswap*, I cannot help but think that at a time when Secwepemc communities still had a large number of speakers but, like other First Nations communities, were facing the brunt of the cultural genocide and linguicide imposed by residential schools, Aert Kuipers anticipated the decline of the language and advocated language documentation work to include stories, place-names, personal names, cultural practices and traditions, and registers of speech that connect to them.

As the ICSNL persisted, new generations of researchers have honoured this legacy, and next to the descriptive and theoretical work on languages, many of the linguists and graduate students who have contributed to the conference have continued to carry out collaborative work with speakers to document languages. Some have collaborated with speakers and learners in First Nations speech communities to create pedagogical and applied materials, and to teach or co-teach the language to the next generation. Along with the ICSNL, other conferences, including the *Stabilizing Indigenous Languages Symposium* and the *International Conference of Language Documentation and Conservation*, have grown in the past decade or so, and have promoted and show-cased language revitalization in method, practice and theory. It is important to remind ourselves that the ICSNL, as involving collaborations among linguists and speakers of indigenous languages, has existed in this spirit from the onset. Importantly, in addition to the linguistic working paper presentations, since at least the 1990s, the ICSNL has included applied sessions on grass-roots language teaching and learning, and language revitalization. Unfortunately, since these are for the most part oral presentations, we do not have a written record of this important part of the Salish Conference.

In marking the 50th anniversary of the conference, and to celebrate the spirit and practice of collaboration among linguists and speakers of our languages, this year we “de-segregated” the more technical linguistic papers and the applied and collaborative presentations. Instead, we named our Friday session Collaborations, Indigenous Voices and Stories, featuring a number of papers presented or co-presented by First Nations elders, linguists and First Nations linguists, including last but not least a paper by Jan van Eijk, “The barrier breached: Ongoing cooperations between native speakers and linguists” that addresses this very topic. In addition, several of the papers presented in the sessions on Phonetics and Phonology, Syntax and Semantics, and on neighbouring language families Tsimshian and Wakashan feature collaborations and indigenous linguists.

As indigenous language communities are seeing their languages hanging by a thread and are facing the loss of the last first language speakers, we may ask, what can linguistics do, and what role do linguists have in indigenous language revitalization? For one thing, as we face the urgency and the challenge of producing fully proficient second language speakers of our languages, collaborations between linguists, and the training of indigenous linguists are
important tasks that will not only help academics understand and analyse the complex and difficult phonologies and grammatical structures of First Nations Languages, but will also help First Nations language learners develop practical and pedagogical materials. The 50th ICSNL will continue such collaborations and will continue to celebrate our languages, and will continue the dialogue of linguistic research and collaboration.

Marianne Ignace

July, 2015
Vancouver, British Columbia
Part I
Phonetics and phonology
Heavy syllables in Gitksan*

Jason Brown
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Abstract: Very little attention in the existing literature has been devoted to the prosodic structure of Gitksan. Recent work on stress, however, has opened a productive discussion about syllable weight. This paper uses these insights to further the discussion about possible moraic structures, and isolates a difference in how weight is assigned to consonants in stress vs. in other types of prosodic morphology, such as reduplication and word minimality. The patterns that emerge are similar to the behavior of heavy syllables in other languages, but with some key differences.

Keywords: Gitksan, phonology, stress, prosodic morphology

1 Introduction

The status of prosodic units in Gitksan is a topic that has received little recent attention in the literature on the language. Despite the potentially complex syllables in the language, and the range of prosodic morphological operations that are present, aside from recent works such as Brown (to appear) and Schwan and Anghelescu (2013), there has been little discussion as to what the internal prosodic structure of syllables in the language is.

In recent work, Forbes (2015) has shown that the stress system of Gitksan is weight-sensitive, in that stress preferentially falls on heavy syllables that are not in the default position for stress assignment (i.e. in root-final position). While CVV₁ syllables count as heavy, CVC syllables do not seem to behave in the same way, as far as stress assignment is concerned. This work intends to expand on Forbes’ important study, and to investigate the role that syllable weight plays in other facets of the language beyond word-level stress.

In short, this paper is a brief note intended to highlight a contrast between the syllables that count as heavy for metrical reasons, and those that count as

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*I would like to thank my primary Gitxsanimx teachers, Barbara Sennott and the late Doreen Jensen. Thanks are also due to Henry Davis, Clarissa Forbes, Forrest Panther, Tyler Peterson, and Michael Schwan for reading and commenting on earlier drafts of this paper, as well as to the UBC Gitksan Research Lab for general academic stimulation and support, which contributed to the ideas presented here. I would also like to thank the editors for many helpful comments and corrections. All errors are my own.

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1 “CVV” here is used as shorthand for syllables with phonetically long vowels [CV:], or for syllables with diphthongs that are bimoraic [CV₁V₂]. The “C” is intended to reflect an optional syllable onset across languages, and is not intended to be limited to a single consonant, as these structures generally do not contribute to syllable weight cross-linguistically.

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heavy for prosodic morphological operations, including reduplication and word minimality. While the evidence indicates that coda consonants are moraic for prosodic morphology, this finding still lends support to Forbes’ claim that stress is weight-sensitive, as the minimal word equals the stress foot (Hayes 1995) insofar as it is a heavy syllable. While this short note is not intended to provide an in-depth and unified analysis of the syllabic and sub-syllabic units in the language, it does aim to isolate a pocket of problematic data. The paper is structured as follows: Section 2 provides a brief overview of stress in Gitksan (as presented by Forbes 2015), and draws out the implications for prosodic structure. Section 3 expands the study into the area of reduplication, where it will be shown that coda consonants must be moraic, and section 4 continues this thread in an exploration of the minimal prosodic word. Section 5 provides a brief discussion, and relates the observations to larger theoretical issues.

2 Word stress

Rigsby (1986), Forbes (2015), and Brown, Davis, Schwan & Sennott (to appear) draw the generalisation that lexical stress in Gitksan falls on the final syllable of the morphological root. This is exemplified below² (data from Forbes 2015: 81–82):

(1)  
ɡɪbá ‘wait.for’  
gʷɪlá ‘blanket’  
lax’ní ‘hear’  
mijnúxs ‘good smell’  
ʔamxswá: ‘white person’  
sdik’é:kʷ ‘sibling’

Forbes (2015) notes that this is a default iambic stress pattern. Forbes further illustrates the fact that despite this default pattern, lexical stress is weight-sensitive. That is, if a syllable with a long vowel precedes the root-final syllable, this syllable will instead be stressed, as exemplified in (2):

(2)  
náːsík’ ‘raspberry’  
láːgal ‘examine’  
ʔóːts’in ‘soul, spirit’  
naq’édá ‘muskrat’  
cawagáːni ‘make peace’  
hóːbrxj ‘spoon’

² Syllable breaks are not indicated in these forms. While syllable divisions are unambiguous in many words (e.g. [ɡɪ.bá] ‘wait.for’, syllabification in other words is much less clear, due to the fact that Gitksan allows fairly extensive clustering of obstruents, and where the ordering of stops and fricatives in a cluster is relatively free. See Brown (to appear) for a discussion of syllable structure in the language.
Thus, stress is sensitive to syllable weight, with long vowels attracting stress away from the default root-final position. The same pattern, however, does not hold for syllables with a short vowel and closed by a coda consonant:

\[(3) \quad \begin{align*}
&\text{laχ’nì} \quad \text{‘hear’} \\
&\text{bisdá’j} \quad \text{‘grouse’} \\
&\text{gmx’dí} \quad \text{‘sibling of opposite gender’} \\
&\text{hindá} \quad \text{‘where’}
\end{align*}\]

The generalization is thus that the default for stress placement is the root-final syllable, but a heavy syllable in the root can attract stress away from the right-hand position. As defined by the patterns in (2) and (3), a heavy syllable is one with a long vowel (i.e. CVV), and not one with a short vowel plus a coda consonant (CVC). In Optimality-theoretic terms, this would be the result of ranking of WEIGHT-TO-STRESS » RIGHTMOST, such that primary stress is aligned rightmost in the prosodic word, all else being equal, and where this condition can be over-ridden by the presence of a syllable with a long vowel.

2.1 Implications

As the data above illustrates, the stress patterns in Gitksan have implications for the prosodic representations of the language below the level of the syllable. As noted above, the patterns lead Forbes to the sensible conclusion that coda consonants are not moraic in Gitksan, and for the purposes of stress, only long vowels count as heavy. Thus, the representations of the Gitksan syllable are as in Figure 1:

![Figure 1 Syllable weight in Gitksan](image)

As Figure 1 illustrates, long vowels are bimoraic, but coda consonants are not moraic. This amounts to one of the options available to languages cross-linguistically, the other option in a system with contrastive vowel length being that coda consonants contribute to syllable weight (i.e., are moraic) (Zec 1995, 2011). In the following sections, data will be presented which supports the view

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3 Forbes (2015) actually lists some forms that appear to have this pattern on the surface: \[\text{[qojp’ay]} \quad \text{‘bright’}, \quad \text{[námq’ap]} \quad \text{‘bank of stream’}.\] She notes, though, that the vowel of the second syllable is epenthetic in these cases, motivated by breaking up consonant clusters either (a) after a long vowel, or (b) when the first member of the cluster is glottalized, with the underlying forms of the words above being /qojp’y/ and /namq’p/, respectively. The dynamic introduced by this sub-pattern has obvious implications for a constraint-based approach to stress assignment; however, I will not treat these cases further.
that coda consonants are moraic for some phonological processes in Gitksan. This raises the problem whereby certain structures count as heavy for one phenomenon, and as light for others. This problem will be touched on in Section 5.

3 Reduplication

One aspect of prosodic morphology that requires a distinction between light and heavy syllables in the language is reduplication. Reduplication marks plural number, plural agreement, or durative aspect (Rigsby 1986, Brown 2007). Gitksan exhibits two basic reduplicative templates (plus one more with a fixed palatal fricative, which won’t be discussed at length here). One template is a CV- reduplicant, with the vowel surfacing as an allophone of /ə/:\n
(4) CV- reduplication

\[\text{ʦ’ak’} \quad \text{ʣi~ʦ’ak’} \quad \text{‘dish’}\n\]\n\[\text{doʔo} \quad \text{di~doʔo} \quad \text{‘cheek’}\n\]\n\[\text{baʔa} \quad \text{bi~baʔa} \quad \text{‘thigh’}\n\]\n\[\text{lit} \quad \text{li~lit} \quad \text{‘wedge’}\n\]\n\[\text{gin} \quad \text{gi~gin} \quad \text{‘to feed someone’}\n\]\n\[\text{ɡidaχ} \quad \text{ɡi~ɡidaχ} \quad \text{‘to ask’}\n\]

This template amounts to a light syllable (\(\sigma_\mu\)) in the reduplicant. The following illustrates the other template, a CVC- reduplicant, where the vowel quality effects are the same as in the pattern above:

(5) CVC- reduplication

\[\text{ʔisx}^w \quad \text{ʔas~ʔisx}^w \quad \text{‘stink, smell’}\n\]\n\[\text{ʣap} \quad \text{ʣip~ʣap} \quad \text{‘make, do’}\n\]\n\[\text{jim} \quad \text{jim~jim} \quad \text{‘smell (VT)’}\n\]\n\[\text{t’e;’lt} \quad \text{dił~t’e;’lt} \quad \text{‘be fast, quick’}\n\]\n\[\text{ɡats} \quad \text{ɡas~ɡats} \quad \text{‘pour’}\n\]\n\[\text{dulpx}^w \quad \text{dił~dulpx}^w \quad \text{‘to be short’}\n\]\n\[\text{masx}^w \quad \text{mis~masx}^w \quad \text{‘to be red (ochre-coloured)’}\n\]

Given that there is a contrast between the light syllable template and the template in (5), it’s safe to say that the latter is a heavy syllable (\(\sigma_{\mu\mu}\)).

Assuming that reduplicative templates are derived from genuine units of prosody and not consonantal and vocalic slots (McCarthy & Prince 1986), the surface CV- and CVC- templates employed in (4)–(5) must be encoded in the grammar in prosodic terms. As argued extensively in Brown (2008), there is no sense in which these reduplicants can fall out of a generalized template; i.e., the reduplicant templates are not shaped by other independent forces in the grammar. Instead, the constraints regulating the reduplicant shape must be stipulated in the

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4 Most of the [i]s in these forms are more accurately [ɨ]. Vowel quality has been abstracted over in these cases.
form of templatic constraints such as $\text{RED}=\sigma_\mu$ ("reduplicants equal a light syllable") and $\text{RED}=\sigma_{\mu\mu}$ ("reduplicants equal a heavy syllable"). This is in part because there are no properties of the base that will predict when a given template is used (cf. the similar bases but different templates in $\text{gi-gin}$ ‘to feed someone’ vs. $\text{ jim-jim}$ ‘smell (TRANS)’), and that there is inter-speaker variation such that some bases will surface with different reduplicants, depending on the speaker, as well as intra-speaker variation such that there is some degree of free variation in reduplicant shape, depending on a given base (for details of the variation associated with plurals, including reduplication, cf. Brown 2007).

### 4 Minimal words

One other aspect of the prosodic morphology of Gitksan that is worth investigating is the minimal prosodic word. This aspect of the language has not previously been discussed; however, when the possible free-standing words in the language are observed, some clear patterns begin to emerge. The following is only a brief summary; more work in this area is required. The following discussion, however, can perhaps be taken as indicative of the types of constraints on word structure that must be at play. Data from this section is taken from the database collected in Brown (2008, 2010), which subsumes a published dictionary of the language (Hindle & Rigsby 1973), and includes other forms collected during fieldwork.

According to Hayes (1995), the minimal prosodic word in a language corresponds to the minimal stressed foot. As predicted by the account of stress outlined above, this equals a CVV prosodic word.\(^5\) Aside from the loan [di:]/[tʰiː] ‘tea’, the following constitutes the set of lexical words that are CVV from the database:\(^6\)

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\(^5\) As mentioned in footnote 1, “C” is intended to represent a consonantal onset, and not necessarily a single consonant. Onset clusters exist in the language, and can include lengthy strings of obstruents. See Brown (to appear) for a treatment of onsets in the language.

\(^6\) There is also a word $x^w\text{da}$: ‘mattress’, which, according to the analysis provided by Schwan and Anghelescu (2013), could be interpreted as disyllabic due to the nuclear status of the labialised velar fricative; i.e., [x$^w$.da:].

(6) CVV words

\[ \text{gj} \text{o:} \quad \text{‘to move in water, to swim (of fish)’} \]
\[ \text{gj} \text{u:} \quad \text{‘beads’} \]
\[ \text{‘n} \text{a:} \quad \text{‘out of the woods, into view, against a background’} \]
\[ \text{t’a:} \quad \text{‘to sit’} \]
\[ \text{gj} \text{sa:} \quad \text{‘to win’} \]
\[ \text{je:} \quad \text{‘to go’} \]
\[ \text{ne:} \quad \text{‘no, negative’} \]

Surprisingly, as far as the database in Brown (2008) is concerned, this list is exhaustive.\(^8\) There are actually just as many, if not more forms that consist of only a syllable with a long vowel, but which are proclitics\(^9\) (Gitksan makes use of both prenominal and preverbal proclitics, which will be discussed in more detail below):

(7) CVV proclitics

\[ \text{‘n} \text{i:} \quad \text{‘on’} \]
\[ \text{l} \text{u:} \quad \text{‘inside’} \]
\[ \text{s} \text{a:} \quad \text{‘away, off’} \]
\[ \text{s} \text{a:} \quad \text{‘suddenly’} \]
\[ \text{s} \text{i:} \quad \text{‘new, fresh’} \]
\[ \text{‘w} \text{i:} \quad \text{‘big, large, great’} \]
\[ \text{g} \text{u:} \quad \text{‘one who habitually does (something)’} \]

The prediction made above in Section 2 with respect to stress is that CVC should not count as heavy. There are, however, many more free-standing lexical CVC words that exist in the language than CVV words. In fact, CVC appears to be the canonical, or at least preferred, root shape in the language. (8) illustrates this with only a sampling of those words:

(8) CVC words

\[ \text{b} \text{a} \text{h} \quad \text{‘to run’} \]
\[ \text{b} \text{a} \text{n} \quad \text{‘to ache’} \]
\[ \text{d} \text{a} \text{p} \quad \text{‘liver’} \]
\[ \text{‘m} \text{a} \text{l} \quad \text{‘canoe’} \]
\[ \text{d} \text{i} \text{l} \quad \text{‘bag’} \]
\[ \text{g} \text{a} \text{t} \quad \text{‘to be born, to hatch’} \]
\[ \text{?} \text{a} \text{m} \quad \text{‘be good’} \]

If both CVV and CVC count as heavy in the language (i.e. are bimoraic), then the prediction is that the minimal word must be a bimoraic foot. Ito and

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\(^7\) The suppletive plural for this form is also CVV: [lo:].

\(^8\) There is one additional verbal root \text{gu:} \ ‘take, get, catch’; however, as a transitive verb, this root is presumed to never surface without inflectional affixes.

\(^9\) The clitic status of these morphemes is currently under debate, and further investigation into their prosodic characteristics is likely to yield interesting results; however, for the moment, these structures will be termed clitics, consistent with Rigsby (1986).
Mester (2003) state this as a condition on binary branching, such that the prosodic word must either branch, or the level below it (i.e., the foot) must branch. What is not predicted is a mono-moraic CV minimal word, as this does not constitute a licit stressed foot in the language, and is not a bimoraic structure. For the most part, this prediction holds. There are, however, more than a handful of forms that require some discussion. One set of morphemes is CV, as in (9); however, the forms in (9) are all proclitics (either prenominals or preverbals):

(9) CV proclitics

<table>
<thead>
<tr>
<th>Morpheme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>tk’i</td>
<td>‘down’</td>
</tr>
<tr>
<td>?a, q’a</td>
<td>‘anew, again’</td>
</tr>
<tr>
<td>xsa, xsax</td>
<td>‘only’</td>
</tr>
<tr>
<td>sbi, sba</td>
<td>‘lair, den’</td>
</tr>
<tr>
<td>xsi</td>
<td>‘fresh’</td>
</tr>
<tr>
<td>xgu, xgua</td>
<td>‘small, little’</td>
</tr>
<tr>
<td>sga</td>
<td>‘across the way’</td>
</tr>
</tbody>
</table>

Rigsby (1986:58–59) discusses the prosodic status of preverbals. Rigsby notes that prenominals are not free-standing words and are prosodically bound compounding forms, which often have free-standing lexical counterparts. The preverbal clitics, on the other hand, have slightly different properties. Rigsby notes that they are isolable, take secondary stress, and have the distributional properties of words, rather than affixes (such as the property of having full, rather than reduced, vowels). This argues strongly in favor of the preverbals being prosodic words; however, Rigsby (1986:59) states that “They seem to me to be not unlike English prepositions, determiners, and auxiliary verbs […] and they too don’t bear the primary phrasal stress.” Likening the preverbals to English function words sheds much light on the issue: while the preverbals are not affixes per se, they behave like function words in other languages, which typically escape minimality restrictions in languages and are often incorporated into higher-level prosodic structure (cf. Selkirk 1995). Thus these forms do not constitute true exceptions to a ban on CV lexical words, as that ban is assumed to hold on free-standing forms. The behavior of these proclitics is an interesting one, especially the difference between the prenominals and preverbals; however, a more in-depth investigation is still needed in this area.

Finally, there exists a very small set of lexical items that do in fact violate this minimality condition. There are seven lexical items in total, listed in (10):

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10 Dialectally this form is [ksa(χ)].
This exhausts the list of lexical words in the database from Brown (2008). The fact that these vowels are short is demonstrated by measurements from the recordings in Brown et al. (to appear), where the minimal pair [t’a] ‘louse’ and [t’a:] ‘to sit’ can be compared. In unpublished measurements over the tokens from that paper, [t’a:] had an average duration (measured over two productions in isolation) that was more than twice that of [t’a]. It is likely no accident that the vowel in each of these words is the low vowel [a]. No explanation is available at present for this fact, however, and these forms will stand as a list of patterned exceptions. There are three additional forms, the verbal roots he ‘to tell (trans), sgi ‘to be on’, and ‘wa ‘to find, to get to someplace’. However, these forms are transitive verb roots, and as such, obligatorily take inflectional affixes. Occasionally trained consultants may produce these as citation forms, but most consultants reject these as free-standing prosodic words.

Finally, there is a piece of supporting evidence in the offglides accompanying short vowels in certain contexts. Rigsby (1986:183–184) notes that in unstressed syllables with short vowels, a resonant [h] offglide follows the vowel. When morphology is added to these roots, the offglide no longer surfaces:

(11) Di! [dr³] ‘Move! (SG)’
    sa [sa⁴] ‘day’
    sqa [sq[e³]] ‘herring’

Assuming that the minimal word in Gitksan is CVC, the presence of this offglide in all of the relevant environments such as in (11) suggests that some extra prosodic weight is desired in these sub-minimal forms.¹³

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¹¹ Clarissa Forbes (personal communication) notes that this form almost always occurs with the prenominal lax ‘on, in’, yielding the disyllabic lažha.
¹² Note that the first form di ‘move’ is not in the Brown 2008 database, and thus not listed in example (10) above.
¹³ Thanks to Michael Schwan for bringing this pattern to my attention. He also points out that some consultants will put an apostrophe at the end of these sub-minimal roots to indicate this offglide, and that the offglide is actually orthographically indicated in the Coast Tsimshian language.
Discussion

As this paper has shown, while certain syllables count as heavy for the assignment of stress, other syllables count as heavy for other morphological operations. This state of affairs is not as unusual as it seems at first blush. Take, for instance, the case of Maori (Austronesian): long vowels are preferentially stressed, and if no long vowels are present in a word, then diphthongs will count as heavy. Finally, if there are no other “heavy” syllables, the default strategy is to stress a light syllable in initial position (cf. Bauer 1993). In that particular case, both CV_iV_j and CV_iV_i count as heavy, but the grammar makes a distinction when targeting a syllable for stress. The same is true for Kashmiri (Indo-European), where closed syllables will be stressed only if they are the optimal syllable type that is present which can be stressed; i.e., if there are no CVV syllables present (Morén 2000). Mam (Mayan) presents another, similar case: In Mam, CVV syllables are preferentially stressed; if these are not present, then syllables closed with a glottal stop will count as heavy, and will be stressed (England 1983). There are also cases of systems that make a distinction between what counts as heavy for the assignment of primary vs. secondary stress (Rosenthal and van der Hulst 1999). The primary difference between Gitksan and the cases cited above is that Gitksan doesn’t preferentially treat CVV over CVC as heavy in the computation of stress. Instead, CVC appears to be uniformly light with respect to stress. Where Gitksan displays similarities with these other systems is in the treatment of CVC as heavy for other types of prosodic morphology. It is in this respect that the inconsistent status of CVC syllables poses an interesting challenge.

These types of weight-inconsistencies across phonological processes have been reported for various other languages, such as Latin, Kiowa, and Lhasa Tibetan (cf. Hayes 1995, Gordon 2006, Zec 2011). It is important to specify that the inconsistency is across processes, and not contexts, because single contexts such as word-final position, which will be relevant for both the process of stress assignment and the minimal word effect in Gitksan, will yield inconsistencies with respect to the weight of CVC.

While it was noted above that the stressed foot in the language equalled the minimal word, there are still some wrinkles. While the heavy syllable template (i.e. $\sigma_{\mu\mu}$) seemed to be necessary to account for the behaviors of CVC, whatever the reason ultimately may be, CVC does not seem to be the minimal metrical foot in the language, but yet it constitutes a legal minimal word. While there remains much work to be done in this particular area, for the moment we can cite Garrett’s (1999) typological work illustrating the point that minimal words, while the smallest legal lexical structures in a language, do not always equal the stressed foot, and that stressed feet and minimal words can coexist in a single system as different prosodic structures.

Finally, Shaw (1992) has presented evidence that sonorants are moraic in the related Nisgha language, where some of the phenomena above, namely, stress assignment and reduplication, exhibit slightly different patterns. If the same types of patterns and behaviours are identified in Gitksan, then this would
present a substantially more complex situation, one worthy of deeper investigation.

References


Tsimshian syllable devolution¹

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Abstract: A Tsimshian natural class of sounds, \{[ʔ], [h], [ɾ], [l], [j], [w]\}, in syllable coda position, often significantly alters syllable structure by losing certain phonetic features while spreading/copying them to onset and peak. This spreading/losing (transference) of features (devolution) occurs in stages, often giving individual lexical items several surprising variants.

Keywords: phonology, feature spreading/copying, feature loss, devolution, variability

1 The spread of syllable coda features

There is a pervasive tendency in Tsimshian for syllable coda elements (features and whole segments) to spread/copy in stages to syllable onset, ‘strengthening’ the onset and coloring the syllable peak along the way. The coda subsequently ‘weakens’ also in stages. See Figure 1.

![Figure 1: The spread/loss of coda features](image-url)

This was both a synchronic and diachronic process (continuum) at least into the 1980s. Individual lexical items differed in the same speaker from time to


time, from speaker to speaker and from dialect to dialect as to where they were in this continuum or staging process. This resulted in an unusually rich variation in many single lexical roots or stems. This variability, documented in Dunn (1978), is confirmed by Dale Kinkade in a personal communication some years ago after he had taught a field methods course with a Gitxsen speaker. Matthews (2001) also records significant variability in Gitxsen.

2 Syllable diversity and staging

The lexical root/stem for the verb ‘to tear, tear up, tear out’ shows this diversity.

\[(1) \quad bā'χ, \; bāχ-bāqal \; \text{‘to tear [out]’ (Boas 1912:262, hence B262)}^2\]
\[bē'χ, \; bēHχ, \; bēeχ \; \text{‘to tear, tear up’ (Dunn 1978, entry #151, hence D151)}\]
\[p'ēG-al \; \text{‘to tear out and turn over’ (B263)}\]
\[p'eeG-l, \; p'eeG-n \; \text{‘tear out and turn over’ (D1595)}\]

Figure 2 represents the spread of the laryngeal to the onset, changing [b] to [p'], and the spread of the feature [-low] to the vowel, [ā] becoming [ē].

\[\text{σ} \quad \text{O} \quad \text{R} \]
\[\text{C} \quad \text{V} \quad \text{q} \]
\[\text{p'} \quad \text{[laryngeal]} \quad \text{[low]} \]
\[\text{ē} \quad \text{[low]} \quad \text{Ø} \quad \text{G} \]

I interpret the staging, i.e., development in stages, devolution, of this lexical item as \(ba'q > bā'χ > bē'χ > bēHχ > bēeχ\) and alternate \(ba'q > p'ēG > p'ēG\). The laryngeal feature of the coda \([-q]\) causes the vowel to lengthen, \(ba'q > bā'x\), stage one. Then the laryngeal moves into the peak and the vowel

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\(^2\) Boas used the superscript symbol \(^o\) to represent a weakened secondary vowel or a glottal stop (1911:68). The \([H]\) in Dunn (1978) is the same as Boas’ \([o]\), but representing only the weakened secondary vowel, i.e., a reduced vowel, tending toward \([ə]\) and with a falling tone. In CODA position, \([q]\), \([χ]\), and \([G]\) are free variants.
assimilates the [-low] feature of the laryngeal, $b\tilde{a}\chi > b\tilde{e}\chi$, stage two. The laryngeal feature is then lost, leaving the reduced, falling tone [H], $be\tilde{a}\chi > be\chi$, stage three. Finally the [eH] becomes a simple long vowel, $be\chi > b\tilde{e}\chi$, stage four. In the alternate staging, the laryngeal spreads to onset, raising and lengthening the vowel, $ba\tilde{a}q > p\tilde{e}\tilde{e}G$, alternate stage one. Then the laryngeal is lost in the coda, $p\tilde{e}\tilde{e}G > p\tilde{e}G$, alternate stage two.

This staging pattern is typical of a large number of lexical items.

(2) $h\tilde{a}\tilde{x}$ ‘goose’ (B261)
   $ha\tilde{a}q, ha\tilde{a}q, ha\tilde{x}, ha\tilde{a}x, ha\tilde{a}'$ ‘goose’ (D641)
   staged $ha\tilde{a}q > ha\tilde{a}q > h\tilde{a}\tilde{x} > ha\tilde{a}x > ha\tilde{a}$

3 Staging and semantic development

In some instances the different stages carry modifications in meaning:

(3) $dz\tilde{e}s$ ‘grandmother’ (B270)
   $na-Gan-dz\tilde{e}s-k$ ‘ancestress’ (B270)
   $dz\tilde{i}\tilde{i}s$ ‘grandmother’ (D262)
   $na-Gan-dz\tilde{i}\tilde{i}s-k$ ‘ancestresses’ (D1483)
   $ts\tilde{i}\tilde{i}i$ ‘grandmother’ (D1931)
   staged thus $dz\tilde{e}s > dz\tilde{i}\tilde{i}s > ts\tilde{i}\tilde{i}$

(4) $G\tilde{a}b$ ‘scratch’ (B278)
   $Gap-G\tilde{a}p!-E\ell$ ‘rake, scratch’ (B278)\textsuperscript{3}
   $k\tilde{a}ap-n$ ‘scrape; scraped’ (D1039)
   $Gaap-k$ ‘rake, scratch’ (D291)
   staged $G\tilde{a}p > G\tilde{a}b > k\tilde{a}ap > Gap$

4 Dialect boundaries

4.1 Dialects and sources

The sources for Coast Tsimshian (Sm'algyax) in this paper are Boas (1911, 1912), Dunn (1978/1995), and the Ts'msyeen Sm'algyax Language Authority (2001). Much of this material is repeated with additional data in Anderson et al. (2013). The sources for Southern Tsimshian (Sgüüχs) are the field notes of Nislaus and Dunn (1976–1981). The source for Gitxsen is Matthews (2001). The sources for NisGa'a are Tarpent (1986) and Williams and Rai (2001).

4.2 Syllable devolution across dialect boundaries

The progressive staging of syllable coda features—spread (devolution) can cross dialect boundaries, and is therefore diachronic.

\textsuperscript{3} Boas' [E] is “an obscure, weak vowel, as in flower” (Boas 1912:67).
(5) *bāo* ‘to run’ (B262)

*baah, baH* ‘to run’ (D123)

*baχ* ‘to run’, Gitxsen (Mathews 2001:7, hence G7)

*baχ* ‘run’, NisGa’a (Williams & Rai 2001:18, hence N18; Tarpent 1986:413, hence T413)

*bah-an* ‘make run, e.g., start an engine’, Southern Tsimshian (Nealaus and Dunn 1976–1981, hence S9/76)

staged *baH > bāo > bāh > baχ*

See Figure 3. The sounds [H], [o], and [h] are variants of the continuant laryngeal. The loss of the laryngeal and [-back] features in coda results in [h] becoming [χ]. This analysis makes the claim that laryngeal sounds are stronger than consonantal fricatives. Whereas [h] can be predicted as a source of [χ], the reverse is not true; [h] cannot lose the feature [-back] without all the other features of a consonant filling in, but for [χ] to become [-back] simply results in another fricative, not a laryngeal.

![Figure 3](image-url)

**Figure 3** *baH > bāo > bāh > baχ*
(6) biāl-s ‘star’ (B263)
biyaal-s, biyeel-s ‘star, i.e. it flashes forth, shines’ (D162)
biyaal-s ‘star’ (S9/79)
bil-’u-s-t ‘star’ (G11)
bil-’i-s-t ‘star’ (N21, T414)
staged biāl-s > biyaal-s > biyaal-s > biyāl-s > biyēl-s > bil-’i-s-t
> bil-’u-s-t

(7) mâ’n ‘the salt water, sea, salt’ (B264)
motn ‘the sea’ (D1445)
ʔmoon ‘salt’ (Ts’msyeen Sm’algyax Language Authority 2000:146, hence
L146)
moʔon ‘salt’ (S9/76)
moʔon ‘salt’ (G81)
moʔon ‘salt’ (N129, T447)
staged mâ’n > motn > moʔon > ʔmōn

5 Unusual consequences of syllable devolution

The spread and loss of features can account for [p] becoming [m], [l] becoming
[l], and [l] becoming [s].

5.1 Devolution: [+voi][+son] > [-voi][-son]

The spread of features [+voi][+son] from coda to onset can derive [ʔm] from
onset [p?]. The subsequent loss of the same features in coda can derive [l] from
[l]. See Figure 4.

![Diagram of syllable devolution](image)

Figure 4 [m] derived from [p], and [l] from [l]

The features [+voi][+son] copy from coda [l] to onset, changing [p?] to [ʔm].
The feature [-low] copies to the vowel, changing [a] to [ə]. Coda [l] loses the
features [+voi] [+son], changing [l] to [l].
(8)  \(p'\text{ʔ}a\text{ʔ}l\) ‘button’ (B263)

\(p'\text{ʔ}a\text{ʔ}la\) in \(n'i-p'\text{ʔ}a\text{ʔ}la\) ‘abalone shell button, i.e. it glitters’ (D1539)

\(p'\text{ʔ}l\) in \(p'\text{ʔ}l\text{-}\text{muu}‘\text{earring (muu ‘ear’)}’\) (D1589)

\(\text{ʔ}\text{mal}‘\text{to button (something)}’\) (N130)

staged \(p'\text{ʔ}a\text{ʔ}la > p'\text{ʔ}l > p'\text{ʔ}l\) and \(\text{ʔ}\text{mal}\)

(9)  \(p'\text{ʔ}\text{ʔ}-\text{ʔ}\text{ʔ}\text{ʔ}l\) ‘scatter’ (B263)

\(p'\text{ʔ}\text{ʔ}-\text{ʔ}k ‘\text{steam, scattered’ (B263)}\)

\(p'\text{ʔ}u\text{ʔ}-\text{ʔ}k ‘\text{scattered, steam, i.e., it blows out’ (D1613)}\)

\(p'\text{ʔ}u\text{ʔ}, p'\text{ʔ}u\text{ʔ}-\text{ʔ}l ‘\text{scatter’ (D1613)}\)

\(\text{ʔ}\text{mi-}\text{txw ‘\text{scattered all over the place’ (G118)}\)

\(\text{ʔ}\text{mi-}\text{k\text{kw ‘\text{scattered’ (N132)}\)

staged \(p'\text{ʔ}\text{ʔ} > p'\text{ʔ}u\text{ʔ} > \text{ʔ}\text{mi} \) and \(p'\text{ʔ}\text{ʔ}-\text{ʔ}\text{ʔ}l > p'\text{ʔ}u\text{ʔ}-\text{ʔ}l\)

5.2 Devolution: [+lat] > [-lat]

Some lexical items show [s] derived from [l]. See Figure 5.

\[
\begin{array}{c}
  \sigma \\
  \downarrow \quad \downarrow \\
  O \quad R \\
  \quad \downarrow \quad \downarrow \\
  \quad \text{peak} \quad \text{coda} \\
  \quad \downarrow \quad \downarrow \\
  h \quad \text{ʔ} \quad l [-\text{voi}][-\text{son}][+\text{lat}] \\
  \quad \downarrow \quad \downarrow \\
  h \quad \text{ʔ} \quad s [-\text{voi}][-\text{son}][-\text{lat}] \\
\end{array}
\]

\textbf{Figure 5} [+lat] > [-lat], [s] derived from [l]

Coda [l][-voi][-son][-low][+lat] gives up its feature [+lat], coda [l] becoming [s] [-voi][-son][-low][-lat], \(h\text{ʔ}-\text{en-\text{s, h\text{ʔ}s ‘hellebore root’).}

(10)  \(h\text{ʔ}\text{ʔ}-\text{en-\text{s ‘hellebore’ (B262)}\)

\(h\text{ʔ}s ‘\text{root’ (B262)}\)

\(h\text{ʔ}\text{ʔl-n-n ‘poisonous root, used for medicine’ (D823)}\)

\(h\text{ʔ}s, h\text{ʔ}s-t ‘\text{root’ (D43)}\)

\(h\text{ʔ}-\text{en-\text{s ‘hellebore’ (L85)}\)

staged \(h\text{ʔ}\text{ʔl} > h\text{ʔ}s \) and \(h\text{ʔ}\text{ʔl} > h\text{ʔ}\text{ʔl} > h\text{ʔl} > h\text{ʔ}s\)
(11) *diH in Ga-diHl-g-m-was* ‘fringed blanket’ (D310)
    *dīl in Ga-dīl-gm-was* ‘fringed blanket’ (L50)
    *diHs in Gā-diHs-k* ‘braid one’s hair in one braid on the side of the head’ (D311)
    *dīHs in q’a-diHs-k* ‘a braid; esp. in one braid on the side of the head’ (D311)
    *dīl in Ga-dīl-g-m-was* ‘fringed blanket’ (L50)
    *diHs in kʔ-diHs-k, k’a-diHs* ‘braid’ (L103)
    staged *diHl > dīl > diHs > dīs

(12) *dukʷl-Gn* ‘drown’ (D227)
    *dakʷl-Gn* ‘drown’ (L20)
    *dukʷl-inaʔ* ‘suffocate, drown’ (G19)
    *dukʷs-gum-naal-q* ‘be out of breath’ (N30, T417)
    *dukʷs-kw* ‘run out of supplies’ (N30, T417)
    staged *dukʷl > dukʷs*

It is clear that the Tsimshian [s] is related to [l] for it maintains the contact between the lateral edges of the tongue and the roof of the mouth, the difference being that air exits the mouth across the top of the tongue rather than along the sides of the tongue. The [l] becomes [s] by holding all articulators the same except simply lowering the tip of the tongue from its contact with the roof of the mouth. The Tsimshian [s] is variously heard as something between English [s] and [ʃ].

6 Devolution initiators, a natural class

The coda elements that most frequently copy to onset are [ʔ], [h], [r], [l], and post vocalic or glide [j] and [w]. These form a natural class of devolution initiators. They are approximant sonorants.5

The Tsimshian laryngeal [ʔ] is very soft in comparison to glottal stops in the neighboring languages, and often becomes a suprasegmental as something approximating very soft creaky voice.

6.1 Glottal approximant [ʔ]

(13) *Gā*, q’āo ‘cane’ (B278)
    q’āo-d ‘shaft of a lance’ (B279)
    q’āʔa-t ‘a cane’ (D853)
    staging *Gā > q’āo > q’āa*

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4 Boas (1912:68) said the Tsimshian [s] is lateral.
5 There is considerable disagreement as to whether the laryngeals [ʔ] and [h] are sonorant or approximant. In Tsimshian, the laryngeals behave like the other sonorant approximants, or rather, the sonorant approximants behave like the laryngeals.
(14) *Gats’a-l* ‘to swallow’ (D427)
  *q’adza-l* ‘swallow’ (B279)
  *q’adzā*, *q’adzā-l* ‘to swallow’ (D860)
  *k’adza-l* ‘to swallow’ (S9/76)
  staging *Gats’a > q’adza > k’adza*

(15) *gū’p!El* ‘two round objects’ (B274)
  *gu’pl, guu’pl* ‘two (general number)’ (D498)
  *q’ōp-syn* ‘two (of long objects)’ (D939)
  *Gōp-syan* ‘two long ones’ (B280)
  *gulba* ‘double’ (B274)
  staging *gū’p-l > q’ōp*

(16) *dax̂-ia̲gʷa* ‘hold firmly’ (B265)
  *dax̂-yaHgʷa* ‘hold fast, hold tight’ (D206)
  *t’aχ-yakʷ* ‘hold’ (D1841)
  staging *dax̂-ia̲gʷa > dax̂-yaHgʷa > t’aχ-yakʷ*

6.2 Glottal approximant [h]

Coda [h] spreads to onset its laryngeal property as [ʔ].

(17) *Gan-dah, Gan-deh* ‘skate, ray (fish)’ (D388)
  *Gandah, Gandeh, q’andah* ‘skate; ray’ (L58)
  staging *Gandah > q’andah*

(18) *nah gỳg’aanx⁷* ‘upstream’ (S9/76)
  *ʔnah-, ʔna-* ‘direction toward’ (L154)
  staging *nah > ʔnah- > ʔna-

(19) *GaH, Gah* ‘come’ (D277)
  *q’ah* ‘come’ (D863)
  staging *GaH > Gah > q’ah*

(20) *Goy-pah, Goy-p* ‘bright, moon’ (D488)
  *Goe-p’a* ‘light’ (B280)
  *Goy-ʔpa* ‘daylight’ (D488)
  *Goy-ʔpa* ‘daylight, brightness’ (L67)
  *Goy-ʔpa* ‘light’ (S9/76)
  *Goy-ʔmαχ, goy-p’mαχ* ‘bright’ (G35)
  *Goy-p’αχ* ‘(light) be bright’ (N57, T424)
  staging *Goy-pah > Goy-ʔpa > goy-p’mαχ > Goy-ʔmαχ*

6.3 Coda [r]

Boas used the symbol [r] in only a handful of words. He characterizes his [r] as “a very weak, strongly sonorant middle palatal trill” (Boas 1912:68). This is
equivalent to or became Dunn’s [ʊ], a high, back, unround, continuant, sonorant glide.

In the word der ‘to die’, the [r] spreads its [+high][-rnd] features to the syllable peak and lengthens it, [E] becoming [iː]. Then [r] disappears, der > diiũ. In some instances it weakens by losing its sonorant approximant, voicing and unround properties, becoming [xʷ]. Then the [+rnd] feature spreads to the vowel, daxʷ > dō.

(21) der ‘dead, to die, plural’ (B265)
    diiũ ‘dead, to die, plural agreement’ (D244)
    doo ‘to put down, lay down’ (D1686)
    daxʷ ‘die, plural’ (N24, T415)

The [r] in word kser ‘to go out’ behaves in much the same way.

(22) kser ‘to go out’ (B275)
    ksâũ ‘to go out’ (B275)
    ksiũ ‘to go out (singular)’ (D989)
    ksooũ ‘to go out (plural)’ (D989)

    In sger ‘to lie on, to set down, place’, the [r] colors and lengthens the vowel as before.

(23) sger ‘to lie (be lying on)’ (B270)
    sgii, sgiiũ ‘be lying on, put down, place’ (D1681, 1686)

    In lerder ‘keep, preserve’ the [r] in the second syllable colors and lengthens the vowel as above. But the [r] in the first syllable behaves like, becomes [ʔ]: ler > luʔo > luH > lũ.

(24) lerder ‘keep, preserve’ (B283)
    luʔodiũ ‘keep, preserve, i.e., keep hidden’ (D1347)
    n-luH ‘be under’ (D1551)
    luuk, lu’tak ‘keep, look after, treasure, prize’ (L137)
    luut’uxw ‘cherish, treasure, value’ (N83, T432)

6.4 Coda [I]

Coda [I] behaves like or becomes [ʔ].

(25) lēbēlt- ‘against’ (B281)
    lēbēlt-wālks ‘enemy’ (B281)
    lib-ilt-waltk ‘enemy’ (D1142)
    lũʔp’el ‘tear up’ (B282)
    lũʔp’-l ‘tear up’ (D1139)
    staging lib-ilt > lēbēlt > lũʔp’el > lũʔp’l
The [j]-glide is not strictly speaking a coda element, but it follows the peak vowel and behaves in the same way as the coda sources of devolution. The [j]-glide behaves like or becomes [ʔ].

6.5 [j]-glide

The [j]-glide is not strictly speaking a coda element, but it follows the peak vowel and behaves in the same way as the coda sources of devolution. The [j]-glide behaves like or becomes [ʔ].
(31) nay ‘mother (archaic address form)’ (L151) 
  nāy-a ‘mother (said by a girl)’ (B272) 
  nā ‘mother’ (B273) 
  nā-s ‘wife of father’s brother’ (B273) 
  no’o, noo ‘mother (includes maternal aunt and uncle’s wife)’ (D1554) 
  no’oh ‘mother’ (S9/76) 
  no ‘mother’ (S12/80) 
  noo-ts ‘male homosexual i.e. like a mother’ (D1558) 
  noo-ts ‘homosexual’ (L153) 
  staging naj > nāj > nā-s > no’o > no’oh > no-o > no/nō

(32) Gay-k ‘chest’ (D455) 
  Gāi, qā’ai ‘wing, arm, fathom (measure of opened arms, trump in stick game)’ (B278) 
  Ga’ai, Ga-qā’ai ‘wing, i.e., like a gill’ (D294) 
  qā’a-qā’ai ‘wing’ (D294) 
  Ga-qaax ‘wing’ (S9/76) 
  Gāi-k ‘chest, front of body, half a fathom’ (B278) 
  Gāi-t, Gāy-t ‘billed (wing in front) hat’ (B278) 
  Gaay-t ‘hat’ (S12/10/80) 
  staging Gaj > Ga’aj > q’aj > q’āx

See Figure 6 for an illustration of the devolition from the above examples.

Figure 6 Gaj > Ga’aj > q’aj > q’āx

6.6 [w]-glide

(33) hau’ts, ha’u’ts, hauts ‘sea loon; cormorant; bottle-neck duck’ (D786) 
  ha’u’uts, ha’wts ‘black cormorant, bottle-neck duck’ (L81) 
  staging hauts > hau’ts > ha’u’ts

25
(34) q’alum’q ‘swallow (something) in one gulp’ (N100)
   k’al-ikp’ahmys ‘choke’ (S9/76)
   k’al-haauy ‘choke’ (S9/76)
   k’al-au ‘choke’ (D875)
   staging au > haauy

(35) Gaus ‘hair’ (B278)
   Gaus ‘hair’ (D435)
   Gaaus, Gaus ‘hair’ (S9/76)
   t’Em-Gaus ‘head’ (B278)
   r’m-q’aus ‘head’ (D1863)
   q’am-Gaus-(u) ‘head’ (S5/81)
   Ga-Gaaus, Ga-Gaus ‘horn (of any animal), antlers, a buck with antlers’ (D320)
   Ga-Gaaus ‘horn’ (S9/76)
   staging Gaus > q’aus and Gaus > Gaus and Gaus > Gaaus

(36) gau in q’a-gau-tk ‘howl’ (D862)
   q’aw in Ga-q’aw-tk ‘howl, bay (of dogs and wolves)’ (L52)
   staging gaw > q’aw

(37) sqāq, sgau ‘to refuse’ (B270)
   sgaaq ‘to refuse’ (D1665)
   sgauq, sgaw ‘to refuse’ (L172)
   staging sgau > sgau > sgauq > sqā

The sonorant approximants can readily become laryngealized by a simple merging rule, i.e., \{[r],[l],[j],[w]\} > \{[Ɂr],[Ɂl],[Ɂj],[Ɂw]\} > [Ɂ], but deriving the various sonorant approximants from the laryngeal, e.g., [Ɂ] > \{[r],[l],[j],[w]\}, is problematic, as there is no way to predict which sonorant approximant the laryngeal will become.

7 Summary and conclusions

Tsimshian syllable devolution is an elegant phenomenon, a simple paradigm, accounting for much if not all lexical root/stem variations. The coda/post-vocalic devolution initiators spread some of their phonetic properties to syllable onset and peak and lose or degrade those same and other properties in their original coda position. What counts for coda weakening or degradation is not clear when one tries to characterize it in terms of the traditional phonological/phonetic feature systems. The Tsimshian postvocalic sonorant approximants \{[r],[l],[j],[w]\} function as devolution initiators and behave like the laryngeal devolution initiators \{[Ɂ],[h]\}. Indeed in the devolution process they become laryngeals. In a sense the laryngeals are the skeletal remains of the sonorant approximants after they have lost all or most of their other features, absolute devolution. The important question is this: at some systematic level are all the devolution initiators laryngeals?
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Audio data processing for phonetics and phonology in Blackfoot *

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Abstract: This article outlines a collaborative audio data mining project that is developing an automated program to process and compile audio files for Blackfoot research. The framework consists of two major steps, audio syntactic analysis and data mining. We tested the system on recordings of Blackfoot conversations to automatically identify segments containing the phonetic forms [x], [xʷ], and [ζ] of a particular phoneme /x/. At this point, we are able to process a large volume of audio streams and the experimental results show that the project is promising. This project is innovative because the application of computational techniques in indigenous languages is underdeveloped, and it could also enhance research methods in other languages. The project extended existing computational techniques, such as information processing and artificial intelligence (Jones, 2007), to tackle issues in understudied languages. This study also exemplifies one of many possibilities for collaborative projects between a computer science specialist and a linguist to enhance research in both areas.

Keywords: Blackfoot, audio data mining, phonetics-phonology, endangered languages

1 Introduction

The phonetics and phonology of indigenous languages are considerably understudied (McDonough and Whalen, 2008) with far fewer papers published in comparison to morphology and syntax. Recordings of word pronunciation, narratives and/or conversations is urgently needed considering the fact that most, if not all, indigenous languages are endangered and it is often a race against time to describe and analyze the sounds of these languages for phonetics-phonology research.

Audio recordings provide phonetics-phonology research with both its essential data and also many of its challenges. In the past, limited budgets for tapes constrained researchers to record only research-relevant words and/or pronunciations. With the advancement of digital recording techniques, present-day researchers are able to record and save more data, such as entire sessions, meetings, or conversations. But as a result, the data organization process has become more complicated. For example, in order to access a particular audio segment, researchers often need to listen through entire recordings to locate the segment of interest and/or conduct transcription to access the targeted segment.

*We would like to thank Ms. Shiree Crow Shoe and the late Mr. James Boy for providing conversations in summer 2007. This work was supported by the National Endowment for the Humanities, Digital Humanities Start-Up Fund [HD-50840-09].

via annotation data. However, both processes are time consuming and infeasible in indigenous language research because of the urgency of documenting these languages, most of which are on the verge of extinction. Computational support for the organization and management of audio data would therefore enhance linguistics research and fieldwork.

Currently, there are some computational tools targeting endangered languages. One group of tools is used to develop language learning programs, such as Rosetta Stone® and RezWorld. Another group of tools is for language documentation and description, such as Field Linguistics Explorer (FLEx), developed by the Summer Institute of Linguistics to help compile linguistic information, and ELAN or EUDICO Linguistic Annotator, developed by the Max Planck Institute for language transcription and annotation (Lausberg and Sloetjes 2009). Different from all these existing works, our project enhances the research process by providing a system to automatically locate audio segments of research interest. This is especially important for phonetics and phonology research in endangered languages, where recording every minute during fieldwork is valuable.

The current system has been tested on sound clips of Blackfoot, an Algonquian language spoken in Alberta, Canada, and Montana, US, to detect segments containing the phonetic forms [x], [xʷ], and [ç] of a particular phoneme /x/ (h in orthography). In the future, the system could be extended and applied to other languages, including commonly researched languages, and other fields such as morphology, syntax, and sociolinguistics.

This project is related to computational linguistics attempts to automatically manipulate speech instances from a computational perspective for linguistic studies (Paillet 1973). However, while languages with populations of over a million speakers have been the main targets of computational linguistics, very little work has been conducted on endangered languages. Lonsdale (2008; 2011) attempts a computational process in transcribing and translating Lushootseed and reports the difficulty in reaching high accuracy with current techniques in computational linguistics. As discussed in Pardo et al. (2010), one of the key issues that hinders progress in this area is the lack of multidisciplinary collaboration between the study of endangered languages and computer science. Our collaborative project aims to addresses this issue, and the preliminary achievements of such collaboration are demonstrated in this article.

The rest of this article is organized as follows: first, the Audio Data Mining Collaboration Project is described. Second, the experimental results are presented and analyzed, together with a brief discussion of the Blackfoot language data source. Finally, the article discusses the significance of the development of the tool and concludes with some future plans.

2 Audio data mining collaboration project

With support from the NEH Digital Humanity Start-Up Grant (2009–11), we are developing an advanced audio data mining system. Taking speech audio as input, this system can produce a list of audio segments containing requested targets,
such as a particular sound or a certain prosodic pattern. This framework consists of two major steps: (i) audio syntactic analysis and (ii) data mining.

2.1 Audio syntactic analysis

Audio files last for minutes or even hours, and it is important to parse them into manageable units (or basic units) for computational processing and analysis. Audio files are processed at the frame level, consisting of 512 samples with a total duration of 32ms, which is consistent with common research practice in the audio processing field (Chen and Miyashita 2011).

Then, similar to a traditional database where each item is represented by its attributes, each basic audio unit (i.e. audio frame, in our work) is characterized by audio features extracted from it and stored as a feature vector for acoustic analysis. In the current system implementation, four types of audio features were extracted:

- short-time signal energy, which is the average waveform amplitude defined over a specific time window and computed frame by frame,
- sub-band energies, which are energies computed for different frequency intervals to model the energy properties more accurately,
- Spectral flux, a measure of how quickly the power spectrum of a signal is changing, and
- Cepstral coefficients, twelve coefficients to represent the short-term power spectrum of a sound.

As demonstrated in the literature (Umapathy et al., 2007), these features are simple, commonly used, and help produce reasonably good results in audio (especially speech sound) analysis and comparison.

2.2 Data Mining

Data mining is a data processing technique that uses sophisticated data search capabilities and statistical algorithms to discover patterns and correlations in large datasets. In our project, a type of data mining called classification is used, which is defined as building a model (or function) that describes and distinguishes data classes for the purpose of being able to assign any new items to these predefined classes. In other words, if researchers want to get audio segments that relate to a certain research interest (e.g. containing /x/), a classification model can be developed to automatically assign all segments of speech recordings into two classes, “yes” for those matching the interest (containing /x/) and “no” for all others.

The classification task begins with a dataset (training data) in which the class assignments are known (i.e. a set of feature vectors where the vector is labeled as “yes” or “no”). Our classification algorithm then builds a statistical model to represent the pattern of the targeted class (i.e. the statistical commonality among vectors with “yes” labels) through the feature selection, training data refinement, and decision fusion processes described below. This
statistical model can then be applied to an extended dataset (i.e. recordings without annotation) to detect segments with the target sound or sound pattern.

- Feature selection: In reality, a feature set that we believe is good is often not perfect, and literature shows that it is hard to define a “perfect feature set” for a general purpose. Therefore, the feature selection process is developed to automatically identify a subset (i.e. the representative feature components) from the imperfect feature set for a given target sound, using a mathematical operation called \textit{eigenspace projection and analysis}. Briefly, this operation maps data in the input space (the original feature space) to another space called eigenspace via \textit{linear transformation}. It has been proven that a small subset of vectors in the eigenspace can better represent different sound characteristics than the vector set in the original feature space (Mak and Hsiao 2007).

- Training data refinement: The training dataset is likely to contain some outliers as a result of improper operations or noise introduced during the production/processing stage. Therefore, a self-refining process is implemented to refine the training dataset, in which data instances that are dramatically different from the statistical properties of the remainder of the training data are considered outliers and are eliminated automatically.

- Decision fusion: For each sound of research interest, two predictive models are built for two opposite classes, one representing the pattern of the target sound (concept class) and another one rejecting the possibility of containing the target sound (non-concept class). Intuitively, instances belonging to one class can be considered anomalous to the other and vice versa. However, in real applications, it is possible that an instance may be accepted by both classifiers, or may not be accepted by any classifier. Such issues generally arise from the fact that hardly any classifier can ensure 100% classification accuracy and the quality of data sources is rarely perfect. The decision fusion module is applied to integrate the decisions and to solve these ambiguous cases.

As a result, our approach identifies the feature set, training data distribution, and decision algorithm that are optimal for a specific sound. In the literature, most research only deals with one or two of these essential aspects (Xiong et al., 2003).

3 Experimental results

This framework has been tested on Blackfoot speech recordings to detect the particular phonetic variations \([x], [\varsigma], \text{and } [x^w]\) of the phoneme /x/. These sound variations should be similar enough to be grouped into one, as there are only two other fricatives available in Blackfoot: [s] and [h], which are audibly very different from the variations of /x/. Also, we chose this sound /x/ for our project because its surface forms are typologically rare. When /x/ is underlingly
preceded by /a/, /i/ and /o/, it is coalesced with the preceding vowel and surfaces as [x], [ç], and [xʷ].

We used Blackfoot speech which had previously been recorded by the linguist author from her independent research. The original purpose of the recording was to document natural conversation between two native Blackfoot speakers. The recording was conducted in Browning, on the Blackfeet reservation; the conversation was between a male speaker, who was 79 years old at the time of the recording, and a female speaker who was 54 years old. We used this recording in our study because the differences between the speakers’ sex and age would test the system’s performance in handling such variances.

The recorded sound files were transcribed and the transcriptions used to build the classification model and to evaluate its performance afterwards. Figure 1 shows a sample transcription with time indication (Time), speaker identification (SP), transcription in Blackfoot orthography (Frantz, 1978; 2009), and free translation. The audible target sound for the test is highlighted.

![Figure 1](image)

The recordings were then parsed into more than 17,000 segments (audio frames), of which 144 contained the target sound. Features were then extracted for those segments.

Following the transcription, each feature vector was tagged with either “yes” or “no” as the class label. The resulting dataset was randomly partitioned into two disjoint sets: two-thirds for a training dataset and one-third for a testing dataset. That is, the training set contained about 11,000 segments, among them 96 segments labeled as “yes”, while the testing set contained about 6,000

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1 The free translation here is what was given by the female speaker who also acted as a language consultant. Note that the translation is not necessarily reflecting semantic information of each morpheme. e.g., *ikkam- “if”* is not overtly translated (00.42).
segments with 48 “yes” segments. A classification model was then derived from the training dataset, and its performance on the test data was evaluated by comparing the pre-assigned class labels to the model-predicted values.

This process was repeated five times. The average performance across these five models is calculated and compared with a set of well-known classification methods (see Table 1), such as support vector machine (SVM), neural network (NN), and K-nearest neighbor (KNN), which are included in the WEKA package (Hall et al., 2009). Two evaluation metrics, recall (R) and precision (P) (as defined in Figure 2), are adopted.

\[
recall(R) = \frac{\text{Number of instances correctly identified}}{\text{Number of all the targeted instances}}
\]

\[
precision(P) = \frac{\text{Number of instances correctly identified}}{\text{Number of all units identified as targeted instances}}
\]

**Figure 2** Equations of two evaluation metrics

As shown in Figure 3, on average our work can achieve more than 61% recall value and 50% precision value, which is far better than other general data mining approaches. Given that the testing dataset contains 48 “yes” segments (i.e. the number of total targeted instances in equation (1)), the number of instances correctly identified, according to equation (1), is 30, the recall value (61%) multiplied by the number of total targeted instances (48). According to equation (2), the number of units identified as targeted instances is 60, the number of instances correctly identified (30) divided by the precision value (50%). This means that in this testing environment, when a researcher looks for segments containing /x/, he/she will get from our system about sixty segments (from 6,000 testing segments) where about thirty actually match his/her searching request.

In real application, this statistical model can be applied to an extended dataset (i.e. recordings without annotation) to detect target segments. This level of performance could help researchers, without needing to actually listen through all files, get a candidate pool of data automatically with a favorable success rate. It is quite promising, considering that this is the first trial and that automatic phonetic analysis remains a challenging task.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Our work (%)</th>
<th>SVM (%)</th>
<th>NN (%)</th>
<th>KNN (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall</td>
<td>61.1</td>
<td>58.3</td>
<td>42.4</td>
<td>40.2</td>
</tr>
<tr>
<td>Precision</td>
<td>50.3</td>
<td>41.2</td>
<td>42.5</td>
<td>50.1</td>
</tr>
</tbody>
</table>

**Figure 3** Experiment results

4 Conclusions

We reported on our preliminary Audio Data Mining Collaboration Project, designed to create an automated audio database compilation system for research
in Blackfoot phonetics and phonology. At this point, we are able to process a large volume of audio streams. The experimental results show that the project is promising. Its performance is expected to be further improved in our future work with the addition of more representative features and training data. The next stage is to create a database by compiling files that include the target sound. This project is innovative because the application of computational techniques in indigenous languages is underdeveloped, and it can also enhance the research methods in other languages. Also, the Audio Data Mining Collaboration Project may be extended to capture a string of sounds or morphemes for research in morphology and/or syntax. In a broader perspective, this work can also benefit other fields by, for example, finding cues in natural conversational interactions for sociolinguistics and analyzing folksongs’ structures and patterns for ethnomusicology (Nettl, 1989).

References


A Trio of Phonetic Details in Homalco

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Abstract: This paper presents three phonetic features of Homalco and other dialects of Comox. These three features are offglides between a palatal obstruent and a following nonhomorganic vowel, laryngealized stops and vowels, and the heterosyllabic nature of sequences of consonants, which do not function as consonant clusters in the generally accepted meaning of the term cluster.

1 Introduction

In their 2008 editorial *The phonetics of North American languages*, McDonough and Whalen point out that even the best orthographies do not note phonetic detail and are “usually of limited value for phonetic sciences.” They quote Sapir (1921, p. 55), “There remains the important question of the dynamics of these phonetic elements … [which] … are important for the proper understanding of the phonetic genius of a language as the sound system itself, often far more so.” They also write, “In examining the phonetic structure of an under-documented language, the focus of the research is the natural phenomena, not a particular theory. The phenomena must be described as fully as possible.”

Homalco is the northernmost dialect of the language known in the literature as Mainland Comox. The first speakers who made an impression on me with their style of enunciation were the Homalco speakers Noel George Harry, born in 1892, Bill Galligos, born in 1903, and Jimi Wilson, born in 1945, along with numerous casual speakers from 1969 up to 1980. I also worked extensively with Mary George, born in 1924, who lived all her life at Sliammon, as well as having casual conversations with other men and women at Sliammon and Church House, the then home of the Homalco Band. In my master’s thesis at the University of Victoria in 1970, I did not identify each utterance by speaker, partly because not all of my observations were made during formal language sessions. But I did distinguish between men’s and women’s speech, which includes the differences between Mary George and my other language consultants.

2 First history

The first field notes that I’ve been able to obtain are from Franz Boas, written onto file slips around 1887. Boas worked with the Island Comox dialect and not with one of the three Mainland Comox dialects. These slips are in the Smithsonian Anthropological Archives as Document 711–b. Although this document gives much phonetic data, fine phonetic detail is not discernable. For
example, although the letter ç uniquely represents the sound [θ], the letter q represents any one of the three sounds [çʷ], [ç], [χʷ].

Edward Sapir, in his 1915 publication Noun Reduplication in Comox, wrote

As not infrequently happens in American Indian languages, the long vowels are not always held out with even stress, but end with short rearticulations which give the whole vowel in each case a quasi-diphthongal effect. … they cannot … be considered the normal forms of the long vowels; sometimes the short rearticulations seem to serve as glides to following consonants, particularly velars. The quasi-diphthongal long vowels are here indicated by long vowels followed by superior short vowels, the vocalic quality of the latter being indicated as in normal short vowels (Sapir 1915: 3–4).

Writing before the invention of portable recording machines, Sapir intended to convey fine phonetic detail, giving the reader as complete an idea as possible of the actual and exact pronunciation of the language. He did so without sacrificing a thoroughgoing analysis of reduplication patterns in the data he collected.

3 One source of Sapir’s “rearticulated vowels”

In my 2005 ICSNL paper, “High consonants, articulatory transitions, and nonhigh vowels in Comox”, I described one source of the phenomenon of what Sapir calls “rearticulated vowels” as being a palatal consonant followed by a phonemic /a/:

<table>
<thead>
<tr>
<th>Phonemic</th>
<th>Phonetic</th>
<th>Written for learners</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>/pq sčaj:n/</td>
<td>[pq sčéaj:n]</td>
<td>peq sch‘ajen</td>
<td>‘weasel’</td>
</tr>
<tr>
<td>/čalas/</td>
<td>[čalas]</td>
<td>ch‘alas</td>
<td>‘three’</td>
</tr>
<tr>
<td>/čagay/</td>
<td>[čagay]</td>
<td>ch‘agay</td>
<td>‘old time woodenspoon’</td>
</tr>
</tbody>
</table>

When I asked how many syllables these words have, he replied “two and a half” — Bill Galligos had been analyzing his language for years, thinking about it and making comparisons and analogies. Thom Hess had worked with Bill Galligos and recommended him highly.

In this paper the digraph ia has approximately the same value as it has in the Pinyin alphabet, used to write Chinese. Illustrative alternations in the spelling herein between the digraphs ia and ìa are

(1) /čám/    [č‘em?] | chiam’  
‘how, why’

(2) /xʷaʔ čám/ [χʷo čéámas] | whe chiamas
‘nohow, noway, can’t, won’t’
These examples illustrate the pedagogical orthography that I am using to transcribe my field notes and the texts which have been told to me. Parallel with the offglide from a palatal stop being heard before an /a/, most instances of a palatal stop followed by the vowel /u/ also have an audible offglide — an exception is the word for ‘child’ /čuy̕/ [čuyʔ]. Some examples of the audible offglide are:

(4) /č'umən/ [č'iümən] ch'iumen

‘a screw’

(5) /čuʔulqinəm/ [čiuʔolqənəm] chiu’olqinem

‘stealing food’

These examples of the “y” offglide are parallel with the pronunciation of the “w” offglide after a velar:

(6) /kwamnəč/ [k'wámnəč] kwamnach ~ kwamnach

‘root’

The phenomenon of the offglides being pronounced separately from the neighboring phonemic vowel suggests that Homalco and its related dialects are mora timed rather than being syllable timed or stress timed. They are also parallel with the normal, unemphatic pronunciation of the word “no” where the unvoiced segment is stressed and the neighboring voiced segment is unstressed.

(7) /xʷəʔ/ [çúʔ?] ʷha’

‘no’

Compare the emphatic pronunciation of ‘no!’

(8) /xʷəʔ/ [çáʔp] wha’

‘no!’

Here the initial segment is pronounced not as its own syllable (or mora) but is phonetically a syllable initial consonant. One instance of this emphatic denial came during a conversation with Tommy Paul, when I asked him what sasquatch may’al’alh [mayʔəlʔəl] eats. His response was “Tam qigath, tam majath” [tam qegθə, tam məjaθə] ‘any kind of deer, any kind of meat’ — then when I asked “pileq ?” [pələq] ‘mushrooms’ his answer was an emphatic “NO!”
4 Stød as another source of Sapir’s “rearticulated vowels”

In the spring of 1970, Jimi Wilson visited me in Victoria. Jimi was a member of the Homalco band, raised in Church House. He visited the University of Victoria campus and classrooms and attended a number of social events. One of these was a cookout on the beach near Sooke. At that cookout, Jim Hoard asked Jimi to pronounce several words. When Jimi said the word for “mussel” Jim immediately identified the pronunciation as being an instance of stød with the same pronunciation as it would have if it were a word in Danish.

Wikipedia defines stød [sdøð] as “a suprasegmental unit of Danish phonology, which in its most common form is a kind of creaky voice (laryngealization), but may also be realized as a glottal stop, above all in emphatic pronunciation.” The article goes on to say that the IPA character for glottal stop is used to transcribe stød. This description from Wikipedia also describes the situation in Homalco. I described this alternation in my M.A. thesis (pp. 24-27). Mary George pronounced a glottal stop where Noel George Harry and Bill Galligos regularly pronounced a rearticulated vowel, a dragged out vowel, with creaky voice and lower pitch.

The Comox word for ‘mussel’ which Jimi told Jim is /samə/ [saːmə] or [saːmə] (alternative notations for the same phenomenon) with creaky voice. In his 1915 publication, Edward Sapir wrote the word for ‘mussel’ as sā’ba’ (p. 30). This pronunciation of [b] for /m/ is not unexpected. For example, Noel George Harry sometimes said /majaθ/ as [baʃaθ] ‘meat’ and /ʃənəs/ as [ʃidis] ‘tooth’ in allegro speech.

One alternation which occurs in all dialects of Comox is /w/ ~ /g/ and /y/ ~ /j/. One example is the formation of the word ‘puppy’

(9) /çənəw/ [çənəw] ch’iiano
   ‘dog’

(10) /çənagul/ [çənagul] ch’iinanagolh
   ‘puppy’

However, when the original glide is a laryngealized or glottalized resonant, the glottalization precedes the resulting voiced stop, resulting in the alternation called stød.

Remember that the description of stød is an alternation between glottal stop and creaky voice. In Homalco this describes the following alternation:

(11) /ław/ [lawʔ] lhaw’
   ‘escape’

(12) /lagit/ (or /laʔgit/) [laːgit] / [laʔgit] ~ [laʔgit] lha’git
   ‘he got away’

with /w/ ⇒ /g/ before a vowel.

A second example of this alternation is
(13) /təw/  [tu?]  tew’
‘freeze’

(14) /tagɪt/  [taːgɪt] / [taʔgɪt] ~ [taʔgɪt]  ta’git
‘frozen’

The negation of the word for ‘good’ /ʔəy/ [ʔiːʔ] illustrates the alternation of /y/ => /ʔ/ before a vowel.

(15) /xəʔaʔaɬ̕as/  [cəʔaʔaɬ̕as] ~ [cəʔaʔaɬ̕as]  whe ’a’jas
‘not good’

To restate, Wikipedia states that stød is represented by the symbol for a glottal stop. When the glottal stop is not realized, Sapir’s rearticulated vowel is heard. However, during the 1970s the speakers who pronounced the rearticulated vowel also had creaky voice.

Another example of stød before a laryngealized resonant is:

(16) /ʔaɬás/  [ʔaɬ̕aɬ̕as] / [ʔaɬ̕aɬ̕as] not recorded as [ʔaʔaɬ̕as]
‘sea cucumber’

Together with the words which Bill Galligos called “two and a half” syllables, this rearticulated, or echo, vowel phenomenon suggests that Homalco and its related dialects are mora-timed.

5 Studies of Other Languages

Sonya Bird of the University of Victoria has done extensive analysis of laryngealized resonants in St’at’imcets, most recently in 2011. In that publication, Bird states, “[one] way in which [laryngealized resonants] exhibit substantial variability is in the realization of the laryngeal gesture: from a complete stop to a small dip in fundamental frequency.” This statement is reminiscent of the description of stød as given in Wikipedia.

There have also been studies of laryngealized vowels in Otomanguean (Mazatec, Mixtec) and Hokan (Oaxaca Chontal) and Panoan (Capanhua) languages. Some of these studies are listed in the reference list of this paper. The laryngealization of vowels in Comox is not an isolated phenomenon.

6 Another source of laryngealized vowels in Homalco

Vowels adjacent to glottalized stops and affricates can also be laryngealized. Some examples of the entire syllable being laryngealized are:

(17) /t̕in/  [t̕ɪn]  t’in
‘barbecued fish’

(18) /ʔap̕uk̕w/  [ʔap̕ok̕w]  ’ap’ok’w
‘maggot’
Here the stops are not ejective as pronounced by Bill Galligos and Noel George Harry, but are laryngealized, and the vowels are creaky voice.

Although other speakers, such as Noel George Harry, often pronounced glottalized stops and affricates not as ejectives but as laryngealized, with adjacent vowels enunciated as creaky voice, Bill Galligos never pronounced ejectives. When asked, he described /p̕/ as “on the side of ‘b’” and /t̕/ as “on the side of ‘d’” — in other words, more like the voiced than the unvoiced stops in English.

Ladefoged (1965) distinguishes between voiceless, ejective, laryngealized, and voiced stops in languages of the world. All four occur phonetically in Mainland Comox. However, when a glottalized stop was laryngealized rather than ejective, Bill Galligos and Noel George Harry, among others, pronounced the adjacent vowels as laryngealized.

The Wikipedia article on the Achumawi language states, “The laryngealized stops are similar in articulation to the ejective glottalized stops of neighboring languages, but more lenis, that is, not “popped” unless an unusual effort is made at articulating the distinction.”

Citing Ladefoged’s phonation-types tape, Professor Phil Hoole of the University of Munich gives examples of Danish stød with the laryngealization equally likely to be on the vowel or on the adjacent resonant. This same website transcribes Hausa laryngealized stops using the symbols for voiced consonants with a subscript tilde. This is reminiscent of Bill Galligos equating glottalized stops with voiced English stops.

7 Another source of Sapir’s “rearticulated vowels”

Sapir (1915) transcribes a large number of forms with vocalic offglides into following consonants. Among the speakers whom I heard, the most noticeable offglide was when the front vowel was followed by the post-velar stop. Examples include:

(20) /səp̕iqʷətas/ [sap̕e²qʷətas] sep’iqwatas
     ‘he hit him in the head’

(21) /t̕əʃiqʷ/ [t̕eʃe²qʷ] t’eshiqw
     ‘snot’

8 Similar timing in the enunciation of consonants

In their 2008 editorial *The phonetics of North American languages*, McDonough and Whalen write that “Salishan languages have long sequences of consonants, uninterrupted by vowels … that violate theoretical notions of syllable structure and phonetic salience.”
In his 1978 paper, Syllabification in Northwest Indian languages, James Hoard describes how such sequences of consonants are actually pronounced here in the Northwest. In this paper, Hoard distinguishes between tautosyllabic and heterosyllabic consonant clusters. All the consonants in a tautosyllabic consonant cluster are pronounced together as a unit. By contrast, in heterosyllabic consonant clusters, the consonants are pronounced separately or in pairs. A Comox illustration of a heterosyllabic consonant cluster is:

\[(22) /\text{t}u\text{b}h\text{št}\text{a}s/ [\text{t}u\text{b}h.\text{š}t\text{a}s] \quad \text{t’oz’shta}s\]
‘(S)he shot him/her in the foot/lower leg’

Each of the three consonants in the sequence -z’sht- [tʰšt] is enunciated separately and clearly. Here I am adopting James Hoard’s convention of using a period on the line to show the separation of one mora from another.

The segment [-št] is a reduced form of the lexical suffix -šən/ before the transitive suffix -t/; the full form of this lexical suffix is seen in the following intransitive form, where there is no agent

\[(23) /\text{t}u\text{b}h\text{šən} \text{čan}/ [\text{t}u\text{b}h.\text{š}ən \text{č}ən] \quad \text{t’oz’šen chian}\]
‘I was/am shot in the foot/lower leg’

Another example of how individuals consonants in a sequence are enunciated separately is

\[(24) /\text{ʔas}x\text{w}/ [\text{ʔa.ś}w] \quad ‘\text{a}sw\text{h}’\]
‘fur seal’

and the word for ‘falling snow’ or ‘snowflake’ is a reversal of the word for ‘no’ wherein each continuant — vowel and fricative — is enunciated separately:

\[(25) /\text{ʔa}x\text{w}/ [\text{ʔa.ś}w] \quad ‘\text{a}wh’\]
‘falling snow’ ; ‘snowflake’

\[(26) /x\text{w}aʔ/ [çw.əʔ] \quad ‘\text{w}ha’\]
‘no’

Similarly, I usually heard the following word pronounced bimoraically:

\[(27) /qaw\theta/ [qa.w\theta] \text{or} [qa.u\theta] \quad qaw\theta\]
‘potato’

But Susan Blake reported (p. 22) the diminutive with a vowel after the /w/ and the /w/ becomes /g/ prevocally, which means that the form /qaw\theta/ does not have a vowel in the second mora.

The bimoraic pronunciation of /qaw\theta/ ‘potato’ sheds light on the following reduplicated forms:
Noel George Harry described to’ltol as a spear throwing game or contest, where a stone wheel with a hole in its center was rolled across the ground and the players or contestants tried to throw a spear through the hole as the wheel rolls.

These two examples suggest that some instances of glottal stop are epenthetic, inserted as the resonant is enunciated separately from the preceding vowel.

In his paper, James Hoard cited examples from Quileute, Nisqually, Columbian, Nez Perce, and Bella Coola. In his conclusion, he writes, “Nearly all descriptions of Northwest languages contain phonemic transcriptions which mask some of the important phonetic properties of these languages. This is especially true of syllabication.” He advises “learning to pronounce the individual consonants themselves [rather] than pronouncing combinations of them in clusters.” This is true of Homalco (and Sliammon) and the same advice can be given for pronouncing the vowels as well.

9 A mora-timed language

The individual enunciation of serial consonants is one more example suggesting that Homalco and its related dialects are mora-timed. It is mora-timed not only in its vowels, as noted in Sapir’s transcription, but also in its syllable initial consonants as well as its syllable final consonants. This gives the language a rhythm quite different from spoken English.

The moraic nature of Sliammon syllable peaks and syllable final consonants has been noted previously by Susan Blake (1992). However, I have not found that she discusses a word initial consonant receiving its own moraic value.

10 A possible language change

One word which is remembered and used today is the word which Noel George Harry translated as “cousins and friends” — jiəjia. However, its pronunciation has changed from the old pronunciation of “two and a half” syllables

(30) /jaجا/ [jíajə] jiajia to be just two syllables

(31) /jaجا/ [jəjə] jiajia so that now it seems to follow the rhythm pattern of English.
11 An areal phenomenon

James Hoard has shown that careful enunciation of consonants is an areal phenomenon. Careful enunciation not only of consonants but also of glide transitions between vowels and consonants may also be an areal phenomenon.

12 Afterword

In their 2008 editorial *The phonetics of North American languages*, McDonough and Whalen write, “Given the fact that he best (i.e., most practical) orthographies gloss over phonetic detail, these records are usually of limited value for phonetic science. Even the best IPA transcriptions require a segmentation and linearization that is often at odds with the phonetic phenomena at hand.”

The big question is how do we annotate these languages so that they can be taught in a way that is true to our consultants and teachers who are no longer with us? How do we represent their pronunciation so that it can be emulated? Straight taxonomic phonemic notation has been useful for academic linguistic comparison, but it can be debated whether or not this notation is optimal for language preservation and revitalization among people who are not trained in linguistics. We have strayed far from the detail preserved in Sapir’s transcriptions.

References:


Hoard, James E. 1978. Syllabification in Northwest Indian languages, with remarks on the nature of syllabic stops and affricates. In *Syllables and Segments* (Bell, Alan, & Joan Bybee Hooper, eds.) Amsterdam: North Holland (pp 59–72).


Phrase boundary effects in /t/ duration and aspiration in Nłeʔkepmxcin (Thompson River Salish)*

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Abstract: Consonant inventories and substantial obstruent clusters in Salishan languages like Nłeʔkepmxcin can obscure potential F0 cues to prosodic phrase boundaries, such as boundary tones, or declination reset. By using phonetic analysis, I test the hypothesis that consonant duration and aspiration behaviour differs phrase internally as opposed to in phrase final positions. I show that the final voiceless alveolar stop /t/ of the 1pl marker /kt/ is longer when phrase final than phrase internal. Additionally, /t/ is longer at an i-phrase boundary than at a p-phrase boundary. In terms of aspiration, phrase final /t/ tokens have aspiration that is greater in duration and with an earlier intensity peak, though this appears to be a property only of i-phrase and not p-phrase boundaries.

Keywords: prosody, phrasing, aspiration, Nłeʔkepmxcin, Salishan

1 Introduction

The Salish languages of the Pacific Northwest of North America are well known for their rich consonantal inventories, widespread glottalization, and lengthy obstruent clusters (e.g. Bagemihl 1991; Kinkade 1992; Shaw 2002). Because obstruents are well known to affect the pitch of adjacent resonants (e.g. Brown and Thompson 2006 on Upriver Halkomelem Salish), it can be difficult to measure potential F0 cues to prosodic phrasing, such as boundary tones and declination reset, in Salish languages. In this paper, I explore an alternative phonetic cue to prosodic phrasing in Nłeʔkepmxcin (Thompson River Salish), one that in fact takes advantage of the widespread distribution of obstruents. Koch (2010) proposed that the final /t/ of the 1st person plural marker /kt/ is aspirated in phrase-final position, but not phrase-internally. In this paper, I test this prediction by comparing /kt/ in phrase-final versus phrase internal positions, on a range of phonetic measures, including consonant and aspiration duration, and aspiration intensity. The tests were done on intransitive clauses (since these use the subject agreement marker /kt/).

Results indicate that there is no difference on the morpheme internal /k/ of the 1pl /kt/ across different positions, but the final /t/ of the /kt/ 1pl is reliably longer in duration when phrase final (in both phonological phrases, or p-phrases,

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and intonational phrase, or i-phrase). In addition, i-phrase final /t/ has aspiration that is greater in duration and intensity than both p-phrase final and phrase internal /t/.

Results are discussed in terms of how phonological phrasing aligns with properties of syntax, and properties of information structure. While verbs and auxiliaries are phrased together, intransitive verbs and oblique arguments or adjunct phrases appear to be phrased in separate p-phrases. As for the transitive clauses with VSO order that were investigated, these appear to have verb, subject and object phrased in independent p-phrases.

2 Background

I begin with some background on Nleʔkepmxcin, then move on to some general background on phrasing and consonant cues to phrase boundaries, reviewing some related prior research in Nleʔkepmxcin, other Salishan languages, and cross-linguistically.

2.1 General properties of Nleʔkepmxcin

Nleʔkepmxcin (Kroeber 1997; Thompson and Thompson 1992, 1996) is one of 23 Salish languages (Czaykowska-Higgins and Kinkade 1998; Kinkade 1992; Kroeber 1999; for some general overviews of Salishan). It is spoken in the southwest of British Columbia, and is severely endangered, with no more than a few hundred elderly speakers remaining. The phonemic inventory is given in Table 1.

<table>
<thead>
<tr>
<th>CONSONANTS</th>
<th>labial</th>
<th>alveolar</th>
<th>alveo-palatal</th>
<th>velar</th>
<th>uvular</th>
<th>pharyngeal</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
<td>p</td>
<td>t</td>
<td>k kʼ w</td>
<td>q qʼ w</td>
<td>?</td>
<td></td>
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<tr>
<td>Ejectives</td>
<td>p̓</td>
<td>tʼ</td>
<td>k̓  k̓  w</td>
<td>q̓  q̓  w</td>
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<tr>
<td>Lateral Eject.</td>
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<td>Glottalized</td>
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<td>ʷn</td>
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<tr>
<td>Affricates</td>
<td>č [ts]</td>
<td>c [tʃ]</td>
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<td>Ejective</td>
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<td>Fricatives</td>
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<tr>
<td>Approximant</td>
<td>(w)</td>
<td>z</td>
<td>y [j]</td>
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<td>Glottalized</td>
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<td>Glott. Lateral</td>
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Like all Salish languages, Thompson Salish is predicate-initial. The typical order is Verb-Subject-Object-Adjunct, though post-predicative verb order is in practice quite flexible. Predicates are obligatorily inflected for transitivity and subject/object agreement markers (see Thompson and Thompson 1992). Second position clitics (2CL) follow the first prosodic word. DPs are obligatorily marked with determiners. A transitive sentence is shown in (1).

(1) **Verb** 2CL **Subject** **Object**

\[ \text{kən-t-Ø-és} =xe̞ \quad \text{e=skíxze?-kt} \quad \text{e=sínci?-kt.} \]

\[ \text{help-TR-3O-3S} \quad \text{=DEM \, DET=mother-1PL.POSS} \quad \text{DET=brother-1PL.POSS} \]

‘Our mother helped our brother.’

Example (1) also shows two cases of the 1pl marker /kt/, in this case as a possessive suffix; /kt/ will be the object of phonetic analysis in section 3. The 1pl marker /kt/ can appear in one of two guises: either as an affix, or as a clitic. Following Davis (2000) on the *Clitic Mobility Criterion*, the affix always attaches to the same syntactic word form, regardless of general word order. The clitic, on the other hand, is “mobile” relative to its host, and will attach as a second position clitic, whatever the syntactic status of the first prosodic word in its phrase.

The affix/clitic distinction in Nleʔkepmxcin correlates with different semantic/syntactic uses of the 1pl marker. To mark nominal possession, as in ‘our brother’ and ‘our mother’ in (1), /kt/ always attaches to the possessed noun, and is thus an affix, and not a second position clitic. For example, in (2), the nominal is preceded by an adjective, yet the possessive marker (here the 3rd person possessor -s) still affixes to the nominal ‘dog’, and not the preceding adjective. Thus, adding more structure to the nominal phrase, like a preceding adjective, has no effect on where the possessive affix surfaces: its position is fixed to the noun.

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1 Abbreviations in the glosses are based on Thompson and Thompson 1992, 1996, Kroeber 1997: ‘-’ = affix, ‘=’ = clitic, **CLEFT** = cleft predicate, **COMP** = complementizer, **CnCl** = conjunctive subject clitic, **DEM** = demonstrative, **DET** = determiner, **DRV** = directive transitivizer, **EMPH** = emphatic (independent pronoun), **EVID** = evidential, **FUT** = future, **IMPF** = imperfective, **InCl** = indicative subject clitic, **INTRANS** = intransitive, **LINK** = link marker (predicate modification), **LOC** = locative, **NOM** = nominalizer, **O** = object, **OBJ** = object, **OBL** = oblique, **PERS** = ‘persistent’ marker, **PL** = plural, **POSS** = possessive (affix), **PoCL** = possessive subject clitic, **S** = subject, **SG** = singular, **SUBJ.GAP** = subject gap suffix, **TRANS** = transitive, **TR** = transitivizer, **TS** = transitive subject.
(2) e=stípte te=sqáqxə?-s  
DET=black LINK=dog-3POSS  
‘his black dog’

The second use of /kt/ is as an intransitive subject agreement marker in indicative or nominalized clauses. Intransitive predicates may be followed by oblique arguments (3), and in cases of a 1pl subject, are inflected with the 1pl subject clitic (on subject marking, see Davis 1999, 2000; Hoard 1971; Koch 2009; Krooiber 1999; Newman 1979, 1980). In this case, /kt/ is a second position clitic, and attaches to whatever is the first prosodic word in its attachment domain, rather than to a fixed host. In example (3), the 1pl indicative subject clitic =kt follows the verb, while in (4) it follows the initial auxiliary. Thus, this /kt/ is “mobile” and is not fixed to the verb. In (5), we see the /kt/ possessive clitic attaching to the imperfective auxiliary, the first prosodic word in a nominalized clause, and not to the verb qʷac ‘(get) warm’.

(3) Verb 2CL Oblique  
wʔxám =kt te=swíte.  
have =1PL.INCL OBL=sweater  
‘We have sweaters.’

(4) Aux 2CL Aux Verb  
xʷúy̓ =kt nés téw-cn-me.  
FUT =1PL.INCL go buy-mouth-INTRANS  
‘We’re going to go grocery shopping.’

(5) Aux 2CL Verb  
…ʔé k=s=wʔéx =kt qʷá̱c  
…and COMP=NOM=IMPF =1PL.POC=CL warm  
‘…so we could stay warm.’ [787d””]

2.2 Prosodic phrasing background

There has been little previous research on properties of prosodic phrasing in the language: the grammar mentions a few general pitch cues (Thompson and Thompson 1992:24), while Egesdal (1984) details some general rhythmic properties of narratives, again only impressionistically. Koch (2008, 2011) showed that intonational phrases were right-headed, as indicated by the prosodic prominence of vowels, and phrase-final vowels showed a significant final lengthening effect. In the present study, it is hypothesized that consonants at phrase final edges will also undergo a lengthening effect, similar to vowels. In this paper, I will be referring to phonological phrases (p-phrase) and intonational phrases (i-phrases) in the prosodic hierarchy of Nespor and Vogel (1986, also Hayes 1989). The labels p-phrase and i-phrase are not universally used (e.g. minor phrase and major phrase are other similar terms – Selkirk and Kratzer 2007); for the purposes of the present study, what is important is that I will
provide evidence for two phrasal categories above and beyond words and clitic groups in Nłe?kepmxcin.

Looking across the Salish language family more generally, there again has been much work on prosodic categories below the level of phrases (e.g. Czaykowska-Higgins 1993, 1998; Shaw 2002; Thompson and Thompson 1992, etc.), but comparatively little at the phrasal level. A notable exception, Beck (1996, 1999) identifies the following indicators of p-phrase status in Lushootseed Salish (see also Beck and Bennett 2007):

(6) Characteristics of phonological phrases in Lushootseed Salish (Beck 1999)
   a. set off by 50-100 ms pause in careful speech
   b. lack phonological interaction (i.e. assimilation, etc.) across p-phrase boundaries
   c. contain a single phonological word with an amplitude peak plus clitics and affixes

In the present study, I primarily focus on how (6c) plays out in Nłe?kepmxcin, and test whether p-phrase in Nłe?kepmxcin can extend beyond single words. In this regard, I show that the verbal complex (auxiliaries plus main verb) are parsed as a single p-phrase, even though auxiliaries are prosodic words since they attract second position clitics. Thus, auxiliary-verb sequences contain two prosodic words, but only one phrase. I also make some remarks about complex noun phrases, suggesting they may also be parsed as single phonological phrases.

In addition, Beck (1999) notes that intonational phrases in Lushootseed are characterized by a steady fall in F0, with a declination reset at the start of each i-phrase. In Okanagan Salish, prosodic boundaries are also marked by pauses, F0 fall, and reset or partial reset of declination across phrasal boundaries (Barthmaier 2004). Finally, recent work by Caldecott (2009) shows that prosodic phrases are right-headed in St’át’imcets Salish; Koch (2008) finds that Thompson Salish, too, has rightmost nuclear stress and right-headed phonological-phrases. The present study does not directly address declination effects in F0, since it looks at consonants.

2.3 Consonant production background

In terms of prior related research on consonants in Nłe?kepmxcin, Thompson and Thompson (1992:4) note that stops are “somewhat aspirated before a spirant” and regularly aspirated “before another stop,” while in “syllable final position, [stops] are strongly aspirated.” These observations led Koch (2010) to examine stop aspiration as a possible cue for phrasal boundaries. Specifically, Koch (2010) looked at some cases of the voiceless alveolar stop /t/ in the 1pl marker /kt/, proposing that it was aspirated in phrase final but not phrase internal positions; however, the study used a small set of data, was limited to aspiration (presence or absence), and did not do a phonetic analysis across a larger data set.
Cross-linguistically, consonants have been shown to have phonetic properties that are plausibly the phonological realization of phrase edge boundaries. Butcher and Harrington (2003a, 2003b) showed that /p/ in onset position in Warlpiri focus phrases had increased duration. In Blackfoot, a laryngeal feature marks phrase final positions, including the devoicing of vowels, and aspiration of phrase final consonants (Frantz 2009, Windsor and Cobler 2013). Niebuhr (2008) showed that, in German, utterance final /t/ aspiration differed in duration and intensity depending on the accompanying tonal contour: in other words, while tonal contours are a type of phrasal property usually thought of as realized on vowels, the consonant aspiration also played a role in indicating phrasal type in German. Results of these studies motivate the hypothesis that aspiration duration and intensity may mark final phrase boundaries in Nleʔkepmxcin.

Considering Salishan consonant articulation more broadly, the present study will be of interest to other work that has examined various aspect of consonant production across other Salishan languages. Esling and colleagues laryngoscopically examined properties of glottal stops, glottalized resonants and pharyngeals, including in Nleʔkepmxcin (Carlson et al. 2004; Esling et al. 2002); the present study provides acoustic phonetic information on laryngeal properties (aspiration) of the voiceless stops /k/ and /t/. Bessell (1997, 1998) examined co-articulation effects of vowels on consonants in St’át’imcets, a related Interior Salish language. J.H. Davis (2005) showed that pre-vocalic glides in Comox often attract primary stress, usually thought of as a property of vowels, which are usually described as prosodic heads of syllables and phrases; in terms of the present study, this motivates looking at consonants for other phonetic markers of phrase position and phrase type (here, duration and aspiration). Looking at guttural glides in St’át’imcets, Shahin (2003) also showed a phonological conditioning on consonant production, in that pharyngeal occurrences happen with labialization, while uvular forms were found elsewhere; the present paper proposes that voiceless stop production in Nleʔkepmxcin is also phonologically conditioned, by phrasal boundaries.

Because the present study involves /kt/, a two-consonant form that additionally followed other root consonants, all forms occur in consonant clusters, and will be of interest to studies that have examined consonant cluster properties in other Salish languages (e.g. Hoard 1978, Bagemihl 1991 on Nuxalk; Bianco 1996 for Cowichan; Shaw 2002 for hən’q’əmín’əm’; Marinakis 2004 for Upriver Halq’eméylem). Finally, while phrasal distinctions have not received much attention, Van Eijk (2001) examined word, clitic and sentence distinctions in St’át’imcets (Lillooet Salish); here I look for phonetic evidence for phrasal groupings.

2.4 Predictions based on Koch (2010)

In Koch (2010), the following were proposed to constitute phrasal boundaries. Auxiliaries and verbs form a single phrase, while arguments and adjuncts are
phrased separately from the verbal complex. Thus, /kt/ in (7)–(10) are proposed to be phrase internal. In (7) to (9), we have clitic instances of /kt/ (as per the Clitic Mobility Criterion discussed in 2.1). In (10), we find an instance of the possessor affix /kt/.

(7) \(i\)-phrase [VP internal clitic /kt/]
( )\(p\)-phrase
\(x^{\text{"u\text{y}=kt}}\) nés tèw-cn-me.
FUT=1PL.INCL go buy-mouth-INTRANS
‘We’re going to go grocery shopping.’

(8) \(i\)-phrase [Sentence final clitic /kt/ with additional clitic after it]
( )\(p\)-phrase
nan’èk’=kt=nuk\(^{\text{*}}\).
get.nutrition=1PL.INCL=EVID
‘We got nutrition.’ [F_P599a-1]

(9) \(i\)-phrase [DP internal clitic /kt/, in prenominal relative clause]
( )\(p\)-phrase
\(\ldots\) n=e=s=cúw=kt
nmíml.
\(\ldots\) in=DET=NOM=work=1PL.POCL 1PL.EMPH
‘… for our work.’ [F_P644a]

(10) \(i\)-phrase [DP internal affix /kt/]
( )\(p\)-phrase
\(\ldots\) e=spzuʔ=kt
nmíml.
\(\ldots\) DET=animal-1PL.POSS 1PL.EMPH
‘… our animal.’ [F_P769a-2]

On the other hand, /kt/ in (11)–(15) are proposed to be phrase final, and thus show greater duration and aspiration.

(11) \(i\)-phrase [Sentence final clitic /kt/]
( )\(p\)-phrase
\(\ldots\) t=e=s=máq’=kt.
\(\ldots\) OBL=DET=NOM=full=1PL.POCL
‘… because we’re full.’ [F_P704v-3]

(12) \(i\)-phrase [Sentence and DP final affix /kt/]
( )\(p\)-phrase
\(\ldots\) ?el le=?ímc-kt.
\(\ldots\) and DET=grandchild-1PL.POSS
‘… and our grandchildren.’ [F_P375e-1]
(13) [DP final affix /kt/]

\[
\begin{align*}
&\text{cúk}^w\text{=ƛ̓u}^w\text{ nmíml} & \text{e=pús-kt} & \text{e=ʔem’c-n-x}^w. \\
&\text{finish=PERS 1PLEMPH} & \text{DET=cat-1PL.POSS} & \text{COMP=feed-DRV-3O.2SG.TS} \\
&\text{‘Our cat was the only one you fed.’} \ [F_P769b] \\
\end{align*}
\]

(14) [VP final clitic /kt/ followed by adjunct]

\[
\begin{align*}
&\text{yé’} & \text{e=s=n-ʕ̓wóy’t=kt} & \text{ʃ=sítist.} \\
&\text{good} & \text{COMP=NOM=LOC-sleep=1PL.POCL} & \text{DET=night} \\
&\text{‘We slept good last night.’} \ [F_P181f-1] \\
\end{align*}
\]

(15) [VP final clitic /kt/ followed by oblique]

\[
\begin{align*}
&\text{wʔxám=kt} & \text{te=swíte.} \\
&\text{have=1PL.INCL} & \text{OBL=sweater} \\
&\text{‘We have sweaters.’} \ [F_P046] \\
\end{align*}
\]

Note that the present study also allows us to test whether i-phrase final /kt/ has different phonetic properties than p-phrase final /kt/ that is not also i-phrase final at the end of a breath group. This would provide evidence for an intonational phrase (i-phrase), above the p-phrase level, thus resulting in the two levels of phrasing indicated in the above examples. For example, in (14), there are three p-phrases but only one i-phrase; =kt is in final position of the second p-phrase, but is not i-phrase final. In addition, the study looks at both the clitic /kt/ (=kt) and the affix /kt/ (-kt), allowing us to see whether this distinction has any effect on production of /k/ and /t/ in the two cases.

3 Methodology

The 1pl marker /kt/ was chosen for analysis because, in addition to consisting of two voiceless stops, it was expected to occur relatively often. Moreover, as an enclitic or suffix, /kt/ would occupy right edge positions as well as internal positions. Instances of /kt/ were collected from the author’s corpus of recordings made over the course of three years of fieldwork. The data are from fieldwork with two speakers of the ƛ̓q̓emcín (Lytton) dialect of Nleʔkepmxcin. Speakers were recorded on separate channels using a digital audio recorder and individual microphones. The forms examined in this paper all stem from a single breath group (where the breath group corresponds to the intonational phrase in the prosodic hierarchy). Examples come from both elicited examples, as well as spontaneous discourse generated via a range of methodologies (see Caldecott and Koch 2014).
Using Praat (Boersma and Weenink 2013), individual utterances were extracted from master recordings and saved as individual wav files. Using textgrids, consonant and aspiration lengths were marked for /k/ and /t/ in each example. In total, 580 tokens were analyzed. This included 290 tokens of complete consonant durations (phrase final /k/ = 72, phrase internal /k/ = 73, phrase final /t/ = 72, phrase internal /t/ = 73) and 290 tokens of aspiration (phrase final /k/ aspiration = 72, phrase internal /k/ aspiration = 73, phrase final /t/ aspiration = 72, phrase internal /t/ aspiration = 73). However, 5 tokens of phrase internal /t/ yielded no aspiration values because there was no noticeable consonant release and aspiration frication present.

Automated scripts were used to measure overall consonant duration (ms), and the following aspects of consonant aspiration: duration (ms), maximum intensity (dB), and the time point during the aspiration at which the maximum intensity occurred (both as an absolute value in ms, and as a percentage of the overall duration of aspiration). Where there was no aspiration at all, this was noted; if there was no complete /t/ closure (but continuous aspiration from the preceding /k/), this was also noted.

(16) Acoustic phonetic measurements made
   a. entire /k/ and /t/ consonants:
      • duration (ms)
   b. /k/ aspiration and /t/ aspiration:
      • duration (ms)
      • maximum intensity (dB)
      • time of maximum intensity (ms)
      • time of maximum intensity as percentage of overall aspiration duration (%)
      • absence of aspiration
      • absence of complete /t/ closure

In addition to descriptive statistics, independent samples t-tests were used to conduct the inferential statistical tests. Where necessary, the t-tests were conducted for unequal variances after inspection of F values in Levene’s Test for Equality of Variances, with degrees of freedom adjusted as needed. Because of the number of comparisons performed (20), the significant p-value was adjusted downward to 0.0025.

4 Results

I begin by reporting results for overall consonant duration, and then move on to results for aspiration. I use the following abbreviations: sd = standard deviation, n = number of observations, df = degrees of freedom, t = t-value of the
independent samples t-test, $d = $Cohen’s $d$ (effect size measure)$^2$. In the tables, significant results are marked with a *. 

Because /k/ values are always clitic or affix internal, being the first phoneme of the 1pl marker /kt/, they serve as a type of control: phrase edge effects are expected for /t/ but not for /k/ (or, at least, to be much stronger for /t/ than for /k/).

### 4.1 Overall consonant duration

In terms of the overall duration of the consonants across all conditions, the duration of /k/ (mean=132.67ms, sd=30.69ms, n=145) and /t/ (mean=118.41ms, sd=74.87ms, n=145) did not differ significantly ($t=2.121$, df=288, $p=0.035$).

Turning to the two conditions of interest, /k/ duration when /kt/ was in phrase internal position (mean=127.28ms, sd=29.56ms, n=73) and phrase final position (mean=138.13ms, sd=31.04ms, n=72) did not differ significantly ($t=2.156$, df=143, $p=0.033$). Although phrase final /k/ trended in the expected direction and was slightly longer in duration, the effect size was also small ($d=0.36$). On the other hand, /t/ duration in phrase internal position was significantly shorter (mean=75.91ms, sd=33.16ms, n=73) than /t/ duration in phrase final position (mean=161.50ms, sd=80.71ms, n=72), as the t-test showed ($t=8.330$, df=94.036, $p<0.001$). These results are summarized in Table 2.

<table>
<thead>
<tr>
<th></th>
<th>/k/ duration (ms)</th>
<th>/t/ duration (ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phrase internal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>127.28</td>
<td>75.91</td>
</tr>
<tr>
<td>sd</td>
<td>29.56</td>
<td>33.16</td>
</tr>
<tr>
<td><strong>Phrase final</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>138.13</td>
<td>161.50</td>
</tr>
<tr>
<td>sd</td>
<td>31.04</td>
<td>80.71</td>
</tr>
<tr>
<td><strong>F test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>0.001</td>
<td>65.289</td>
</tr>
<tr>
<td>$p$</td>
<td>0.971</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td><strong>t-test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$t$</td>
<td>2.156</td>
<td>8.330</td>
</tr>
<tr>
<td>df</td>
<td>143</td>
<td>94.036</td>
</tr>
<tr>
<td>$p$</td>
<td>0.033</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td><strong>Effect size</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$d$</td>
<td>0.36</td>
<td>1.72</td>
</tr>
</tbody>
</table>

Because the phrase-final condition included phrase boundaries that were both i-phrase and p-phrase final, or only p-phrase final, it was hypothesized that these two phrase final positions may have different consonant productions. A difference here would be indicative of /t/ production being affected by being at a p-phrase versus i-phrase boundary. A /t/ produced at an i-phrase boundary was expected to be longest; /t/ at a p-phrase but not i-phrase boundary was expected

[^2]: The standard interpretation of the effect size for Cohen’s $d$ is 0.2 for a small effect size, 0.5 for a medium effect size, and 0.8 and more for a large effect size (Cohen 1988).
to be medial in duration; while phrase-internal /t/ was expected to be shortest. Thus, the tokens in the phrase final condition were split into two groups.

Pairwise comparisons of the groups were consistent with this hypothesis. In the table below, i-phrase final tokens are numbered 1, tokens that are only p-phrase final are numbered 2, while the unaltered phrase internal group is labelled 3. The tokens of i-phrase final /t/ were longest in duration (mean=217.92ms, sd=59.77ms, n=39); /t/ at p-phrase final position were of medial duration (mean=94.82ms, sd=41.82ms; n=33); and phrase internal /t/ productions were of shortest duration (mean=75.91ms, sd=33.16ms, n=73). T-tests showed that i-phrase final /t/ was significantly longer than p-phrase final /t/ (t=7.081, df=69.377, p<0.001), but p-phrase final /t/ was approaching but did not reach significance in comparison to phrase internal /t/ (t=2.603, df=97, p=0.011), though the effect size was a medium one here (d=0.49). These results are summarized in the table below.

<table>
<thead>
<tr>
<th></th>
<th>/t/ duration (ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 i-phrase final</td>
<td>Mean 217.92</td>
</tr>
<tr>
<td></td>
<td>sd 59.77</td>
</tr>
<tr>
<td>2 p-phrase final</td>
<td>Mean 94.82</td>
</tr>
<tr>
<td></td>
<td>sd 41.82</td>
</tr>
<tr>
<td>3 phrase internal</td>
<td>Mean 75.91</td>
</tr>
<tr>
<td></td>
<td>sd 33.16</td>
</tr>
<tr>
<td>F test 1-2</td>
<td>F 8.761</td>
</tr>
<tr>
<td></td>
<td>p 0.004</td>
</tr>
<tr>
<td>t-test 1-2</td>
<td>t 10.237</td>
</tr>
<tr>
<td></td>
<td>df 67.755</td>
</tr>
<tr>
<td></td>
<td>p &lt;0.001*</td>
</tr>
<tr>
<td>Effect size 1-2</td>
<td>d 2.49</td>
</tr>
<tr>
<td>F test 2-3</td>
<td>F 0.076</td>
</tr>
<tr>
<td></td>
<td>p 0.783</td>
</tr>
<tr>
<td>t-test 2-3</td>
<td>t 2.500</td>
</tr>
<tr>
<td></td>
<td>df 104</td>
</tr>
<tr>
<td></td>
<td>p 0.014</td>
</tr>
<tr>
<td>Effect size 2-3</td>
<td>d 0.49</td>
</tr>
</tbody>
</table>

Finally, I examined whether i-phrase final clitic =kt showed differing durations of /t/ than i-phrase final affix –kt. While the affixal /t/ was slightly shorter (mean=203.23ms, sd=58.57ms, n=9) than the clitic /t/ (mean=222.32ms, sd=60.40ms, n=30), the difference was not significant (p=0.408). This suggests that i-phrase final affix and clitic /kt/ are not pronounced differently, despite different morphosyntactic status.
4.2 Aspiration duration and intensity

Aspiration of /k/ and /t/ were measured for duration, maximum intensity, time of maximum intensity, and percentage time of maximum intensity as a measure of the overall duration of intensity (this last measure was undertaken because duration of aspiration varied, so absolute time may not have been an accurate measure of the time of the intensity peak).

For /k/, there were no significant differences in the duration or maximum intensity for aspiration values. This suggests that the clitic or affix internal position of /k/ in the 1pl marker /kt/ meant that its production was not significantly affected by the position of /kt/ relative to a phrase boundary. However, the percentage time of the aspiration maximum did differ significantly in the two conditions, with phrase final /k/ aspiration occurring earlier (mean= 32% of the total aspiration duration) than phrase internal /k/ aspiration (mean=47.18%). This is a possible cue to phrase final status that is realized on the 1pl internal /k/ of /kt/, and was a mid to large effect size (d=-0.66).

<table>
<thead>
<tr>
<th>Table 4</th>
<th>/k/ aspiration results in phrase final versus phrase internal /kt/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>duration (ms)</td>
</tr>
<tr>
<td>Phrase internal</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>sd</td>
</tr>
<tr>
<td>Phrase final</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>sd</td>
</tr>
<tr>
<td></td>
<td>p</td>
</tr>
<tr>
<td>t-test</td>
<td>t</td>
</tr>
<tr>
<td></td>
<td>df</td>
</tr>
<tr>
<td></td>
<td>p</td>
</tr>
<tr>
<td>Effect size</td>
<td>d</td>
</tr>
</tbody>
</table>

Turning to /t/ aspiration in Table 5, its duration was significantly shorter (t=7.816, df=78.754, p<0.0001) in phrase internal positions (mean=27.04, sd=15.51, n=68) than in phrase final positions (mean=89.34ms, sd=65.85ms, n=72). The difference in maximum intensity was also significant (t=-3.162, df=138, p=0.002); interestingly, phrase internal /t/ aspiration showed on average over 3dB greater maximum intensity (mean=59.81dB, sd=6.23dB) than phrase final aspiration (mean=56.74dB, sd=5.21dB), a point I will return to in the discussion. Finally, the percentage time of the maximum aspiration intensity was, as for /k/ aspiration, later in phrase internal positions (mean=65.73%,
sd=23.95%, n=68) than in phrase final positions (mean=47.32%, sd=32.17%, n=72), a difference that was significant (t=-3.873, df=130.975, p<0.0001).

Table 5 /t/ aspiration in phrase final versus phrase internal positions

<table>
<thead>
<tr>
<th></th>
<th>duration (ms)</th>
<th>maximum intensity (dB)</th>
<th>time (ms) of max. intensity</th>
<th>% time of max. intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phrase internal</td>
<td>Mean</td>
<td>27.04</td>
<td>59.81</td>
<td>18.24</td>
</tr>
<tr>
<td></td>
<td>sd</td>
<td>15.51</td>
<td>6.23</td>
<td>10.69</td>
</tr>
<tr>
<td>Phrase final</td>
<td>Mean</td>
<td>89.34</td>
<td>56.74</td>
<td>31.46</td>
</tr>
<tr>
<td></td>
<td>sd</td>
<td>65.85</td>
<td>5.21</td>
<td>40.28</td>
</tr>
<tr>
<td>F test</td>
<td>F</td>
<td>138.436</td>
<td>3.171</td>
<td>13.686</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>&lt;0.001</td>
<td>0.077</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>t-test</td>
<td>t</td>
<td>7.816</td>
<td>-3.162</td>
<td>2.685</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>78.754</td>
<td>138</td>
<td>81.502</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>&lt;0.001*</td>
<td>0.002*</td>
<td>0.009</td>
</tr>
<tr>
<td>Effect size</td>
<td>d</td>
<td>1.76</td>
<td>-0.54</td>
<td>0.59</td>
</tr>
</tbody>
</table>

In addition, there were 5 phrase internal tokens of /t/ for which there was no release or aspiration of any sort apparent in the waveform and spectrogram (hence the n of 68 rather than 73 for this analysis), while there were an additional 5 tokens where there was no complete closure for /t/, but rather continuous aspiration carrying over from the production of the preceding /k/. Thus, 10/73 tokens in phrase internal position /t/ (13.70%) lacked either aspiration or closure. No tokens in the phrase final data set lacked closure or aspiration. This suggests that lack of complete closure or lack of any aspiration may be a phrase internal but not phrase final consonant characteristic.

Finally, in terms of consonant duration, we saw that p-phrase final /t/ occupied a position between i-phrase final /t/ and phrase internal /t/. In terms of aspiration measures, as shown in Table 6, i-phrase final /t/ aspiration was significantly different from p-phrase final /t/ aspiration in terms of duration, maximum intensity and the percentage time of the maximum aspiration intensity. However, p-phrase final tokens patterned with the phrase internal /t/ tokens, and showed no significant differences from phrase internal /t/ in terms of aspiration measures: even though p-phrase final aspiration duration was slightly longer on average than phrase internal aspiration duration, the effect size was relatively small (d=0.29). This suggests that increased aspiration duration is primarily a marker of i-phrase boundaries. However, it should be again noted that phrase internal /t/ tokens did sometimes lack aspiration or closure altogether, something that was not observed in p-phrase final /t/ tokens.
Table 6 /t/ aspiration for i-phrase final, p-phrase final and phrase internal /t/

<table>
<thead>
<tr>
<th></th>
<th>duration (ms)</th>
<th>maximum intensity (dB)</th>
<th>time (ms) of max. intensity</th>
<th>% time of max. intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 i-phrase final</td>
<td>Mean 136.86</td>
<td>54.52</td>
<td>40.75</td>
<td>28.88</td>
</tr>
<tr>
<td></td>
<td>sd 49.61</td>
<td>3.32</td>
<td>52.51</td>
<td>28.22</td>
</tr>
<tr>
<td>2 p-phrase final</td>
<td>Mean 33.18</td>
<td>59.38</td>
<td>20.47</td>
<td>68.92</td>
</tr>
<tr>
<td></td>
<td>sd 26.36</td>
<td>5.82</td>
<td>9.77</td>
<td>21.34</td>
</tr>
<tr>
<td>3 phrase internal</td>
<td>Mean 27.04</td>
<td>59.81</td>
<td>18.24</td>
<td>65.73</td>
</tr>
<tr>
<td></td>
<td>sd 15.51</td>
<td>6.23</td>
<td>10.69</td>
<td>23.95</td>
</tr>
</tbody>
</table>

F test 1-2

|              | F 13.908      | 9.06                    | 18.279                       | 2.217                    |
|              | p <0.001      | 0.004                   | <0.001                       | 0.141                    |

T-test 1-2

|              | t 11.300      | -4.244                  | 2.365                        | -6.688                   |
|              | df 59.697     | 48.954                  | 41.093                       | 70                       |

Effect size 1-2

|              | d 2.93        | -1.21                   | 0.74                         | -1.60                    |

F test 2-3

|              | F 0.449       | 0.432                   | 0.027                        | 0.753                    |
|              | p 0.504       | 0.512                   | 0.871                        | 0.393                    |

T-test 2-3

|              | t 1.501       | -0.334                  | 1.009                        | 0.650                    |
|              | df 104        | 99                      | 99                           | 99                       |

Effect size 2-3

|              | d 0.29        | -0.07                   | 0.20                         | 0.13                     |

5 Discussion

The phonetic analysis reported above tested whether there was any evidence for different consonant duration and aspiration measures depending on phrasal position. The consonants examined were /k/ and /t/ in the 1pl marker /kt/, and these were measured for overall duration; aspiration duration; and maximum aspiration intensity and timing. Tokens that were, based on Koch (2010), claimed to be phrase final and phrase internal were analysed. In addition, the present study conducted an additional post-hoc comparison, splitting the phrase final group into two: those tokens expected to be i-phrase final versus strictly p-phrase final.

5.1 Consonant duration

The results showed that consonant duration was a reliable indicator of phrase final position, with longer duration of /t/ in phrase final than phrase internal positions. Moreover, /t/ at a final i-phrase boundary was longer than /t/ at a final p-phrase boundary, which in turn was longer than phrase internal /t/ (though the latter difference was not quite significant, this may have been because of smaller numbers of observations once the phrase-final group was split into two; the effect size was a medium one, $d=0.49$). This provides evidence for two
categories of phrasal groupings (here labelled i-phrase and p-phrase), which are above the level of the clitic group. For example, repeating example (7) below as (17) but adding a level for the clitic group, we see that this differs from the p-phrase and i-phrase: tokens of /kt/ after initial auxiliaries had significantly shorter /t/, not being at a p-phrase boundary.

\[(17) \quad ( \quad )_{\text{i-phrase}} \quad [\text{VP internal clitic /kt/}] \]
\[(\quad )_{\text{p-phrase}} \quad ( \quad )_{\text{cl-group}} \]
\[x^\text{wūy}=\text{kt} \quad nēs \quad tēw-cn-me. \]
\[\text{FUT}=1\text{PL.INCL} \quad \text{go} \quad \text{buy-mouth-INTRANS} \]
\[\text{‘We’re going to go grocery shopping.’}\]

In these cases of complex verbal predicates, with one or more auxiliaries in addition to the main verb, the first auxiliary attracts the second position clitics. This shows us that auxiliaries count as prosodic words. Yet, in Nleʔkepmxcin, the p-phrase is built around a larger unit that includes more than one prosodic word, unlike Lushootseed (Beck 1999). Entire verbal predicates appear to form a single p-phrase.

Similar results were found for affixal /kt/ in complex nominal predicates. For example, in (18), the 1pl emphatic pronoun is a separate prosodic word from puš ‘cat’, yet these /kt/ similarly showed acoustic properties different from the group hypothesized to be phrase final. This again suggests a single p-phrase mapping to the syntactic DP (Determiner Phrase) ‘our cat’.

\[(18) \quad ( \quad )_{\text{i-phrase}} \quad [\text{DP internal affix /kt/}] \]
\[(\quad )_{\text{p-phrase}} \quad ( \quad )_{\text{p-phrase}} \]
\[\ldots e=\text{puš-kt} \quad \text{nmíml}. \]
\[\ldots \text{DET}=\text{cat-1PL.POSS} \quad 1\text{PL.EMPH} \]
\[\text{‘… our cat.’ [F_P769a-4]}\]

The lengthening effects found for /t/ in phrase final positions are in line with previous findings (Koch 2008, 2011) that there is significant final lengthening of vowels in Nleʔkepmxcin, showing that phrasal lengthening also includes at least some consonants. Interestingly, /k/ duration was not significantly different when /kt/ was phrase-internal versus phrase-final (though the overall pattern was as expected, with phrase final /k/ tokens about 10ms longer, on average, than phrase internal tokens). This suggests that consonants not at clitic or affix boundaries are not affected here. Moreover, /kt/ as a possessive affix and as an agreement clitic showed the same effects for duration increase at phrase-final positions, suggesting the surface phonological string was not sensitive to morphosyntactic status for this measure of pronunciation.
5.2 Aspiration

Turning to aspiration, this measure also distinguished /kt/ production in different phrasal positions, though in a different way from overall consonant duration. The phrase final group /t/ had aspiration that was longer, and with an earlier intensity peak in terms of where the peak occurred as a percentage of overall aspiration duration. /k/ aspiration also showed an earlier intensity peak for phrase final tokens of /kt/. Overall, phonologically, this suggests phonological aspiration of /t/ in phrase final but not phrase internal positions. The /k/ of the 1pl /kt/ marker, on the other hand, was aspirated in all positions.

When the phrase final group was split into i-phrase and p-phrase final subgroups, it was shown that the aspiration measures were relevant for i-phrase final /t/ only, and not for p-phrase final /t/. This suggests that aspiration cues are greater at i-phrase but not p-phrase boundaries, while overall /t/ duration is the primary marker of a final p-phrase boundary. However, there are a few other indicators that suggest p-phrase and phrase internal /t/ tokens were differently marked even for aspiration measures: only /t/ tokens in the phrase internal group sometimes lacked aspiration or /t/ closure altogether, something that was not observed for p-phrase final group. Overall, then, aspiration measures were consistent with the proposal that both i-phrases and p-phrases are relevant for consonant production in Nleʔkepmxcin.

Interestingly, the maximum intensity of /t/ aspiration showed a higher mean in phrase internal positions. This is somewhat surprising if these tokens are meant to be phonologically unaspirated. When the sound files were coded, /t/ aspiration was marked when there was any indication of a release in the waveform or any indication of high frequency aspiration in the spectrogram. Even a phonologically unaspirated /t/ will create some release burst. The higher maximum intensity could well be a product of two factors. First, these release bursts were much shorter in duration, allowing for a higher absolute intensity (that is, if energy was measured over the entire release burst, it would be far higher in the phrase final position, something already reflected in the duration difference of aspiration). Secondly, the phrase internal /kt/ tokens occurred earlier in the breath group, so the absolute higher value of intensity could just be a factor of occurring earlier in the declination group.

5.3 On some misalignment of phonological and syntactic phrases

An additional reason why the acoustic properties of p-phrase final /kt/ were not found to be as distinct from phrase internal /kt/ (as opposed to i-phrase final /kt/) is likely due to a misalignment of the syntax-prosody interface in some instances. At least some cases of p-phrase final /kt/ were followed by additional clitic material, but from a different syntactic phrase. It appears that principles of syllabification (preferably making the /t/ an onset with a following resonant clitic, for example) conspire to add additional phonological material after a /kt/ that is syntactic phrase final. This removes the /t/ by one segment from the p-
phrase boundary, and also makes it an onset (which are less or perhaps phonologically unaspirated – Thompson and Thompson 1992:4), thus reducing the duration and aspiration values for some of the p-phrase internal /kt/ data.

For example, in (19), there are two adjuncts, a Preposition Phrase ne citxt\u2018\u2018at our hours’ and a temporal clause e krîșməs us \u2018at Christmas’ (more literally: ‘when it was Christmas’). Syntactically, the first is a PP (Preposition Phrase) and the second a CP (Complementizer Phrase). The CP is introduced by the complementizer e, a morphosyntactic proclitic.

\begin{align*}
(19) & [\text{PP}] \quad [\text{CP}] \\
& n=e=citx\text{-}kt \quad e=krîșməs=us. \\
& \text{in=}\text{DET=}\text{house-1PL.POSS} \quad \text{COMP=}\text{Christmas=}3\text{CNCL} \\
& \text{‘… at our house at Christmas.’} \ [F_{P055a}] \\
\end{align*}

However, in the actual phonological parse, this morphosyntactic proclitic seems to phonologically encliticize after the /kt/ in the preceding syntactic unit. This is shown in (20). The effect is to make the /t/ of /kt/ an onset, rather than a coda at the end of the p-phrase. The preference for onsets overrides the alignment of the syntactic and phonological units. The CP is thus split across two phonological phrases: the e encliticizes onto the initial p-phrase, while the remainder of the CP is in its own p-phrase.

\begin{align*}
(20) & [\text{PP}] \quad [\text{CP}] \\
& (\quad )_{i\text{-phrase}} \quad (\quad )_{p\text{-phrase}} \\
& (\quad )_{p\text{-phrase}} \quad (\quad )_{p\text{-phrase}} \\
& n=e=citx\text{-}kt \quad =e \quad krîșməs=us. \\
& \text{in=}\text{DET=}\text{house-1PL.POSS} \quad =\text{COMP} \quad \text{Christmas=}3\text{CNCL} \\
& \text{‘… at our house at Christmas.’} \ [F_{P055a}] \\
\end{align*}

Thus, unsurprisingly, phonological phrasing principles can override syntactic phrasing in at least some cases. Another instance like this is shown in (22) below.

\section*{5.4 Corrective focus phrasing}

It is worth mentioning some additional interesting cases of /kt/. In a language where some lexical items (such as /kt/ for ‘we’ or ‘our’) are expressed through a phonetic form consisting solely of consonants, we may wonder how they are emphasized, such as in corrective focus contexts. In many languages like English, focus marking is realized through additional prosodic prominence on the focused constituent, and this additional pitch, intensity and duration is most noticeable on vowels and other resonants. How would one mark emphasis on purely consonantal material (moreover: purely voiceless obstruents), like /kt/, or would one mark it at all? Example (21) shows a case in which the speaker marks meta-linguistic corrective focus on /kt/, after the preceding speaker uses a different person marker. She corrects the form to /kt/, and does so by
emphasizing the aspiration on both consonants involved, and inserting a phrase boundary after /kt/.

(21) ( )
   ( )p-phrase
   ( )p-phrase

… ?é k=s=w?éx=kt táns …. (21)
… and COMP=NOM=IMPF=1PL.PoCl dance …. ‘… and [WE]FOCUS had to dance …. ’ [787d’”]-3

Both /k/ and /t/ in the /kt/ of (21) have longer duration than the averages reported in tables 2–3 (168.11ms for [k], 270.9ms for [t]). /t/ also has aspiration that is longer (163.61ms) and louder (60.73dB maximum intensity) than the phrase-final average, while the aspiration intensity peak also occurs earlier than average (at 8.66% of the aspiration duration). Finally, /t/ aspiration is followed by approximately 170ms of silence until the release of the /t/ of tans. This suggests that the speaker uses a p-phrase boundary after /kt/ to mark corrective focus on /kt/ here (normally, auxiliaries and verbs are parsed in the same phrase).

Interestingly, I have only documented cases of corrective focus that show this sort of marking; new information focus (as in answering a wh-question), selective focus or contrastive focus don’t seem to employ this strategy. Instead, the preferred strategy is to cleft the 1pl independent emphatic pronoun nmíml to mark focus (Koch 2008). In (22) and (23), nmíml occurs in the focus domain following the ‘only’ cleft predicate cukw, and the ‘persistent’ particle ḥu which gives an ‘only’ meaning (Koch and Zimmermann 2010). While the first example also contains a /kt/ in the initial focus domain, the second example has only the independent emphatic pronoun nmíml in the focus domain after the cleft predicate.

(22) ( )
   ( )p-phrase
   ( )p-phrase

cukw=ḥu? nmíml e=pús-k̓ t =e ?ém’c-n-x̄w.
CLEFT=PERS 1PL.EMPH DET=cat-1PL.POSS =COMP feed-DRV-3O.2SG.TS
‘[Our]FOCUS cat was the only one you fed.’ [F_P769b]
(more literally: ‘It was only [our]FOCUS cat that you fed.’)

(23) ( )p-phrase
   ( )p-phrase

( )p-phrase

cukw=ḥu? nmíml e=?éx kə̓ n-t-éy-s ?éx
CLEFT=PERS 1PL.EMPH COMP=IMPF help-TR-1PL.O.-3TS
( )p-phrase

e=sḵúzeʔ-kt te=ḥuʔsqáyxw.
DET=offspring-1PL.POSS LINK=man
‘[We]FOCUS are the only ones that get help from our son.’ [F_P767d]
(more literally: ‘It is only [us] that get help from our son.’ (other people don’t get help from their sons))
Notice that example (22) is another instance of the sort of syntactic and phonological misalignment discussed in section 5.3. The initial e complementizer in the cleft clause e ñemcnxʷ ‘that you fed,’ generally understood as a morphosyntactic proclitic (e=) on the following clausal material, instead appears to be parsed as an enclitic (=e) in the preceding p-phrase. This is evident since it is lengthened, followed by a short pause, and has no declination reset. As an enclitic on /kt/, the =e enables the /t/ of /kt/ to become an onset, thus reducing the aspiration values of /t/ here.

5.5 Phonological parsing of verbs and arguments

The present study, because the /kt/ clitic is an intransitive verb agreement marker, was limited primarily to intransitive clauses. It was argued that intransitive verbs (plus any additional auxiliaries) form one p-phrase, while oblique arguments or adjuncts form another. Koch (2010), as well as the present study, looked at some cases of the possessive affix /kt/ at the end of arguments in transitive clauses, showing that these pattern with phrase final /kt/, and the phonetic results support this view. This suggests that verbs and arguments are parsed into separate p-phrases in Nleʔkepmxcin, in both transitive and intransitive clauses. Cross-linguistically, this parsing is claimed to be less typical; for example, in English and many other languages, verb and object are typically parsed into one phonological phrase, while the subject is realized in a separate p-phrase (Chomsky 1971; Gussenhoven 1983; Jackendoff 1972; Kahnemuyipour 2004; Selkirk 1995; Selkirk and Kratzer 2007). In a language with underlying transitive V-S-O-Adjunct order, verb and object are split by the subject (where it is expressed), so verb and object are not adjacent. In these cases, either the verb and all arguments must be parsed together, or, as seems to be the case in Nleʔkepmxcin, Lushootseed (Beck 1999), and Okanagan (Barthmaier 2004), the verb is parsed separately from all arguments. There are other languages where verbs and arguments are parsed into separate phonological phrases. Outside the Salish language family, Hayes and Lahiri (1991, on Bengali), Schafer and Jun (2002, on Korean), and Nespor and Sandler (1999, on Israeli Sign Language), also argue for parsing of verb and arguments into individual p-phrases (see also Ishihara 2007: 147–148, ex. 17b, for such parses of some Japanese sentences). This raises interesting questions as to which syntactic units in Nleʔkepmxcin correspond to the prosodic units p-phrase and i-phrase, which (apart from the comments on some syntax-phonology misalignments made above) I will for the moment leave to further research.

6 Conclusion

This paper used a consonant-oriented test to probe phrasal boundary cues of Nleʔkepmxcin clauses. By examining the voiceless stops /k/ and /t/ in the 1pl marker /kt/, I showed that phrase final /t/ is greater in duration, and that this duration is greater at i-phrase boundaries that at p-phrase boundaries. The
aspiration of /t/ phrase finally was longer, and both /k/ and /t/ aspiration had an earlier intensity peak (as measured as a percentage of the overall aspiration duration). On closer inspection, these aspiration cues appeared to be a property of only i-phrase final /t/. P-phrase final /t/ aspiration did still differ from phrase internal /t/, in that only that latter was sometimes completely unaspirated or lacked complete closure during its production.

The results show that consonants can be investigated for reliable cues to phrasal boundaries, good news for the consonant heavy Salish languages. A future investigation might investigate the production of the glottal stop, which frequently ends clitic groups in the demonstrative xeʔ.

On a final note, the results show a pattern of aspiration that is roughly opposite to that of English voiceless stops. While English voiceless stops are strongly aspirated as solitary onsets of stressed syllables, Nleʔkepmxcin stops are strongly aspirated phrase finally as codas (Thompson and Thompson 1992). This is a useful tip for second language learners: aspirate those final stops.

References


Part II
Syntax and semantics
Lillooet irrealis: how real is it?*

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Abstract: The category ‘irrealis’ has been studied for a large number of languages, but remains controversial in that a number of authors question the validity of this term, or the entire existence of the category, as a viable linguistic concept. This paper discusses ‘irrealis’ with regard to Lillooet, within the context of existing observations on this concept.

Keywords: Lillooet, irrealis, aspect, tense, mood

1 Introduction

Over the years a large number of studies have appeared that are devoted to the concept ‘irrealis,’ i.e. (briefly) the linguistic expression of unrealized or not realizable conditions or situations. As an example we can use English phrases like ‘she was here,’ ‘she is here,’ ‘she will be here,’ all of which refer to situations that have been realized, are realized or will be realized, while ‘if she were here (or, ‘were she here’), she would do it’ or ‘I wish she were here’ refer to situations the realization of which has been rendered moot as they do not reflect real or potential facts but unfulfilled conditions or wishes and the like.

In his paper we investigate ‘irrealis’ with regard to Lillooet, but we also need to study the validity of this concept as that has been called into question in a number of recent studies. We explore this latter issue first, in section 2, before turning to Lillooet in section 3.

2 Problems in conceptualizing irrealis

A workable definition of ‘irrealis’ is given in Trask (1993:147):

A label often applied in a somewhat ad hoc manner to some distinctive grammatical form, most often a verbal inflection, occurring in some particular language and having some kind of connection with unreality. Palmer (1968) recommends that this term should be avoided in linguistic theory on the ground that it corresponds to no linguistic content.

*As before, it is my pleasant task to thank my Lillooet (St’át’imcets) consultants for their invaluable teachings, and First Nations University of Canada for providing the job security and stimulating academic environment that made this article possible. Thanks are also due to Christina Mickleborough for priming my interest in the irrealis issue. The responsibility for the contents of this article remains mine alone.

Palmer (1968) has appeared in a second edition as Palmer (2001) to which we will refer henceforth. On p. 148 of that source, Palmer has indeed the following to say on ‘realis’ and ‘irrealis:’

Although they are transparent, it is, perhaps, a little unfortunate that the terms ‘realis’ and ‘irrealis’ have been adopted as grammatical terms in place of the traditional terms ‘indicative’ and ‘subjunctive’.

Palmer’s misgivings are reflected in Bybee (1998:267), “A highly generalized notion such as ‘lacking in reality’ is probably too abstract to be of much communicative use,” Martin (1998:198), “[...] the irrealis category in Mocho [a Mayan language—JvE] is not amenable to a single analysis and is best understood as involving a spectrum of meanings and speaker stances that are neither grammatically nor discursively unified,” Vidal and Manelis Klein (1998:185), “[...] the categorization of all such speech acts [counterfactuals, conditionals, etc. —JvE] as belonging to an irrealis mode is highly variable.”

The above hedgings are neatly summarized in Kinkade’s properly pithy comment “[...] irrealis remains inconsistently defined” (Kinkade 1998:234), followed up in a later work with “[...] linguistic literature has used this term in a variety of ways, often referring to very different phenomena,” and “these papers [in Anthropological Linguistics, vol. 40, no. 2—JvE] clearly do not reflect a single notion of irrealis” (Kinkade 2001:189).

We are thus presented with two problems: (a) is it necessary to use the terms ‘realis’ and ‘irrealis’ in addition to ‘indicative’ and ‘subjunctive,’ and (b) is a term like ‘irrealis’ useful (if it is used at all) when it covers a large range of different notions (which also may vary from one language to another).

As for the first point, although Palmer’s book is thoroughly researched and richly detailed, with a plethora of examples from a wide array of languages, I can still see the usefulness of ‘realis’ and ‘irrealis’ in addition to ‘indicative’ and ‘subjunctive,’ as (to me, at least) ‘indicative’ and ‘subjunctive’ refer to the formal aspects of category-marking, while ‘realis’ and ‘irrealis’ refer to their (admittedly broad and richly varied) semantic functions, comparable to, say, the terms ‘nominative’ and ‘accusative’ indicating the formal markers of ‘subject’ and ‘object’ respectively. Furthermore, there is not always an automatic link between ‘indicative’ and ‘realis,’ as in English ‘I move that she is promoted’ (colloquial equivalent of ‘I move that she be promoted,’ see also section 2.1), where indicative ‘is’ signals the irrealis. There may be a firmer (be it as yet not completely established) relation between ‘subjunctive’ and ‘irrealis,” an issue we explore for Lillooet in sections 3 and 4.

The fact that ‘irrealis’ covers a large number of ostensibly different categories or functions (again, also varying from language to language) should not be a problem either. It would be utterly impractical to invent a new term for a certain formal or semantic category for each language where that language covers related but also different categories under that term. (For example, the fact that Russian uses the genitive for the object of a negative construction, as in ja ne znaju etogu
čeloveka ‘I do not know that person’ [literally, ‘I do not know of that person’], while, for instance, German generally does not [except for archaic expressions like Ich kenne des Menschen nicht] does not require us to come up with different terms for the genitive in Russian or German. Similarly, Van Eijk and Hess (1986) argue for using ‘noun’ and ‘verb’ for Salish, even though these word classes pattern differently in Salish than in, for example, Indo-European, but still share enough qualities with non-salish languages to not abandon these terms. Finally, Matthewson (2010) sensibly uses the term ‘subjunctive’ for the non-factual and non-indicative paradigm in Lillooet, even though “[...] the St’át’imcets subjunctive differs semantically in interesting ways from European subjunctives” [p. 59].

Having proposed that the term ‘irrealis’ is indeed useful and that the fact that it may cover a range of notions is not a problem, we need to define what it actually “does” in any language that employs it. Again, Kinkade (1998:234) hits the nail squarely on the head when he states: “It is necessary to distinguish between that which is actually unreal and an irrealis grammatical category.” Kinkade then mentions negatives, questions, conditionals and subjunctives, and references to the future as expressions that refer to unreal situations, but that are not necessarily marked grammatically (morphologically or syntactically) as unreal. (Note that, in contrast to Palmer, he does not automatically associate or equate ‘subjunctive’ [or ‘conditional’] with ‘irrealis.’) Kinkade then concludes his discussion of unreal vs. irrealis by observing that Upper Chehalis does make a distinction between logical and grammatical unreality (the latter marked in Upper Chehalis with the particle q’at).

2.1 Formal markers of ‘irrealis’

Extrapolating Kinkade’s comments (at the risk of unintentionally misrepresenting them) to a number of languages not mentioned by him we could say that grammatical marking of the irrealis can also consist of a formally distinct paradigm (as in Latin moneam ‘that I warn’ vs. moneō ‘I warn’), or the “raiding” of a realis (indicative) paradigm for forms that could not be used in their realis function (as in English ‘if she were here’ [irrealis] vs. ‘she was here’ [realis], with ‘were’ is taken from the realis expressions ‘you were here’ or ‘we were here’), or an unusual syntactic pattern, such as the inversion in ‘had she been here’ (irrealis) vs. ‘she had been here’ (realis).

Probably the clearest examples of irrealis marking are those cases where a past tense and future tense marker are combined in one form, as in English ‘could,’ ‘should’ and ‘would’ (past tense forms of ‘can,’ ‘shall’ and ‘will,’ all with a future reference). Other examples (taken from Jensen 1990 include Sanskrit a-tar-isy-at ‘he would cross (tar), a-dhar-isy-at ‘he would hold (dhar),’ both with the past tense marker a-..-at and the future tense marker -isy, or Georgian da-v-c’er-di ‘I (v-) would write (c’er) it/Them,’ with the future marker da- and the past tense marker -di.
It should also be observed that sometimes realis and irrealis are not formally distinguished when the ‘indicative’ and ‘subjunctive’ paradigms partially coincide, as in English ‘if she was here’ (realis in ‘if she was here, she should have left that book she borrowed from me’) vs. ‘if she was here’ (irrealis as the colloquial variant of ‘if she were here,’ as in ‘if she was here, she would help us out’). The first use refers to a situation that is truth-testable (she was here or she was not), while the second use refers to a situation that is not, as it merely refers to a hypothetical condition. In Italian, andiamo can mean either ‘we go’ (realis) or ‘let’s go’ (irrealis), depending on context. (We clearly have the latter reading in Don Giovanni’s Andiam! Andiam!, where he seduces Zerlina into joining him in his private chambers.) The fact that Italian distinguishes indicative/realis from subjunctive/irrealis in other parts of its macro-paradigm argues for maintaining that we have two semantically different, though formally identical, forms of andiamo. (There is a partial parallel to the Italian case in English ‘we’re walking’ [instead of ‘let’s keep walking’], as used by a tour guide who needs a group of tourists moving when they are dawdling in front of the art pieces in the museum they are visiting.) Finally, Lillooet čaq ańas expresses both ‘s/he eats it’ (indicative/realis) and ‘let her/him eat it’ (subjunctive/irrealis). We have the latter reading in čaq ańas ¿u? (with the general discourse particle ¿u?, which also moves the stress in the preceding word), in a line from Bill Edwards’ story ‘The man who stayed with the bear,’ where a man is chastised by his kinfolk for bringing home a deer from the hunt without sharing it with the others (in violation of strict hunter’s protocol).

Summing up the above, we can say that the realis expresses truth-testable situations, whether those are real (as in ‘she was here’ or ‘she is here’) or as yet unreal (as in ‘she will be here’), while the irrealis expresses non-truth-testable situations (‘I wish she were here’ or ‘had she been here, she would have done it’). Conditionals (basically ‘if’ constructions) can be either realis, as in ‘if you touch me, I’ll scream’ (the truth of your touching me will be tested at some point), or irrealis, as in ‘if you touched me, I’d scream’ (truth not testable). It is for that reason that Leech (1971:110), from whom these examples are taken, classes the first one as a real condition and the second as an unreal condition. (Note also that ‘had she been here,’ quoted above, is rendered as ‘if she had been here’ [unreal condition] in more colloquial English.)

We now apply our observations to Lillooet.

3 Lillooet irrealis

In addition to an indicative and a factual paradigm, Lillooet also employs a subjunctive, which is used in three different ways, of which at least two have a clear irrealis function.\(^1\) In the first place, when the subjunctive is used by itself,

\(^1\) Prefixes are followed by a period [.] in orthographic transcriptions and a hyphen [-] in morpheme-by-morpheme glosses. Clitics are indicated with the underloop [\], which
without additional morpho-syntactic markers, it expresses an optative mood, as in ‘I (s.?ōnc.a) am the one who shot (qʷiuxit) him’ (indicative, with zero-marking on s?ōnc.a) vs. s.?ōnc-ās kʷu nās ‘let me be the one to go (nas)’ (3sing./subjunctive -as on s.?ōnc), xʷʔaż kʷ.s.ēḷq-ī ‘they did not (xʷʔaż) come (ēḷq)’ (literally, there was not the fact (-s) of their (-ī) coming) (indicative, with zero-marking on xʷʔaż) vs. xʷʔāz-ās kʷ.s.ʔōp-su ‘do not get burnt/scalded’ (‘let it not be the fact of your (-su) getting burnt’ -as 3sing./subjunctive), wāʔ-ēḷq? xʷ?hām ‘he is singing (xʷ?hām)’ (indicative) vs. wāʔ-ās xʷ?hām? xʷ?hām ‘let him (be) sing(ing)’ (subjunctive). For the subjunctive reading of čágʷ ańas see section 2.

In the second place, the subjunctive is automatically triggered by the enclitic əañ which indicates ‘possibility, surmise,’ as in tayt-axʷ-an ‘you (-axʷ) 2sing./subjunctive) must be hungry (tayt),’ vs. tayt-kaxʷ ha ‘are you hungry?’ (-kaxʷ 2sing./indicative; question marker), plán-at əañ wa? pəlp ‘it looks like we (-at 1plur./subjunctive), vs. plán-tkal wa? pəlp ‘we are lost already,’ (-kal 1plur./indicative), wāʔ-as əañ kʷzūsəm ‘it looks like he is working (kʷzūsəm),’ vs. wāʔ kʷzūsəm ‘he is working.’

In the third place, the proclitics t. ‘if’ and ?i. ‘when’ also automatically require the subjunctive, as in t.?i?wa?-min-c-axʷ, t.s.zayton-min-axʷ [t.]s.tám-as kʷ.s.čúni-n, húy-lkan cunámən-ci-n kʷa.ʔisəm ‘if you (–axʷ) come along (?i?wa?) with (–min) me (–c), and you do (s.zayton-min) everything I tell (čun) you, I will teach (cunámən) you how to hunt (ʔisəm),’ ?i.čiň-as ‘a long time ago’ (čiň ‘to last a long time’), ?i.sitst-as ‘last night (sitst),’ ?i.cixʷ-wit-as, s.čúni, tiʔ.ʔu? ‘when they got there, was that ever a surprise (s.čúni) for them’ (cixʷ ‘to arrive there’). Although at first blush, these sentences refer to a real, essentially truth-testable situation (much like Leech’s ‘If you touch me, I’ll scream’) but are combined with a subjunctive, and as such suggest that there is not an automatic link between subjunctive and irrealis, the matter may be more complex than that. We explore this issue further in section 4.

For a far more detailed discussion of the Lillooet subjunctive I refer to Matthewson (2010), which also divides the three functions listed above over nine types of use.

There are also three enclitics which have an irrealis “feel” to them, but might not be irrealis from a Lillooet point of view, since they allow combinations with indicative formations. First of all, there is kℓ (kəł) which roughly translates as ‘may’ and indicates a potential event in the future, as in ?ačx̣ən-ci-lkan.kl mútaʔ ‘I (-lkan) will see (?ačx̣ən) you (-ci) again (mútaʔ)?’ (good-bye expression, possibly calqued from English ‘I’ll be seeing you’), ʔalən-c-ās kℓ ti.s.qačə?-láp,a ‘the dog (s.qačəʔ) of you folks (-lap) may bite (ʔalən) me (–c).’ The irrealis “feel” is reinforced when kℓ is combined with tuʔ which indicates that something is definitely over and done with (as in čák tuʔ ‘it’s all gone,

follows proclitics and precedes enclitics. For these and other morphological markers, see Van Eijk (2013).
finished’). An example of \( k_{1} tu? \) is \( qlîl-mîn\)-cih-as \( k_{3} k_{1} tu? \) ‘he might get mad (\( qlîl \)) at (\( mîn \)) you.’ (The difference between \( kl \) and \( k_{1} tu? \) is largely paralleled by an example like English ‘Cigarette smoking may be hazardous to your health’ [relatively strong possibility] vs. ‘Cigarette smoking might be hazardous to your health’ [weaker possibility], as given in Steele 1975:201.)

In addition to \( kl \), Lillooet employs \( ka \) ‘obligation, expectancy,’ as in \( cûk^{\text{ww}}\text{-}\text{tkân}_{1} k_{2}a_{1} ts_{1}a_{1}^{\text{pl}} \cdot \) ‘I (\(-\text{tkân}\)) should finish (\( cûk^{\text{ww}}\text{un} \)) that (\( ti? \)), \( ñzîm_{1} ka_{1} \həm_{4} k^{\text{ww}}u_{3} \kôm^{\text{ww}}\text{yqqs-}\text{kâl} \) ‘we should have a big (\( ñzîm \)) car (\( kôm^{\text{ww}}\text{yqqs} \))’ (\(-\text{kal} \) ‘our,’ \( \həm_{4} \) ‘antithesis, unfulfilled condition’), and \( \text{ka} \) ‘possibility, surmise,’ as in \( sâm_{1}a_{2}k_{3}^{\text{ww}}u_{3} s.q^{\text{ww}}\text{-}\text{âlôn-tâli} \) ‘it must have been a white person (\( sâm_{1}a_{2} \)) who told (\( s.q^{\text{ww}}\text{-}\text{âlôn} \)) her,’ \( x^{\text{ww}}?t_{3}z_{2} s.a_{3}k_{3}^{\text{ww}} a_{3}^{\text{ww}}s_{3} qit_{3} k^{\text{ww}}u_{3} wa? s.təmâ\text{təwâm}_{-3} \) ‘apparently she did not have many (\( x^{\text{ww}}?\text{it} \)) belongings (\( s.təmâ\text{təwâm} \))’ (\(-s \) ‘her’). Interestingly, \( s.a_{3} \) \( \text{ka} \) overlaps semantically with \( a\tilde{n}_{1} \) in that both indicate a speculation about what may be the case. However, while \( a\tilde{n}_{1} \) refers to an almost inevitable conclusion, \( s.a_{3} \) \( \text{ka} \) refers to a possibility only, as in \( wâ?_{1}\text{-}\text{as} s.a_{3}k^{\text{ww}}\text{zûsəm} \) ‘it looks like he is working’ vs. \( wâ?_{2}s.a_{3}k^{\text{ww}}\text{zûsəm} \) ‘he must be at work (that’s why he is not here).’

The enclitics \( kl_{1}, \text{ka}_{1}, s.a_{3} \) \( \text{ka} \) may also combine with forms in the subjunctive, as in \( ñ\text{invat-wit-}\text{as} k_{1}l_{1} \) ‘I wonder what they (\(-\text{wit-}\text{as} 3\text{plur.}/\text{subjunctive} \) will say’ (\( ñ\text{invat} \) ‘to say what?’) vs. \( ñ\text{invat-wit} k_{1}l_{1} \) ‘what will they (\(-\text{wit} 3\text{plur.}/\text{indicative} \) say?’, \( \text{plan-at} k_{1}l_{1} m k_{4}u_{4} \) ? \( wâ? cîx^{\text{ww}} \) ‘I wish we (\(-\text{at} 1\text{plur.}/\text{subjunctive} \) were there already (\( \text{plan} \))’ (\( cîx^{\text{ww}} \) ‘to arrive over there’) vs. \( \text{plan-at} k_{3}l_{1} k_{2}a_{2} \text{tu}_{1} \) ? \( wâ? \) ‘we (\(-\text{kal} 1\text{plur.}/\text{indicative} \) should have been there already,’ \( \text{kanm-}n_{1} s.a_{3} \) \( \text{ka} \) ‘\(-\text{an} 1\text{sing.}/\text{subjunctive} \) don’t know what happened to me’ (\( \text{kanm} \) ‘what happens?’) vs. \( \text{kanm-}t_{3}k_{4}a_{4} \text{ka} \) ‘what happened to me?’ (\( \text{e.g.}, \) when a person has fainted, breaks out in blotches, has an allergy’) (\(-\text{tkân} 1\text{sing.}/\text{indicative} \). The fact that we have subjunctive forms in combination with \( kl_{1}, \text{ka}_{1}, \text{ka} \), with a true irrealis function, suggests that these enclitics do not create irrealis forms when they combine with indicative forms. It should be noted in this connection that, although Van Eijk (1997) does not describe the Lillooet enclitics in terms of ‘irrealis’ (as indicated in Kinkade 2001:194), Van Eijk’s translations of these enclitics (‘remote future, possibility’ for \( kl \), ‘possibility, surmise’ for \( a\tilde{n}_{1} \) and \( s.a_{3} \text{ka} \), and ‘obligation, expectancy’ for \( ka \), as repeated above) do suggest an irrealis, on the basis of which Kinkade (2001:195) remarks that \( kl_{1}, \text{ka} \) and \( s.a_{3} \) ‘[…] have meanings that are compatible with ‘irrealis’.’

Matthewson, Rullmann, and Davis (2005) provide an insightful discussion of \( kl_{1}, \text{ka}_{1}, \text{ka} \), in relation to the resultative combination \( ka_{1}a_{1} \) (labeled ‘purely circumstantial’ by the authors), assigning two functions (‘deontic’ and ‘irrealis’) to \( ka \) (accordingly divided into \( ka_{1} \) and \( ka_{2} \)), but holding open the possibility of at least a partial unification of these functions (p. 182). For an equally insightful and very detailed discussion of \( s.a_{3} \) and \( a\tilde{n}_{1} \), this time in relation to the reportative marker \( k^{\text{ww}}u_{3} \), I refer to Matthewson, Rullmann, and Davis (2006).
4 Conclusions and outlook

The whole issue of ‘irrealis’ remains a vexingly complex one, as it basically asks the unanswerable question ‘How much wood would a woodchuck chuck if a woodchuck would chuck wood?’ It is therefore understandable that oceans of ink have been spilled on this matter, with some authors blithely using the term, while others seriously question its usefulness. In what follows we briefly touch on two interrelated issues that apply to this problem: (a) the relation of ‘realis’/‘irrealis’ (essentially a type of mood) to ‘tense’ and ‘aspect,’ and (b) the function of the subjunctive in Lillooet.

Unless a language has a completely separate paradigm for the irrealis (much like the subjunctive in Latin), the irrealis may “raid” other parts of the macropradigm, and the past tense seems to be a prime target, as in English “I wish she were here,” “were she here, she would do it” (the latter with both the past tense of “be” and “will,” as commented on in section 2.1). There is also an interesting overlap between aspect and irrealis, in that ‘if she had been here (= had she been here)’ (perfect aspect) can only have an irrealis reading, while ‘if she was here’ (imperfect) can have either a realis or an irrealis reading, as detailed in section 2.1. Similarly to the association between ‘past’ and ‘irrealis’ in English, Steele (1975) proposes that ‘past’ and ‘irrealis’ are linked in Uto-Aztecan. Following Seiler (1971), Steele then uses ‘dissociative’ (which Seiler uses in reference to the optative and the preterit in Greek), to refer to the ‘past’/‘irrealis’ link. On the other hand, Vidal and Manelis Klein (1998) interpret the particles ga’ and ka in respectively Pilagá and Toba as having a general future reference (without being future tense markers, since neither language marks tense grammatically), the irrealis function implied by contextual inference.

It thus remains to be seen whether ‘irrealis’ is primarily associated with the past or the future (or both, as in English ‘could,’ ‘should,’ ‘would’). We turn to this topic briefly in our comments below, with regard to the subjunctive in Lillooet.

As we have seen in section 3, the Lillooet subjunctive clearly expresses the irrealis in its optative function (i.e., when it is used by itself) and in combination with .ani, but it seems to express the realis in ‘if’ and ‘when’ situations (i.e., when combined with fi or ?i). However, it is possible that Lillooet ‘if’ and ‘when’ constructions are, from a Lillooet point of view, seen as unreal in as much that the past (?i) cannot be reached anymore, while a potential future (fi) still falls outside our grasp. We have already commented on the fact that the enclitics kl, ka, k possibly do not indicate the irrealis when combined with forms in the indicative, in spite of the fact that they generally indicate the irrealis when translated into English (in itself a weak criterion), but probably should be interpreted as expressing the irrealis when combined with forms in the subjunctive.

In a broader cultural linguistic context it should be pointed out that what is interpreted as ‘real’ or ‘unreal’ from an English (and general European-based) point of worldview, might not be interpreted in the same way within a different culture. (To give an idea, beings that within the Western canon are classified as fictional, such as mermaids, ghosts, two-headed serpents and the like, may be very
real within the classificatory systems of other cultures.) For example, Hofling (1998:225) mentions the fact that past-perfect and future-irrealis may be marked in similar ways in Itzaj Maya, and then suggests that this is related to a fact he noted in a previous article; namely that “Maya time is largely cyclical time, in which past time periods (e.g., days) are considered to be equivalent to future time periods in a comparable calendric position” (Hofling 1993). Hofling also, on p. 214 of his 1998 article but quoting from his 1993 effort, mentions that “Itzaj narrative discourse suggests a division between what a person knows from personal experience centered in one’s home and town (the actual), and what is less known, but imaginable, further away in space-time.” (Incidentally, Hofling’s observations on Maya space-time also mesh with Whorf’s (1956:63) observation that in Hopi, events happening at a distant location are not seen as happening “now,” as we will not find out about them until later, so that in a sense distance in location is associated with distance in time. An association between past and future is also suggested in Dutch vannacht [1] ‘last night,’ [2] ‘tonight,’ or Lillooet natxʷ, which means ‘tomorrow’ when used by itself, but is also used in the expression ḥi nátxʷ-as ‘yesterday.’)

Of course, issues like these are best explored with fluent speakers of the language in question, who should be encouraged to comment on the forms they provide rather than just deliver them as translations of the English forms put before them. As such, a problem like ‘irrealis’ and the way or ways in which it is marked in any language becomes a powerful argument for involving speakers not only as consultants but also as co-investigators.

In summation, I suggest three areas for further research in connection to ‘irrealis.’ In the first place, and with reference to my remarks above, we need to look deeper into the connection between ‘irrealis’ and tense and aspect, even for a language like Lillooet, of which Van Eijk (1997) claims that it has no tense but that it does have aspect. However, other studies to be consulted in relation to this topic in Lillooet include Glougie (2007) on the difference between the future event indicators xʷuʔ and ḥk, and Davis and Matthewson (2003) on the Lillooet enclitic ḥtuʔ, which, although it generally describes a completed event, the authors describe neither as a tense nor an aspectual marker but a distal demonstrative adverb, be it one that supports a ‘tensed’ analysis of Lillooet over a tenseless one.

In the second place, although ‘irrealis’ presents itself as a very complex topic (and I for one have only scratched the surface when it comes to Lillooet), the complexity of this topic should not prevent us from investigating it as vigorously as we can. As holds true for all forms of language research, continued exploration of ‘irrealis’ will occasion us to finetune and, where appropriate, revise the theoretical constructs we have set up to describe and analyze human language. For example, whereas Palmer (2001) essentially identifies ‘subjunctive’ with ‘irrealis,’ as mentioned in section 2, Matthewson (2010) cogently argues against such an automatic identification (see also her summaries of this on pp. 59 and 102 of her article). Even if the Lillooet subjunctive in ‘if’ and ‘when’ constructions can be shown to serve the irrealis, and no cases of a subjunctive serving a realis can be found in any language, Palmer’s association of ‘subjunctive’ with ‘irrealis’
is correct, but not, in my view, his identification of these two categories with each other.

Finally, the topic of ‘irrealis’ needs to be investigated within a wider Salish context. Kinkade (2001) is an excellent first attempt at reconstructing the Proto-Salish irrealis, but he also admits (p. 199) that “What had appeared to me to be a rather straightforward reconstruction of an irrealis morpheme in Salish turns out to have some rather messy loose ends.” There have been other studies on irrealis, such as Baier (2010) on Montana Salish, and those referenced by Kinkade (including some that do not use the term ‘irrealis’), but much further work is needed. I hope that this very minor effort is a modest but hopefully interest-piquing contribution to such an endeavour.

References


Lushootseed semantic composition and
the structure of the lexicon

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Abstract: In this paper, I present an outline of my dissertation research question which regards the semantic compositionality of Lushootseed roots and stems, and the ramifications of corresponding structures in the lexicon. I touch on the relevant literature and then discuss a computational environment for modeling the problem and investigating the issue.

Keywords: UBCWPL, Implemented Grammar, Semantic Structure, Lushootseed

1 Introduction

While Salishan languages are known for wearing their derivational structure “on their sleeves” (Davis and Matthewson 2009:1098), there is some debate about the productivity of these derivational structures and their encoding with respect to the atomic elements of a lexicon in a synchronic grammar. Davis and Matthewson (2009), argue for what they call the “primacy of the root”, the hypothesis that Salishan roots do contribute semantic content in the synchronic lexicon. This is contra Hess (1993)\(^1\) who claims that using the verb-stem as the basis for lexical organization maximizes the perspicuity of the model—that treating verb roots as atomic units obscures the natural classes which fall out of the data when looking at stems. But the question of what morphological level to treat as atomic in a synchronic model of a Salishan language also has ramifications on semantic composition. I assume a neo-Davidsonian semantics in which verbs introduce event-type variables which are qualified by lexical predicates (Copestake et al. 2005; Davidson 1967; Parsons 1990) and nouns introduce individual-type variables which can serve as role-players in predicates. This basic split into lexical items which introduce events versus those which introduce individuals has ramifications on monotonic semantic compositionally because no matter which level of verbal decomposition one takes as basic (verb root or verb stem), nominalization prefixes are allowed to attach outside of inflectional markers of aspect. So the question arises whether or not to allow the basic units of verbs (be they stems or roots) to be underspecified with respect to semantic variable type (essentially making them semantically neutral with respect to semantic type), only specifying them once they have enough morphology attached that they can no longer become nominal. An alternative might be to allow semantic rewrites of variable types, potentially breaking standard assumptions about the monotonicity of semantic composition.

\(^1\)Davis and Matthewson also cite Mattina (1996) and Willet (2003) as supporting the stems based account.

In this short paper, I provide a little more detail about the problem to be investigated. After that, I present a methodology for exploring the issue and describe the preliminary implementation.

2 Roots and stems

Davis and Matthewson (2009) summarize arguments against the primacy of the root hypothesis as being along two lines: the first being that the semantic relation which holds between roots and derived forms is not always compositional and the second being the existence of accidental gaps in derivational paradigms along with the phenomenon of certain bound roots which do not surface without affixation. Davis and Matthewson reject these arguments by pointing out that existence of idiosyncrasy does not preclude the utility of any generality otherwise gained by describing the non-idiosyncratic forms by rule. That is, a system which accommodates exceptional forms is needed anyway and the phenomenon of linguistic exceptions to general rules is found at all levels of linguistic analysis.

While I accept Davis and Matthewson’s arguments in principle, from the perspective of constructing a working synchronic grammar of Lushootseed, it’s not clear what is to be gained by creating rules to systematically build up by formal composition forms which are semantically non-compositional. What’s more, if Hess (1993) is right about the natural classes of verbs “falling out” of the data when operating with a stems-based approach, the structures in a stems-based grammar should offer greater explanatory value for the synchronic processes of the language than the alternative. However, I hold-off drawing any conclusion on this topic and instead turn to a related issue, one of semantic variable types and its relation to multicategoricity.

3 Semantic variables

I assume a semantic compositionality principle where the meaning of a complex sign is a function of the meaning of its parts (Szabó 2013). Furthermore, as mentioned in the introduction, I assume a neo-Davidsonian approach to semantic representation in which verbal predicates take a characteristic argument corresponding to the event the predicate describes and noun-like predicates take a characteristic argument corresponding to the individual. Minimal Recursion Semantics\(^2\) (MRS) (Copestake et al. 2005) provides a practical encoding of this semantic representation which is amenable to implementation in machine-readable grammars. In

\(^2\)MRS saves space and computation time by allowing an underspecification of quantifier scope in just those places where syntax allows quantifier scope ambiguity as well as a mechanism for constraining quantifier scope where syntax requires it. Algorithms for producing the set of fully scope-resolved logical forms from an underspecified MRS have been published. In this way, MRS provides a compact and efficient representation for sentential semantics but can be translated to logical form when required by particular downstream applications.
MRS, the variable types which fill the argument positions of the elementary predications are either e-type (events/states), x-type (instances, individuals), or h-type. For example, the three elementary predications involved in an MRS representation for the English sentence ‘Kim walks’ are shown in (1). Note that the predications corresponding to the proper name quantifier and the name itself take the variable $x_2$ as their first argument. Similarly, the predication for walk takes the event-type variable $e_8$ as a characteristic argument.

(1) $h_1$:proper_q_rel ($x_2$, $h_3$, $h_4$)
    $h_5$:named_rel ($x_2$, “Kim”)
    $h_7$:walk_v_rel ($e_8$, $x_2$)

Nominalization (or deverbalization) and verbalization patterns in Lushootseed, however, pose challenges for this representation scheme. When a Lushootseed noun such as $sqʷšab$ (‘fog’) is analyzed as derived from the verb $qʷšab$ (‘be foggy’), this begs the question of how to introduce the individual type variable which would typically be introduced by a noun. If we just add a new variable, we risk a proliferation of variables (of conflicting types) which correspond to a single lexical item. If we remove or delete the event-type variable from the underlying verb, we break monotonicity in semantic composition. Another alternative would be to utilize a lexical underspecification in which the characteristic variable of a given item would be underspecified for semantic type in the lexicon. In this scenario, morphological rules would hold off constraining the type until enough morphological material had been added to make a concrete determination. I note that the underspecification alternative, *prima facie*, fits nicely with the primacy of the root hypothesis discussed above. That is, if constraints on monotonicity in semantic composition suggests an analysis in which lexical items have to be underspecified as to semantic type, perhaps the root, not the stem, is the place to hang these underspecified variables.

4 An empirical question

The analytical challenges discussed above and the question of which set of analyses is to be preferred is, under certain assumptions, an empirical one. Or, it can become an empirical one given: (1) a fleshed-out, concrete theory of grammatical structures which allows implementation; (2) a testing environment including procedures for applying the competing grammatical models to linguistic data in order to evaluate the analyzed structures as well as procedures to evaluate structures of the grammatical models themselves; and (3) competing implementations corresponding to competing sets of hypotheses about linguistic structures. To this sort of quantitative analysis one can also add a qualitative evaluation of the competing grammatical models; that is, one can ask which grammar is easier to update and

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3The latter type is only used MRS-internally for specifying the scope-tree constraints; that is, h-type variables do not map onto semantic variables in a typical logical-form language (http://moin.delph-in.net/ErgSemantics/Basics).
Figure 1: Above: the two subsystems of a text processing system for testing are generated by independent systems which share a lexical resource. Below: the text processing system forms a pipeline connecting orthographic sentences to semantic and syntactic structures.

maintain, which is “simpler” or more elegant (or just less baroque), which is preferable along the lines of having structures which fall into correspondence with other grammars of other languages. In sum, a mathematically precise theory of grammar along with a testing environment allows empirical analysis of linguistic questions. As things stand, (1) is provided by Head-driven Phrase Structure Grammar (Pollard and Sag 1994) as implemented in the DELPH-IN tools and environment. Point (2) is likewise provided by the DELPH-IN tools. In my dissertation project, I am building out (3) in an effort to make the analytical questions discussed above into empirical ones.

Adopting the design architecture argued for in Bender and Good (2005), I am maintaining separate modules for morphophonology and morphosyntax, each of these sharing a lexical database. In order to maximize efficiency in updating and maintaining the system, the two modules are generated by metagrammar systems which access the lexical database for shared resources. The two metagrammar systems and the database fit together to generate a text-processing system. The overview of this architecture is shown schematically in Figure 1.

The electronic versions of the texts in Beck and Hess (2014, 2015) form a development and testing corpus that can be used to compare the performance of competing versions of the grammar. Furthermore, Fokkens (2011, 2014) describes new methodologies for comparing alternative analyses within grammar engineering. The crucial insight is that by using a metagrammar, one can alleviate the grammar-design problem in which early decisions are overly influential on the space of analysis available for later decisions.

4http://delph-in.net/
In sum, I am developing a metagrammar for Lushootseed (and supporting testing environment) intended to serve as a proving-ground for the research questions outlined above and summarized in (2).

(2) What are the ramifications of competing grammatical analyses regarding semantic variables and lexical structure? Specifically, how do different sets of analyses effect:

- the performance of the grammar (coverage, accuracy, overgeneration: when applied to a test corpus)
- the maintainability of the grammar (as a system to be extended, updated, refined)
- the “elegance” of the grammar and its utility to provide insight into the linguistic structures at play in a Lushootseed sentence

5 Conclusion

In my dissertation project, I flesh out a computational model of Lushootseed grammatical structure in order to tease apart the predictions of these competing hypotheses and to examine their ramifications on the design of a working grammar, one in which “all parts have to hang-together”\(^5\) I suggest that the creation of such a test-environment can lead to new insights on questions of linguistic analysis like those described above.

While the initial morphophonological system was described in Crowgey (2014), work has just begun on the morphosyntactic grammar. I have written extraction procedures to backport the original morphophonological system into the lexical database, and to then allow export back to the original structures (future development will take place only in the lexical database—for maintainability and synchrony with the development of the morphosyntactic system). In future work I will report on the results of these efforts. Ideally, the empiricization of the philosophical and analytical questions described above can provide fodder for further refinement of theories on Lushootseed lexical structure and its relation to other Salishan languages.

References


\(^5\)Miellet quotation (Miellet 1903) translated by Emily Bender in Bender (2008).


Evidence for question formation by direct wh-movement in Ktunaxa

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Abstract: This paper gives a short survey of the formation of wh-questions in Ktunaxa, concluding that they are formed by direct movement of arguments to a position on the left periphery of the (matrix) clause. Ktunaxa adheres to at least three strong island constraints as defined in Ross (1967), namely the Coordinate Structure Constraint, the Adjunct Island Constraint, and the Complex Noun Phrase Constraint; additionally, wh-words cannot be predicates, as nouns require a copula to be interpreted as predicative.

Keywords: Ktunaxa, wh-questions, syntax, field work

1 Introduction

The body of work on questions in Ktunaxa (isolate; British Columbia, Montana, Idaho) is sparse. The most thorough descriptive linguistic resources on the language in general are Boas (1927a), Morgan (1991), and Mast (1988), a Master’s thesis examining Ktunaxa morphology as it appears in Boas (1918). The thesis devotes two sections to the broad topic of questions, the first (pp. 90–97) providing an inventory of interrogative/indefinite pronouns, and the second (pp. 108–115) examining participial/interrogative marking.

Previous work has shown several preliminary facts. First, that Ktunaxa interrogative pronouns share their form with indefinites—specifically, Mast (1988) translates qala to ‘who, whose, someone (for humans)’, ka/-ka to ‘how, where (as for manner or location)’, and qapsin to ‘what, why, something (for non-human nouns, both animate and inanimate)’. Second, these words may be obviative (indicated in Ktunaxa with a suffix -s), but cannot be marked for possession or number, and do not show any agreement morphology. Finally, there is a relevant verbal prefix k-/ki-/k- glossed by Mast as “participle/interrog,” which can mark yes-no questions, as well as serving as “a style marker.” (Mast 1988:109) This paper seeks to add to the literature by exploring the status of movement islands in Ktunaxa using existing Ktunaxa reference materials (Kootenai Culture Committee 1999) and original data collected in discussions between the authors. The first author takes responsibility for the theoretical linguistic material presented in this work, while the second author, a speaker of Ktunaxa, vouches for the consistency and validity of the data.

*We would like to thank Martina Wiltshicko for enabling this project to go forward, and Henry Davis for providing direction, and giving thoughtful comments on earlier drafts. All remaining errors are our own.

This work describes how \textit{wh}-questions are formed in Ktunaxa, concluding that they are instances of direct \textit{wh}-movement that conform to the limits of three traditional movement islands outlined in Ross (1967). Section 2 gives a general introduction to Ktunaxa sentence structure in several subsections focusing on declarative sentences (Subsection 2.1) and canonical cases of \textit{wh}-questions (Subsection 2.2). Following this, Subsection 3.1–3.3 illustrate that Ktunaxa abides by the restrictions on movement that were described in Ross (1967). Finally, Section 4 concludes and gives directions for future work on this topic in this language.

2 Survey of Ktunaxa clauses

2.1 Declarative sentences, complementizer \textit{k}

Default Ktunaxa word order is verb-initial, with some variation permitted in word order for information structural effects (topics and foci can precede the verb, specifically). Verbs also agree with all of their arguments (subject and object for transitive verbs, subject for intransitive verbs), though not for indirect objects of ditransitive verbs (Mast 1988:30).

A few notes on conventions: this squib uses the orthography from the reference dictionary, rather than a closer phonetic transcription. One consequence of this is that what Mast (1988) analyzed as subject-marking prefixes are written as separate words, which has the superficial effect of making Ktunaxa look as though it has SVO word order—however, since these morphemes are bound and do not allow free-standing words to intervene between them and the verb, the generalization that Ktunaxa is verb-initial still holds. Additionally, since the present work focuses on whole-word syntax rather than morphology or morphosyntax, morphologically complex words are provided with simplified glosses.\footnote{Glosses used: 1, 2, 3 = first person, second person, third person; \textit{cont} = Boas and Mast’s “continuative”; \textit{cop} = copula; \textit{comp} = complementizer; \textit{dem} = demonstrative; \textit{dual} = dual (though this gloss may be somewhat inaccurate, as Ktunaxa can also indicate group of three, group of four, which is unusual in a system with a straightforward dual); \textit{ind} = indicative; \textit{neg} = negation; \textit{pl} = obviative; \textit{pl} = plural; \textit{prog} = progressive; \textit{sg} = singular; \textit{sub} = subordinator. A question mark indicates that no applicable gloss could be found.}

The following show some simple declarative sentences: (1a) and (1b) show intransitive verbs with and without a full NP argument, respectively; (2a) and (2b) demonstrate the same, but with transitive verbs.

\begin{itemize}
  \item (1) a. kumnaqalqaʔ-ni mafi sad.face-IND Mary
      ‘Mary looks sad.’
  \item (1) b. hu ɟakunani hu ɟakuna-ni
      1.SG short-IND ‘I’m small/short.’
  \item (2) a. wu·kati martinas erin see-IND Martina-obv Erin
      ‘Erin saw Martina.’
  \item (2) b. hin ɟlakini hin ɟlakili-ni
      2.SG like.3.SG-IND ‘You like him/her.’
\end{itemize}
Embedded clauses in Ktunaxa are distinguished by two main factors: the embedded verb lacks the indicative suffix, and it can be preceded by what this work glosses as a complementizer, $k$—note that in (3a) and (3b) the $k$ affixes to the subject morphology, deleting the $h$- that would be pronounced in a declarative version of this utterance. These attributes (demonstrated in (3a) through (3c) below) are shared with $wh$-questions.

(3) a. $hu$ qakiʔni $ku$ ?umaə
    $hu$ qakiʔ-ni k-hu ?umaə
    1.sg say-ind comp-1.sg laugh
    ‘I said I laughed.’

b. $hin$ qakiʔni $kin$ ?umaə
    $hin$ qakiʔ-ni k-hin ?umaə
    2.sg say-ind comp-2.sg laugh
    ‘You said you laughed.’

c. qakiʔni $’ean$ k?umaə maβis
    qakiʔ-ni $’ean$ k ?umaə
    say-ind John comp laugh
    ‘John said that Mary laughed.’

This $k$ particle has a wide distribution in the language. Mast (1988:109) provides a brief summary:

First, as Canestrelli (1927:7) notes, it marks participles (verbal forms used as nouns) and interogatives. In *Kutenai Tales* it is added to verbs in clauses without interrogative pronouns to indicate yes-no questions; in addition, it is optionally added to verbs which immediately follow interrogative pronouns. It marks subordinate clauses as well as participles. It is used optionally with declarative verbs, perhaps as some sort of style marker.

It can also mark subordinate clauses without distinct overt subjects, as in (4) below.

(4) hin $’elakiʔni$ k $’i·katiʔ$ kiktukliqəł
    hin $’elakiʔ-ni$ k $’i·katiʔ$ k iktuqliqəł
    2.sg like-ind comp look book
    ‘You like to read.’

In light of its specific (though diverse) functions, this paper assumes going forward that $k$ is a complementizer. However, due to the limited scope of this paper, we do not investigate the consequences of this particular classification in more detail, though the topic may be a promising avenue for future research.
2.2 Wh-questions

As noted above, questions in Ktunaxa follow the general template of: \([\text{interrogative pronoun (if a wh-question)}] + k + [\text{verb without indicative morphology}]\). Simple examples are given in (5a) through (5c) below. Additionally, these interrogative pronouns may be interpreted as indefinite when in an argument position, as in (5d) below.

(5) a. qaⱡa k haⱡalaqⱡa
    qaⱡa k haⱡalaqⱡa
    who comp sleepy
    ‘Who’s sleepy?’

b. qapsin k̲in wuⱡa k̲in wuⱡa
    qapsin k-hin wuⱡa
    what comp-2sg see
    ‘What do you see?’

c. qaⱡa k̲in wuⱡa niʔis quk̓ins
    qaⱡa k̲in wuⱡa niʔis qukin-s
    who comp see dem raven-obv
    ‘Who saw the ravens?’

d. hu ḋl̓akiʔnɨ̱ qaⱡa ʔuk̓qna kiʔsuk
    hu ḋl̓akiʔ-ni qaⱡa ʔuk̓qna k-iʔsuk
    1sg like-ind who because comp-?-good
    ‘I like someone because they are so good.’

With respect to interrogative pronouns Ktunaxa differentiates between human arguments, \(qaⱡa\) ‘who’, and non-human arguments, \(qapsin\) ‘what’. Both interrogative pronouns inflect for obviation with an -s suffix, though only in situations where obviation would be appropriate for the argument in the declarative counterpart of the interrogative sentence (for more on obviation in Ktunaxa, see Dryer 1992). The majority of the data in this paper are \(qaⱡa\) questions; though Ktunaxa is sensitive to human/non-human status (particularly in number marking), the behaviours of the two interrogative pronouns seem identical, and the generalizations made for \(qaⱡa\) are expected to hold for \(qapsin\) as well.

Due to the fact that both interrogative pronouns and embedding verbs such as \(qakiʔnɨ̱\) ‘say-ind’ induce the following phrase to be “\(k + \) non-indicative verb,” it could be argued that the interrogative pronouns are themselves predicative. However, nouns in Ktunaxa require an overt copula \(ʔin\) to serve a predicative function, as shown in (6a), (6b), and (7a) below.

(6) a. *hun nakyu
    hun nakyu
    1sg fox
( intentions: ) ‘I am a fox’

b. hun ʔin-ni nakyu
    hun ?in-ni nakyu
    1sg cop-ind fox
    ‘I am a fox.’
(7) a. qaⱡa kiʔin na b. (?ini) məli
    qaⱡa kiʔin na məli
    who COMP-COP DEM COP-IND Mary
    ‘Who is this?’ ‘(It’s) Mary.’
    (as reply to 7a)

This copula is also used to form cleft questions such as (8)—clefts are also employed as a way to repair certain island violations, and will appear in following sections in that capacity.

(8) qaⱡa kiʔin kin wukqa
    qaⱡa kiʔin k-hin wukqa
    who COMP-COP COMP-2.SG find
    ‘Who is it you found?’

Long-range wh-movement is permitted across bridge verbs, as in (9a) through (9c) below. The matrix clause morphology is identical to what would be expected from a local wh-move.²

(9) a. qaⱡa kin qaki k haⱡa-laqa
    qaⱡa k-hin qaki k haⱡa-laqa
    who COMP-2.SG say COMP sleepy
    ‘Who did you say was sleepy?’

b. qapsins k a·qaki məli qukins k səkił ?iks
    qapsin-s k a·qaki məli qukin-s k səkił ?iks
    what-OBV COMP ?-say Mary raven-OBV COMP PROG eat-OBV
    ‘What did Mary say the ravens were eating?’

c. qapsins k qaki məli k səkił ?iks a·qukliʔits
    qapsin-s k qaki məli k səkił ?iks a·qukliʔit-s
    what-OBV COMP say Mary COMP PROG eat-OBV berry-OBV
    ‘What did Mary say was eating the berries?’

Note that the example (9b) is identified as “emphasizing” the eating event; to ask about more specifically what Mary said the ravens were eating, a question such as (10) below (employing the more general wh-word ka·) is preferred.

(10) ka·s k a·qaki məli qukins k səkił ?iks
    ka·s k a·qaki məli qukin-s k səkił ?iks
    where-OBV COMP ?-say Mary raven-OBV COMP PROG eat-OBV
    ‘What did Mary say the ravens were eating?’

²Additionally, in example (9b), the progressive k səkił can also be written or said k skikił.
To sum up, Ktunaxa questions are consistently introduced by an overt complementizer $k$, to whose specifier the $wh$-word moves, either from the same clause, or cross-clausally given the presence of a bridge verb. When $in$ $situ$, $wh$-words may be interpreted as indefinite. And lastly, without an overt copula, $wh$-words (as is the case for Ktunaxa nouns in general) cannot act as predicates.

3 Island constraints

3.1 Coordinate Structure Constraint

As stated in Ross (1967), the Coordinate Structure Constraint (CSC) requires that “[i]n a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.” The latter half of this constraint, specifically banning the movement of one element from a conjunct, holds in Ktunaxa.\(^3\) The conjunction operator in Ktunaxa is the particle $\hat{c}$, a dental affricate; it can conjoin verb phrases and noun phrases, as in (11a) and (11b) below.

(data from Kootenai Cultural Council, pp. 43)

(11) a. puļ navasxu’mi $\hat{c}$ naqwilni
   puļ navasxu’mi $\hat{c}$ naqwil-ni
   Paul sang and dance-$\text{IND}$
   ‘Paul sang and danced.’

   b. piyai $\hat{c}$ puļ qa $\hat{k}$axi
   piyai $\hat{c}$ puļ qa $\hat{k}$axi
   Peter and Paul neg come
   ‘Peter and Paul did not come.’

The sentence (12) below is acceptable as an answer to a general question ‘What did I see?’ However, in a context where the speaker knows only part of the proposition in (12), that speaker cannot then ask about one half of the coordinated object phrase; this results in the ungrammaticality shown in (13a) and (13b).

(12) hin wu’kat-i niʔiy qukin $\hat{c}$ ?a·qukliʔit
    hin wu’kat-i niʔiy qukin $\hat{c}$ ?a·qukliʔit
    2.sg see-$\text{IND}$ det raven and berry
    ‘You saw the ravens and the berries.’

(13) a. *qapsin kin wu’kat $\hat{c}$ ?a·qukliʔit
    qapsin k-hin wu’kat $\hat{c}$ ?a·qukliʔit
    what comp-2sg see and berry
    intended: ‘What did you see and berries?’

\(^3\)Or at least, it holds enough to ban the movement of one member of a coordinate NP in subject or object position. Whether Ktunaxa permits Across-the-Board movement of identical objects (as in ‘What does Mary love and John hate?’) is a topic for another time.
b. *qapsin kin wu·kat qukin ċ?
qapsin k-hin wu·kat qukin ċ
what COMP-2SG see raven and
Lit. ‘What did you see a raven and?’

The sentence in (13b) can become acceptable if the speaker inserts a prosodic break; this then allows the utterance to be interpreted as a question and partial or leading answer, much the same as the English translation.

(14) qapsin kin wu·kat? qukin ċ...
‘What did you see? A raven and...?’

The same pattern holds in subject position. The following examples show a plain declarative sentence, and a question appropriate to ask (answerable with the declarative sentence).

(15) a. kakiswisqani palkiy ċ naʔuti
kaki-swisqa-ni palkiy ċ naʔuti
dual-stand-ind woman and girl
‘A woman and a girl are standing there.’

b. qala k sawisqa
qala k sawisqa
who COMP stand
‘Who’s standing there?’

Questioning only one of the elements of the conjunct results in ungrammaticality:

(16) a. *qala k sawisqa ċ naʔuti
qala k sawisqa ċ naʔuti
who COMP stand and girl
Lit. ‘Who and a girl are standing there?’
(intended: ‘Who and a girl are standing there?’ as echo-question.)

b. *qala k sawisqa naʔuti ċ
qala k sawisqa naʔuti ċ
who COMP stand girl and
Lit. ‘Who a girl and are standing there?’
(intended: ‘A girl and who are standing there?’)

Leaving qala in situ can usually lead to either an indefinite reading or an echo-question reading (see the following sections for examples), but in this particular instance it does not seem to be preferred. Instead, for the declarative form a different word, takaʔlaq ‘another’, is used; for the intended wh-in situ (echo-like) interrogative, cleft questions like (17c) are preferred.
(17) a. */?sawisqaʔni pałkiy ĕ qaɬa
    sawisqaʔ-ni pałkiy ĕ qaɬa
    stand-IND woman and who
    (intended): ‘A woman and someone are standing there.’ OR ‘A woman
    and who are standing there?’

    b. sawisqaʔni pałkiy ĕ ɬaʔakɬaq
    sawisqaʔ-ni pałkiy ĕ ɬaʔakɬaq.
    stand-IND woman and another
    ‘A woman and someone (else) are standing there.’

    c. qaɬa kiʔin k sawisqapmaɬ naʔutis
    qaɬa kiʔin k sawisqapmaɬ naʔuti-s
    who COMP-COP COMP stand.with? girl-OBV
    ‘Who is it standing with the girl there?’

3.2 Adjunct islands

Adjuncts also form islands from which extraction is not allowed (Ross 1967). This
pattern is shown to hold in Ktunaxa; though it is logically possible to seek infor-
mation about arguments within an adjunct (such as the ‘because’ phrase in the
following examples), a speaker cannot do it simply by applying standard question
formation rules, “plugging in” a wh-word at the beginning of the sentence. To
wit, given a declarative sentence such as (18a) below, a speaker can ask about the
subject of the main clause VP—see (18b)—but not the subject or object of the
adjunct—(19a) and (19b), respectively.

(18) a. maɬi kumnaʔałqaʔ-ni ʔukqna ɬeʔans k ɬiʔakɬis erins
    maɬi kumnaʔałqaʔ-ni ʔukqna ɬeʔan-s k ɬiʔakɬi-s erin-s
    Mary sad.face-IND because John-OBV COMP like-OBV Erin-OBV
    ‘Mary looks sad because John likes Erin.’

    b. qaɬa k kumnaʔałwi-тик ʔukqna ɬeʔans k ɬiʔakɬis
    qaɬa k kumnaʔałwi-тик ʔukqna ɬeʔan-s k ɬiʔakɬi-s
    who COMP sad.heart because John-OBV COMP like-OBV
    erins
    erin-s
    Erin-OBV
    ‘Who is sad because John likes Erin?’
(19) a. *qaⱡas k kumnaqalⱡwi-tiks (mali) ?ukqna k ċlakils qa-la-s k kumnaqalⱡwi-tik-s (mali) ?ukqna k ċlakil-s who-obv comp sad.heart-obv (Mary) because comp like-obv ċans ċan-s John-obv
intended: ‘Who is Mary sad because (t) likes John?’
(asking about who likes John, including information that Mary is sad.)

b. *qaⱡas k kumnaqalⱡwi-tiks (mali) ?ukqna ċans k qa-la-s k kumnaqalⱡwi-tik-s (mali) ?ukqna ċan-s k who-obv comp sad.heart-obv (Mary) because John-obv comp ċlakils ċlakil-s like-obv
intended: ‘Who is Mary sad because John likes (t)?’
(asking about who John likes, including information that Mary is sad.)

Leaving the wh-word in situ results in an indefinite reading, but can also be interpreted as a question. For instance, (20a) and (20b) are ambiguous between the two translations given; whether there are prosodic differences between the two forms is uncertain for now, but initial discussion did not result in intense prosodic variation of the sort observable in English echo-questions.

(20) a. mali kumnaqalqa?ni ?ukqna ċans k ċlakils qa-la.
mali kumnaqalqa?-ni ?ukqna ċan-s k ċlakil-s qa-la
Mary sad.face-ind because John-obv comp like-obv who-obv
‘Mary is sad because John likes someone./who?’
(Potential reply: ċan ċlakilni ċan-s. ‘John likes Erin,’ or simply ċan-s. ‘Erin.’)

b. mali kumnaqalqa?ni ?ukqna qa-la k ċlakils ċans
mali kumnaqalqa?ni ?ukqna qa-la-s k ċlakil-s ċan-s
Mary sad.face-ind because who-obv comp like-obv John-obv
‘Mary looks sad because someone/who likes John./?’
(Potential reply: ċan ċlakilni ċans. ‘Erin likes John,’ or simply ċan-s. ‘Erin.’)

The precise semantics of the question interpretation of these sentences is beyond the scope of the present work. They do not seem to necessarily be echo-questions. They might be productively analyzed as questions with declarative syntax (QDS), as they “[appear] to be wh-in-situ […] and may carry interrogative force as a speech act, but from a syntactic perspective [are] declarative clause[s] with a wh-expression in focus” (Bobaljik & Wurmbrand 2014:1).
3.3 Complex NP constraint

The final island addressed by this squib is the Complex Noun Phrase Constraint (CNPC). Specifically, the CNPC states that “No element contained in a sentence dominated by a noun phrase with a lexical head noun may be moved out of that noun phrase by a transformation” (Ross 1967:127). Ktunaxa abides by the CNPC for noun complement clauses in both subject and object positions. Beginning with subjects (which should be the worst case, due to the separate existence of Subject Islands apart from the CNPC), speakers may take a declarative sentence such as (21a) and reform it as a yes-no question, as in (21b).

(21) a. niʔi k haqalpaniʔnam k qakił iłwa mali ʔupqas sił
    niʔi k haqalpaniʔnam k qakił iłwa mali ʔupqas-s sił
    DET COMP story COMP say shoot Mary deer-OBV CONT
    suʔkni
    suʔk-ni
    good-IND
    ‘The story that says how Mary shot and killed a deer is a good one.’

b. niʔi k haqalpaniʔnam qakił iłwa mali ʔupqas, kiʔin
    niʔi k haqalpaniʔnam qakił iłwa mali ʔupqas-s kiʔin
    DET COMP story say shoot Mary deer-OBV COMP-COP
    kiʔsuks?
    kiʔ-suks-s
    COMP-good-OBV
    ‘The story that says how Mary shot and killed a deer, is it a good one?’

However, attempting to create a \(wh\)-question (by movement) which inquires about either of the arguments of the complex NP results in ungrammaticality, demonstrated in (22a) and (22b) on the following page. Note that leaving the \(wh\)-words qa̱la and qapsin in situ in either example would result in normal indefinite readings for either sentence (i.e. ‘The story of how someone shot and killed a deer is a good one,’ ‘The story of how Mary shot and killed something is a good one.’) These in situ counterparts can also be interpreted as questions–be they echo questions or ‘questions with declarative syntax’ à la Bobaljik & Wurmbrand–and the addressee may reply with a fragment answer mali ‘Mary’ or ʔupqas ‘deer (obviative),’ as appropriate.

(22) a. *qa̱la, k haqalpaniʔnam k qakił iłwa ʔupqas isił
    qa̱la k haqalpaniʔnam k qakił iłwa ʔupqas-s i-sił
    who COMP story COMP say shoot deer-OBV ?-CONT
    suʔkni/suk
    suʔk(-ni)
    good(-IND)
    Lit. ‘Who, the story that says \(t\) shot and killed a deer is a good one?’
    (Asking about who shot and killed a deer, including information that the story is a good one.)
When the complex NP is in object position, the same generalization holds. Given a declarative such as (23a) below, speakers may pose it as the yes-no question (23b), but cannot use the wh-questions in (24a) and (24c) to ask about the arguments of the complex NP’s embedded clause.

(23) a. hun hulpañi haqalpañi?nam k qakił iwa mali ḡupqas
hun hulpalin haqalpalni?nam k qakił iwa mali ḡupqa-s
2.sg hear-ind story comp say shoot Mary deer-obv
‘I heard the story that says how Mary shot and killed a deer.’

b. kin hulpalin haqalpañi?nam k qakił iwa mali
k-hin hulpal-in haqalpalni?nam k qakił iwa mali
comp-2.sg hear story comp say shoot Mary
ḡupqas
ḡupqa-s
deer-obv
‘Did you hear the story that says how Mary shot and killed a deer?’

(24) a. *qağa hin hulpalni haqalpalni?nam k qakił iwa ḡupqas
qağa hin hulpal-ni haqalpalni?nam k qakił iwa ḡupqa-s
who 2.sg hear-ind story comp say shoot deer-obv
Lit. ‘Who you heard a story that says t shot and killed a deer?’
(I know you heard a story about someone killing a deer–who was that?)

b. qağa kin hulpalin haqalpalni?nam k qakił iwa
qağa k-hin hulpalin haqalpalni?nam k qakił iwa
who comp-2.sg hear story comp say shoot
ḡupqas?
ḡupqa-s
deer-obv
Who did you hear a story that says they shot and killed a deer?
(I know you heard a story about someone killing a deer–who was that?)
More acceptable ways to ask the questions attempted above use the *wh-in-situ* forms given in (25a) and (25b) below. Speakers also have the option of splitting the query across two sentences (e.g. ‘I know you heard a story about Mary killing a deer. Who was it?’) or using a cleft, as in (25c).

(25) a. hun hułp̣alin haqaḷp̣alin?nam k qakił iłwa qała ʔupqas
    hun hułpaḷ-ni haqaḷp̣alin?nam k qakił iłwa qała ʔupqa-s
1.sg hear-ind story comp say kill who deer-obv
   ‘I heard the story that said how someone/who shot and killed a deer?’
   Potential replies: *man ?ini mali.* ‘It was Mary,’ or *mali.* ‘Mary.’

b. hun hułp̣alin haqaḷp̣alin?nam k qakił iłwa mali qapsins
    hun hułpaḷ-ni haqaḷp̣alin?nam k qakił iłwa mali qapsin-s
1.sg hear-ind story comp say kill Mary what-obv
   ‘I heard the story of that said how Mary shot and killed something/what?’
   Potential replies: *man ?ini ʔupqas.* ‘It was a deer,’ or ʔupqas ‘deer’.

c. qała kiʔin, niʔi haqaḷp̣alin?nam k iłwa ʔupqas
    qała kiʔin niʔi haqaḷp̣alin?nam k iłwa ʔupqa-s
    who comp-cop det story comp shoot deer-obv
   ‘Who was it in that story who killed a deer?’

4 Conclusions and future directions

This work has given evidence for the existence of direct *wh*-movement in Ktunaxa, in contrast with its Salish neighbours, which use predicative *wh*-words in question formation (Kroeber 1999). The major pieces of support for this conclusion are the language’s systematic adherence to the three island constraints listed above (the Coordinate Structure Constraint, Adjunct Island Constraint, and Complex NP Constraint), as well as the fact that nouns and *wh*-words require a copula in order to act as predicates, and are copula-free in plain (i.e. non-cleft) *wh*-questions. Furthermore, the pattern of obviation present in questions involving two third-person
arguments (namely that the object is obviated and the subject not, regardless of which is a wh-word) is consistent with wh-words being generated as arguments rather than as predicates, and triggering obviation fittingly.

An additional consequence of the work presented here is that there is an adjunct-argument asymmetry in Ktunaxa, evinced by the ungrammaticality of movement out of adjuncts, but not out of arguments of bridge verbs. The existence of this asymmetry points to the existence of further structural asymmetries in the clause.

Throughout the earlier sections of this paper, passing reference has been made to areas where this research may be expanded. Specifically, the nature of the k particle, the viability of Across-the-Board movement, and the semantic attributes of questions with declarative syntax might all be productive lines of linguistic inquiry. The following are three other questions and issues that arose in the writing of this work that remain unaddressed here, but may be within the scope of future research.

Whether these wh-indefinites are determiners or NPs is somewhat of an open question. Mast (1988) cites data from Kutenai Tales (Boas 1918) in which the phrase qaⱡa k'amu ‘some child’ appears; however, the second author’s first impression of sentences using qaⱡa as an indefinite determiner was that they were ungrammatical. For instance, qaⱡa patkiy wuⱡati niⱡis qukins intended to mean ‘some woman saw the ravens’ was judged to be questionable at best. It is therefore a possibility that qaⱡa and perhaps qapsin could be used as indefinite determiners in older dialects of Ktunaxa, but younger speakers use the words only as full NPs. However, we have not explored the topic in more detail and we cannot give a conclusive category for the indefinite pronouns at this time.

As for weak islands, we have some preliminary data on wh-islands, given in (26a) and (26b) below, but have not yet discussed the crucial ungrammatical cases. The prediction is that extraction from the embedded phrase headed by a wh-word is banned; given the rest of the data in this paper, this prediction seems likely to hold.

(26) a. hu qaⱡwini qaⱡa k wuⱡat mafis
   hu qaⱡwi-ni qaⱡa k wuⱡat maf-i-s
   1.sg think-ind who comp see Mary-obv
   ‘I wonder who saw Mary.’

b. hu qaⱡwini qaⱡas mafi k wuⱡat
   hu qaⱡwi-ni qaⱡa-s mafi k wuⱡat
   1.sg think-ind who-obv Mary comp see
   ‘I wonder who Mary saw.’

Finally, we have not so much as scratched the surface of multiple-wh questions. Whether Ktunaxa uses multiple wh-fronting (*‘Who what bought?’), or partial (*‘Who bought what?’), or another strategy for inquiring after multiple arguments is a natural next step in its pursuit.
References


Complex predicate-argument relations in Bella Coola

Hank Nater

Abstract: Bella Coola, a head-marking and polysynthetic PSO language, has a few predicate-internal suffixes that are linked with two syntactic arguments; vice versa, such arguments can relate to two or three predicate components. Although these suffixes are paralleled by similar suffixes in other Salish, they (with the exception of CAUS -(s)tu-) differ from those in function and/or origin.

Keywords: Salish, Bella Coola, morpho-syntax, divalency, redirection

1 Introduction

In this brief report on valency-related phenomena in Bella Coola, I consider the morpho-semantics of the predicate base, different types of divalent suffix, relations between the predicate and syntactic arguments, and areal-etymological aspects of the divalent suffixes.

As concerns predicate base properties, note that morpho-semantic traits of Bella Coola verbo-nominals warrant a four-way partition of this class: TR stative / ITR stative / TR active / ITR active (cf. Nater 1984, p. 34). Of these, ITR stative verbs are generally unaccusative, while most ITR active verbs are unergative. (But certain ITR verbs – e.g. those that convey perception or a bodily function, where the degree of subjective control/purpose may vary – can be ambiguous.) This division also holds – but on a distributional, rather than morpho-semantic, basis – where verbo-nominals accept a divalent suffix. For instance, benefactive -tu- is compatible only with ITR active (antipassive) bases, CAUS -tu- with ITR active/stative and detransitive bases, NC CAUS -nix with ITR stative (including adjectival) bases. (In addition, there are ambitransitive verbs and transitive-noun suffixes and adjectives, for which see Nater 1984, pp. 59–60.)

On the other hand, and regardless of TR-ITR and active-stative distinctions, divalent -alst DEPR combines specifically with bases associated with removal or displacement, and applicative suffixes are often found with bases conveying a ritual, artistic expression, mood, or need.

Divalent suffix types and valency structures are outlined in Section 2 below, and BASE–ARGUMENT and SUFFIX–ARGUMENT linking details as such are described in Sections 2.1–2.3. The status of Bella Coola divalent suffixes within Salish is examined in Section 3.

1 Abbreviations used in this paper are: ADJ adjunct, ART article, CAUS causative, DEM demonstrative, DEPR deprivative, DIM diminutive, DIR direct, GEN genitive, IMP imperative, INC inclusive, ITR intransitive, NC non-control, OBJ object, OBL oblique, PART participial, PASS passive, PL plural, POSS possessive, PREP preposition, PROG progressive, RDR redireetive, REFL reflexive, SG singular, SUB(J) subject, TR transitive. Bella Coola examples are copied from my field notes, and Dutch analogues are provided by myself. Contact info: hanknater@gmail.com

A Bella Coola verbo-nominal (noun, verb, adjective) can be combined with one or more suffixes to form a clausal predicate:

(a)  
\[ \text{staltmx-c} \]
\[ \text{chief-1SG.SUBJ} \]
\[ \text{‘I am a chief’} \]

(b)  
\[ \text{sta:ltmx-uul:la-liwa-naw-tqʷ} \]
\[ \text{chief.PL-appearance-…like-3PL.SUBJ-optative} \]
\[ \text{‘let them look like chiefs!’} \]

Within the predicate, which has a \(( ( ( [\text{BASE}] \text{ suffix}) \text{ suffix}) \text{ suffix} ) \ldots\) structure (prefixes being disregarded), suffixes occupy the positions shown below:

<table>
<thead>
<tr>
<th>BASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  [-alst(n)] deprivative ← lexical</td>
</tr>
<tr>
<td>2  aspect</td>
</tr>
<tr>
<td>3  TR [m, amk] applicative</td>
</tr>
<tr>
<td>4  voice</td>
</tr>
<tr>
<td>5  [-tχʷ] optative</td>
</tr>
<tr>
<td>6  [-alst(n)] deprivative ← lexical</td>
</tr>
<tr>
<td>7  [-alst(n)] deprivative ← lexical</td>
</tr>
<tr>
<td>8  [-alst(n)] deprivative ← lexical</td>
</tr>
<tr>
<td>9  [-alst(n)] deprivative ← lexical</td>
</tr>
<tr>
<td>10 [-alst(n)] deprivative ← lexical</td>
</tr>
</tbody>
</table>

| 2  aspect                  |
| 3  TR [m, amk] applicative |
| 4  voice                   |
| 5  [-tχʷ] optative         |

| 1  [-alst(n)] deprivative ← lexical |
| 2  aspect                  |
| 3  TR [m, amk] applicative |
| 4  voice                   |
| 5  [-tχʷ] optative         |

| 1  [-alst(n)] deprivative ← lexical |
| 2  aspect                  |
| 3  TR [m, amk] applicative |
| 4  voice                   |
| 5  [-tχʷ] optative         |

| 1  [-alst(n)] deprivative ← lexical |
| 2  aspect                  |
| 3  TR [m, amk] applicative |
| 4  voice                   |
| 5  [-tχʷ] optative         |

| 1  [-alst(n)] deprivative ← lexical |
| 2  aspect                  |
| 3  TR [m, amk] applicative |
| 4  voice                   |
| 5  [-tχʷ] optative         |

Figure 1: Predicative suffixation

A verb base can itself consist of a root or stem followed by one or more suffixes (subscript numbers are the position indicators used in Figure 1):
Of the suffixes listed above, the divalent ones (printed in boldface in slots 1, 3, 8) have been selected here for further examination.

Note that -(s)tu- ‘causative, benefactive’ (slot 8) originally belonged (along with -(s)txʷ and shorter -(s)t-) in slot 3, but has moved forward and merged with pronominal suffixes (Nater 2014, p. 85). The optative suffix -tχʷ is originally causative -(s)tχʷ ‘make/let it be …!’ ← *-txʷ-χ (Nater 1984, pp. 39–40).

2 Divalent and trivalent linking: types and structures

Below, I categorize, and briefly examine, several types of divalent suffix: Section 2.1 benefactive and deprivative suffixes, Section 2.3 applicative and causative suffixes. In Section 2.2, I mention two lexical suffixes, which are, however, monovalent.

The structure of a Bella Coola clause consisting of a predicate and several arguments is such that the order in which the arguments appear mirrors that of the corresponding morphemes contained in the predicate, except where the base is connected with the SUBJ and/or DIR OBJ, or where a causative or applicative suffix is linked with the TR SUBJ. Thus, in benefactive/deprivative constructions, divalency-marking links connecting the ITR SUBJ/DIR OBJ and OBL OBJ with the predicate form a distinct oscillatory pattern. The figures in Sections 2.1–3 reflect these properties (with “lopsided” links appearing above the constituent level), and show that some predicate components and arguments are connected on more than one level due to the doubly or triply referential role of a suffix, base, or argument. A link conveys one of a number of functions: act or state; gain or loss; include, cause, observe; close, connected, asset; included, caused, observed; being …ed, having …ed; affected, experiencing; actant, includer, causer, observer.

2.1 Benefactive and deprivative suffixes

In Bella Coola clauses with a benefactive/deprivative-marked TR predicate, predicate constituents and arguments are interlinked as follows:
2.1.1 The benefactive suffix

X-(s)tu-B-A ‘A causes B to X’, where X is an ITR active (antipassive) base describing a result-oriented/creative act, can translate into English as benefactive (cf. Nater 1984, pp. 40, 67). The core meaning is here ‘A enables B to get something X-ed’, from which one can derive (i) ‘A gets B to X something’ and (ii) ‘A X-s something for/to B, A benefits B with one’s X-ing’. For the structure of (i) see Figure 9 in Section 2.3.2.1 below, while that of (ii) is presented in Figure 3. Examples are provided in (1)–(3).

(1) tamsul-tu-Ø-t  
    PREDICATE construct.house-CAUS-3SG.OBJ-3PL.SUBJ DEM John
    (i) ‘these people get John to build a house’

(2) tamsul-tu-B-A  
    PREDICATE construct.house-CAUS-3SG.OBJ-3PL.SUBJ DEM John
    (ii) ‘these people build a house for John’
(2) kståʷ-a-l-tu-Ø-c ta_mna-c, tχ  
PREDICATE  
make-antipassive-past-CAUS-3SG.OBJ-1SG.SBJ ART, son-1SG.POSS, ART  
xₜᵤ’t’ksnimtaₜ’aχʷ  
OBL OBJ  
PREP, ART, arrow, DEM  
(i) ‘I got my son to make those arrows’  
(ii) ‘I made those arrows for my son’  

(3) ʔałac’i-tu-ti-c wa_qiqipiį_c ʔała_c’kt’a_ck  
PREDICATE  
narrate-caus-3pl.obj-1sg.subj art, kids art  
prep, art, doing, supposedly  
(i) ‘I get the kids to tell about the things that supposedly happened’  
(ii) ‘I tell the kids about the things that supposedly happened’  

But where the base does not imply a desired result or creation, benefactive interpretations are not acceptable:  

(4) ʔustxʷ-tu-ti-c, ma wa_ʔlkʷ-lx_c  
PREDICATE  
enter-CAUS-3PL.OBJ-1SG.SBJ, maybe  
ART, elders, ART  
‘I may let the elders in’ (NOT *‘I may go in for the elders’)  

(5) ʔałps-l-tu-Ø-xʷ_a ʔa_stan-s ʔiɬ  
PREDICATE  
eat-past-CAUS-3SG.OBJ-2SG.SBJ, ?  
ART, mother-3SG.POSS, ART  
‘did you give his mother something to eat?’ (NOT *‘did you eat something on behalf of his mother?’)  

2.1.2 The deprivative suffix  

The suffix -alst(n) ‘deprivative’ (Nater 1984, p. 71) is associated with a sense of loss implicated by the base (denoting removal or displacement) it combines with. When -alst(n) is deleted from such constructions, the OBL.OBJ becomes the ITR SUBJ or TR DIR OBJ, and the possessor appears as a GEN ADJ, as shown in examples (7) and (9) below. Such redirection also characterizes constructions involving a classifying suffix (see Section 2.2), and is similar to applicative-related redirection considered in Section 2.3 below. The allomorph -alstn occurs in TR forms (Figure 4), while -alst goes with ITR ones (Figure 5).
Compare (6) with (7):

(6) knix-alstn-i-xʷ̣_mas ti_man-c_tx
    PREDICATE DIR OBJ
eat-DEPR-3SG.OBJ-2SG.SUBJ_forever! ART_father-1SG.POSS_ART
    x_a_sqaluc-s_c
    OBL OBJ
    PREP_ART_berries-3SG.POSS_ART
    ‘you are forever eating my father1 out of [his1] berries!’

(7) knix-i-xʷ̣_mas wa_sqaluc-s_c
    PREDICATE DIR OBJ
    eat-3SG.OBJ-2SG.SUBJ_forever! ART_berries-3SG.POSS_ART
    ti_man-c_tx
    GEN ADJ
    ART_father-1SG.POSS_ART
    ‘you are forever eating my father’s berries!’

As indicated above, argument role switching also pertains where the base is ITR stative (unaccusative), as in (8) versus (9):

(8) ?atʔn-alst-s ta_staltnx_χ x_ta_mna-s_χ
    PREDICATE SUBJ OBL OBJ
die-DEPR-3SG.SUBJ ART_chief_ART PREP_ART_son-3SG.POSS_ART
    ‘the chief1 had his1 son die on him’

(9) ?atma-s_c’ ta_mna-s_χ ta_staltnx_χ
    PREDICATE SUBJ GEN ADJ
die-3SG.SUBJ_now ART_son-3SG.POSS_ART ART_chief_ART
    ‘now the chief’s son died’
In example (8), divalency patterns are as shown below:

![Diagram showing base, -alst, SUBJ suffix, ITR SUBJ, OBL OBJ with relationships](image)

**Figure 5** Morpho-syntactic relations in re ITR loss

-alst continues proto-Salish *-als(t) ‘rock, round object’ (Kuipers 2002, p. 205, where Squamish -uy? ‘large object, piece, chunk’ is also mentioned) → ‘bulk, importance’. Hence, knixalstn ‘to eat someone else’s food’ derives from ‘to eat from A what is important for A to have’, ʔatmnalst ‘to have someone die on oneself’ from ‘to lose someone important to death’. (Compare Dutch be-storven ‘having become orphaned or widowed’ ← *be-sterven ‘to become orphaned or widowed’ ← sterven ‘to die’.)

2.2 Lexical suffixes

Like -alst(n), lexical suffixes (specifically metaphoric suffixes and classifiers) can bring about argument redirection after TR bases (Nater 1984, pp. 85–87). But unlike -alst(n), they define the type (use, texture) of property (and are mono-valent rather than divalent), whereas the “loss” or “benefit” connotation is here conveyed by the base alone (which is di- or trivalent). Compare (10) with (11):

(10) ʔulχ-iiχʷ-ɬ-im ma ta_man-c_tχ

PREDICATE SUBJ
steal-hat-past-3SG.PASS maybe ART_father-1SG.POSS_ART
x_\_ta_qayt-l-s_tχ
OBL OBJ
PREP_ART_hat-past-3SG.POSS_ART
‘somebody may have stolen my father’s hat from him’

(11) ʔulχ-ɬ-im ma ta_qayt-l-s_tχ

PREDICATE SUBJ
steal-past-3SG,PASS maybe ART_hat-past-3SG.POSS_ART
ta_man-c_tχ
GEN ADJ
ART_father-1SG.POSS_ART
‘my father’s hat may have been stolen’
The structure of example (10) is:

![Diagram](image)

**Figure 6** Morpho-syntactic relations in re lexical suffix PASS

Next, compare (12) with (13):

(12) kíc’-anl-i-s  ɬa_kikya-cʔiɬ

_PREDICATE_ SUBJ

wash-cloth-3SG.OBJ-3SG.SUBJ  ART_grandmother-1SG.POSS_ART

ɬa_stan-cʔiɬ  x_tu_nup-s_tƛʷ

_DIR OBJ_ OBL OBJ

ART_mother-1SG.POSS_ART  PREP_ART_shirts-3SG.POSS_ART

‘my grandmother washed my mother’s shirts for her’

(13) kíc’-i-s  ɬa_kikya-cʔiɬ

_PREDICATE_ SUBJ

wash-3SG.OBJ-3SG. SUBJ  art_grandmother-1SG.POSS_ART

tu_nup-s_tƛʷ  ɬa_stan-cʔiɬ

_DIR OBJ_ GEN ADJ

ART_shirts-3SG.POSS_ART  ART_mother-1SG.POSS_ART

‘my grandmother washed my mother’s shirts’

The structure of example (12) is presented in Figure 7:

![Diagram](image)

**Figure 7** Morpho-syntactic relations in re lexical suffix TR
2.3 Applicative and causative suffixes

Like benefactive -tu-, but unlike -alst(n) and the classifiers considered in Section 2.2, applicative and causative suffixes are strictly transitivizing.

2.3.1 Applicative suffixes

The two Bella Coola applicative suffixes occur in the following environment:

<table>
<thead>
<tr>
<th>ITR base</th>
<th>-m, -amk</th>
<th>OBJ suffix</th>
<th>SUBJ suffix</th>
<th>TR SUBJ</th>
<th>DIR OBJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>act of X-ing, state of being X</td>
<td>include in one’s (being) X(-ing)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>includer</td>
<td>the one included</td>
<td>being included</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 8** Morpho-syntactic relations in re applicative

2.3.1.1 Applicative -m

The most versatile among all valency-affecting suffixes is -m ‘medium’ (Nater 1984, pp. 61–63). Broadly, ITR verbs with -m are denominal active (unergative), detransitive active (unergative, valency reducing), detransitive stative (unaccusative (mainly anticausative), valency reducing), or detransitive reflexive (valency reducing). Here, we consider transitivizing -m ‘make or find … the object or goal of one’s …ing’, which increases valency (and is not related to ITR -m, see Section 3.1). This is a truly applicative suffix insofar as the OBL OBJ following a predicate without this suffix becomes the DIR OBJ after addition of transitivizing -m to the base, as in (14)–(16).

<table>
<thead>
<tr>
<th>with -m</th>
<th>without -m</th>
</tr>
</thead>
<tbody>
<tr>
<td>(14) talaws-m-i-c c’ayx</td>
<td>talaws-c ?aɬ_c’ayx</td>
</tr>
<tr>
<td>PREDICATE DIR OBJ</td>
<td>PREDICATE OBL OBJ</td>
</tr>
<tr>
<td>marry-INC-3SG.OBJ-1SG.SUBJ DEM</td>
<td>marry-1SG.SUBJ PREP_DEM</td>
</tr>
<tr>
<td>‘I’m marrying her’</td>
<td>‘id.’</td>
</tr>
</tbody>
</table>
(15) ?anayk-m-i-c t’ayx  
  PREDICATE  DIR OBJ  
  want-INC-3SG.OBJ-1SG.SUBJ DEM  
  ‘I want this’  

PREDICATE  OBL OBJ  
  want-1SG.SUBJ PREP_DEM  
  ‘id.’  

(16) qaⱥla-m-i-c wa_qla  
  PREDICATE  DIR OBJ  
  drink-INC-3SG.OBJ-1SG.SUBJ ART_water  
  ‘I’m drinking water’  

PREDICATE  OBL OBJ  
  drink-1SG.SUBJ PREP_ART_water  
  ‘id.’  

2.3.1.2 Applicative -amk

Transitivizing -amk ‘be caused/urged/inspired to (be) … about/with …’ (Nater 1984, pp. 63–64) is, like transitivizing -m, an applicative suffix. (Both suffixes are like Dutch be- ‘to X regarding Y in particular/detail’, as in: ze bespreken de zaak ‘they discuss the matter’ vs. ze spreken over de zaak ‘they talk about the matter’, hij bekeek het huis ‘he viewed the house’ vs. hij keek naar het huis ‘he looked at the house’.) Examples are presented in (17)–(19):  

<table>
<thead>
<tr>
<th>with -amk</th>
<th>without -amk</th>
</tr>
</thead>
<tbody>
<tr>
<td>(17) yayaatw-amk-ii-ti-c t’ayx</td>
<td>yayaatw-ii-c ?aɬ t’ayx</td>
</tr>
<tr>
<td>PREDICATE  DIR OBJ</td>
<td>PREDICATE  OBL OBJ</td>
</tr>
<tr>
<td>happy-INC-DIM-3SG.OBJ-1SG.SUBJ DEM</td>
<td>happy-DIM-1SG.SUBJ PREP_DEM</td>
</tr>
<tr>
<td>‘I am happy about this’</td>
<td>‘id.’</td>
</tr>
<tr>
<td>(18) nuyamɬ-amk-i-c tx</td>
<td>nuyamɬ-c ?aɬ tx</td>
</tr>
<tr>
<td>PREDICATE  DIR OB</td>
<td>PREDICATE  OBL OBJ</td>
</tr>
<tr>
<td>sing-INC-3SG.OBJ-1SG.SUBJ DEM</td>
<td>sing-1SG.SUBJ PREP_DEM</td>
</tr>
<tr>
<td>‘I am singing a song about him’</td>
<td>‘id.’</td>
</tr>
<tr>
<td>PREDICATE  DIR OBJ</td>
<td>PREDICATE  OBL OBJ</td>
</tr>
<tr>
<td>tell story-INC-DIM-3SG.OBJ-1SG.SUBJ</td>
<td>tell story-DIM-1SG.SUBJ</td>
</tr>
<tr>
<td>ART_Raven_ART</td>
<td>PREP_ART_Raven_ART</td>
</tr>
<tr>
<td>‘I am telling a story about Raven’</td>
<td>‘id.’</td>
</tr>
</tbody>
</table>

2.3.2 Causative suffixes

Bella Coola has two causative suffixes: -(s)tu- and -nix. These differ from one another in degree of control/purpose and affiliated pronominal suffix paradigm.
2.3.2.1 Causative -(s)tu-

I mentioned -(s)tu- ‘CAUS TR’ in Section 2.1.1 above. This suffix is compatible with ITR bases, and the associated CAUS template differs from the non-CAUS TR one (Nater 1984, pp. 37–40). It increases valency by adding an argument (causer) to the act described by the base, and ITR SUBJ → DIR OBJ, as in Figure 9. Two examples are given in (20) and (21).

![Figure 9 Morho-syntactic relations in re -(s)tu-](image)

(20) ?aḷps-tu-Ø-s ɬa stanʔiʃ
PREDICATE SUBJ
eat-CAUS-3SG.OBJ-3SG.SUBJ ART_mother_ART
ta_mna-s x tuʔ ṭputx tyʷ
DIR OBJ OBL OBJ
ART_son-3SG.POSS PREP_ART_eulachon_ART
‘the mother gave her son the eulachons to eat’

(21) ka_paxpaaqʷu-u-stu-ti-c ma waʷac’-uks-nu c
PREDICATE DIR OBJ
future afraid-CAUS-3PL.OBJ-1SG.SUBJ maybe ART_dog- PL-2SG.POSS_ART
x tiʔac’ta t’ayx
OBL OBJ
PREP_ART_paddle DEM
‘maybe I will scare your dogs with this paddle’

2.3.2.2 Causative –nix

-nix (and -nixʷ, -nuxʷ) ‘NC CAUS’ (Nater 1984, pp. 68–69) combines with ITR stative (unaccusative-adjectival) bases, and accepts the non-CAUS TR paradigm. It differs from -(s)tu- in that it implies lack of control or purpose: ‘accidentally or unwittingly cause X to …’, ‘find that X has …ed’, ‘find (that) X (is) …’. Like -(s)tu-, -nix is valency-increasing (and ITR SUBJ → DIR OBJ), as in Figure 10. Examples are presented in (22)–(24).
3 Diachrony and areal typology

Here, I treat both archaic and innovative aspects of Bella Coola divalent suffixes.

3.1 Etymologies

The Salish origin of the divalent suffixes discussed in this report is as tabulated in Figure 11 below:
For CAUS /*-nɔxʷ", see Section 4. Note that -mi- replaces applicative -m before the reflexive suffix -cut (Nater 1984, p. 65). Unlike myself, Kiyosawa & Gerdts (p. 46) do not equate Bella Coola -m(i-) with other Salish -mi(n) (but in fn. 19, they do connect -mi(n) with -(a)min, for which see -amk further below). However, the primary meaning (‘use, contact, involvement’) of TR -m is evinced by TR active verb + somatic suffix + TR -m ‘to … something with one’s …’:

(25) cp-ak-m-i-c
   wipe-hand-contact-3SG.OBJ-1SG.SUBJ
   ‘I wipe it with my hand’

(26)ʔał-tmp-aaχalic-m-i-c
   PROG-insert-teeth-contact-3SG.OBJ-1SG.SUBJ
   ‘I’m holding it between my teeth’

(27)ʔiƛ’-aat-m-t-χ
   move-foot-contact-3SG.OBJ.PART-IMP.SG
   ‘move it with your foot!’

-amk is originally complex. I gather that -amk continues *-amǝ(n)-k ‘means-back, middle’ in view of the following points:

- its formal, semantic, and functional resemblance to TR -m (which suggests that …k is suffixal in origin);
- the flexible use/meaning of Salish -(a)min (‘implement, means, oblique-applicative’, see Kuipers, pp. 79 & 132; Van Eijk, p. 417; Speck, pp. 70–71);
- the lack of clear cognates (*-amǝk, *-amik, or the like) in other Salish.

(‘base-teeth’) (Nater 2013 and 2014). 

3.2 Innovations and retentions

Bella Coola applicatives are functionally unlike those in other Salish: they are not used as benefactives or deprivatives (malefactuals). On the other hand, where Bella Coola benefactive formations involve a causative suffix with a range of glosses including ‘… something for somebody’, and where deprivative verbs contain a suffix whose function is derived from another morphological category, other Salish as a rule uses applicatives. Although in Halkomelem, the causative suffix can also be used benefactively, \(-stax^w\) is here added to a TR base, which is not necessarily creation-oriented:

(28) Halkomelem (Kiyosawa & Gerdts, sample 103b)

\[\text{nem} \text{č} \text{ceʔ qaʔ-stax^w tʰən səl̓iʔə} \]
\[\text{go 2SG.SUB FUT steal-CS DET:2POSS grandparent(PL)} \]
\[\text{ʔə kʷθə sciy̓ə} \]
\[\text{OBL DET strawberry} \]

‘You’re going to steal some strawberries for your grandparents.’

(29) Halkomelem (Kiyosawa & Gerdts, sample 104b)

\[\text{nį? ʔə č calaʔl-stax^w kʷθə John ʔə kʷ teləʔ} \]
\[\text{AUX Q 2SG.SUB borrow/lend-CSDET John OBL DET money} \]

‘Did you borrow some money for John?’

The morpho-semantic and distributional mechanisms underlying Bella Coola divalent constructions, too, deviate from other Salish, where:

‘Redirective applicatives are formed on transitive bases, and their precise interpretation—as benefactive, delegative, or malefactive—depends upon the context of the situation and the semantics of the verb. Most transitive verbs form redirectives with benefactive meanings, but redirectives formed on transfer verbs often express malefactive meanings, especially when a source or possessor is the applied object. Relational applicatives are formed on intransitive bases. They frequently have malefactive or adversative meanings, especially with natural or psychological events, and only rarely express benefactive meanings.” (Kiyosawa & Gerdts, p. 27)

The Bella Coola morpho-syntactic details discussed in this paper may also differ from those in other Salish. Nevertheless, the \text{PREDICATE (+ SUBJ) + DIR OBJ + OBL OBJ} clause type associated with benefactive/malefactive is found across Salish (note: in Interior Salish, the subject often precedes the predicate, and the OBL OBJ may precede the DIR OBJ), which is shown in (30)–(34).
(30) Halkomelem (Kiyosawa & Gerdts, sample 1)


\[ \text{An? qʷəł-əc-t-əs ŋə sléni? ŋə kʷəθə spəlil.} \]

\[ \text{AUX bake-RDR-TR-3ERG DET woman OBL DET bread} \]

‘He baked the bread for the woman.’

(31) Shuswap (Kiyosawa & Gerdts, sample 4)

\[ m-k̓úl-x-t-s \]

\[ \text{PERF-make-RDR-TR-3SUB DET woman OBL basket} \]

‘She made a basket for the woman.’

(32) Comox (Kiyosawa & Gerdts, sample 28)

\[ qʷuqʷu-ʔəm-θ-as ŋə tə tθ tiy. \]

\[ \text{drink-RDR-TR-1SG.OBJ-3SUB OBL DET 1SG.POSS tea} \]

‘He drank my tea for me [when I could not finish it].’

‘He drank up my tea [on me].’

(33) Thompson (Kiyosawa & Gerdts, sample 25)

\[ mášx̱times tə s-zélt-ep. \]

//máš-xi-t-uym-es//

\[ \text{break-RDR-TR-2PL.OBJ-3SUB OBL NM-dish-2PL.POSS} \]

‘He broke you people’s dish.’

(34) Okanagan (Kiyosawa & Gerdts, sample 52)

\[ Mary ʕac-xí-t-s iʔ t snk̓läʔsqáʔaʔ iʔ ttwit. \]

\[ \text{Mary tie-RDR-TR-3SUB ART OBL horse ART boy} \]

‘Mary tied the horse for the boy.’

4 Conclusions

As concerns the status of Bella Coola divalent suffixes within Salish, it is clear that the only all-Salish applicative suffix that has survived in Bella Coola (as the transitivizing applicative -m(i-)) is *-mi(n) ‘relational applicative’. *-mi(n) itself is derived from *(a)min ‘OBL OBJ, means, tool’, which also underlies the other applicative suffix (-amk).

Of the three remaining divalent suffixes, the one malefactive (deprivative) suffix -alst(n) is originally lexical, and as such causes ITR SUBJ / TR DIR OBJ → OBL OBJ and GEN ADJ → DIR OBJ redirection. The latter of these is very similar to the OBL OBJ → DIR OBJ shift triggered by applicative suffixes: the role of the GEN ADJ (“victim”, see examples 7 and 9, and cf. example 11) is like that of the OBL OBJ in examples (14)–(19) (right column). Syntactically, however, the GEN ADJ is an adjunct rather than an argument: it is linked – via a POSS pronominal suffix – with the ITR SUBJ or DIR OBJ, not – via an OBL marker – with the predicate.
Both causative suffixes are valency-increasing insofar as an argument (causer/considerer) is added (and IT\text{SUBJ} \rightarrow D\text{IR OBJ}). Unlike \(-m(i-)\) and (to some extent) \(-alst\), neither \(-tu-\) nor \(-nix\) have applicative properties. \(-tu-\), though patently Salish, differs from Salish counterparts in that it has changed its position within the predicate and merged with pronominal suffixes (which now differ from non-CAUS TR suffixes).

The suffix \(-nix/-nxʷ/-nuxʷ\) ‘NC CAUS’ continues \(-nǝxʷ\) ‘NC TR’. But \(-nǝxʷ\) (and \(-n\ldots\) in general) also has a causative connotation in some other Salish: Squamish \(-nǝxʷ\) ‘have \ldots\text{ed (non-volitional (CAUS))}’ (Kuipers 1967, p. 77), Lillooet \(-Vn/-Vn’\) ‘causativizer’ (et alia), \(-nun/-nun’\) ‘to nourish a certain thought on \ldots’ (i.e. ‘consider \ldots’) (Van Eijk, pp. 425–426). It would thus appear that there was already a tendency in proto-Salish for \(*-n-\) (and \(*-nǝxʷ\)) to have, or acquire, the feature \text{CAUS}. In Bella Coola, then, \(-nix/-nxʷ/-nuxʷ\) became the standard NC CAUS suffix under the influence of \(-tu-\) and the (innovative?) \(-t-\) \text{CONTROL} vs. \(-n-\) \text{NON-CONTROL} distinction (for which see Nater 1984, p. 60).

Within Salish, \text{benefactive use of causative} \(-tu-\), strict \text{PSO}_{\text{dir}}O_{\text{obl}} \text{syntax}, and \text{OBL-marking prepositions} are attributes that Bella Coola has in common only with Coastal Salish. These traits lend further support to my thesis that Bella Coola evolved \text{after}, rather than \text{as is too often assumed} \text{– before}, the Coastal Salish ↔ Interior Salish divide, i.e. it has descended from early Coastal (“pre-Coastal”) Salish (see Nater 2013 and 2014 for phonemic, lexical and morphological similarities). The model that reflects this view (Figure 12) differs therefore from e.g. Kiyosawa 2006 (p. 9, after Hinkson, p. 44), who places Bella Coola as having branched off from proto-Salish (and is not led to posit a pre-Coastal node). Note: Nater “Coastal” = Kiyosawa “Proto-Central-Tsamosan”, Nater “Central” = Kiyosawa “Proto-Central”, Nater “Tsamosan” = Kiyosawa “Proto-Tsamosan”, Nater “Interior” = Kiyosawa “Proto-Interior”.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{Figure12.png}
\caption{Bella Coola within Salish}
\end{figure}
In re PREDICATE–ARGUMENT interaction, it remains to be determined to what extent the morpho-syntax, semantic roles of the links, and combinatorial traits described in Sections 2 and 2.1–3 are matched in other Salish. In the meantime, I suspect, in view of the similarities shown in examples (28)–(29) and (30)–(34) (and conclusions drawn in Nater 2013 and 2014), that further research will reveal more morpho-syntactic resemblances between Bella Coola and Coastal Salish than we have seen to date.

References


Part III

Neighbouring languages
**Gitksan gi: A marker of past evidence**

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University of British Columbia

**Abstract:** This paper provides the first targeted investigation of the semantics of the particle *gi* in Gitksan (Tsimshianic). This particle has previously been characterized, both in Gitksan and in related Tsimshianic languages, as a distal deictic marker (Boas 1911, Jóhannsdóttir 2006, Rigsby 1986, Tarpent 1984, 1987, 1998). However, we provide evidence that *gi* does not enforce spatio-temporal distance. Instead, we suggest that *gi* in a declarative sentence conveys that at least one interlocutor had prior evidence for the asserted proposition. The use of *gi* extends to *wh*-questions, in which it conveys that at least one interlocutor had prior evidence for the answer to the question, or for the question itself. Whether *gi* signals the hearer’s knowledge or the speaker’s is determined pragmatically. According to this preliminary analysis, *gi* is a discourse particle with a cross-linguistically unusual property: it encodes information about the knowledge state not of one particular discourse participant (speaker / addressee), but of *either* participant.

**Keywords:** Gitksan, discourse particles

1 **Introduction**

This paper provides the first targeted investigation of the Gitksan particle *gi*, an element which has previously been characterized as a marker of spatio-temporal distance (e.g., Boas 1911, Jóhannsdóttir 2006, Rigsby 1986, Tarpent 1984, 1987, 1998). The use of *gi* is illustrated in (1). In anticipation of our findings, we gloss *gi* as PR.EVID for ‘prior evidence’.  

1 Contact info: tjheins@alumni.ubc.ca, lisa.matthewson.ubc.ca. We are very grateful to our Gitksan consultants Vincent Gogag, Hector Hill, Ray Jones, Barbara Sennott and Louise Wilson, for their patience and skill. Ha'miyaa! We would also like to thank the UBC Gitksan Research Lab: Katie Bicevskis, Kyra Borland-Walker, Colin Brown, Jason Brown, Henry Davis, Catherine Dworak, Clarissa Forbes, Aidan Pine, Alyssa Satterwhite, Michael Schwan and Yimeng Wang. Special thanks to Katie Bicevskis, Henry Davis and Michael Schwan for (proof)reading an earlier version of this paper. This research was supported in part by SSHRC grant #410-2011-0431 and the Jacobs Research Fund.

1 Data are presented in the orthography developed by Hindle and Rigsby (1973). ’ represents a glottal stop or glottalization; hl is a voiceless lateral fricative; ŋ, k and g are uvulars; j is [dz]; vowel length is represented by double vowels. Abbreviations not covered by the Leipzig Glossing Rules: t/t/t/t = series t/t/t/t pronoun, BPG = best possible grounds, CAUS1 = prefixal causative, CAUS2 = suffixal causative, CLCNJ = clausal conjunction, CN = connective, DM = determiner marker, EPIS = epistemic modal, INCEP = inceptive, LV = light verb, PN = proper name, PREP = preposition, PR.EVID = prior evidence, REP = reportative, QUDD = question under discussion downdate, SUBORD = subordinator, T = “T” suffix, YNQ = yes-no question, ¬PPS = ¬p in projected set.

(1) **Context:** Michael has asked George’s name and been told it, but he has forgotten it. So he has to ask:

Michael: Oo naa=hl we-n=gi?
    oh who=CN name-2SG.IL=PR.EVID
    ‘Oh, what’s your name, again?’

George: George=hl we-’y=gi
    George=CN name-1SG.IL=PR.EVID
    ‘My name is George.’ (HH)

We will present novel data showing how *gi* is used in both declarative and interrogative clauses, and argue that it encodes discourse-related notions rather than deictic ones. Specifically, we propose that when *gi* attaches to a declarative clause denoting a proposition *p*, it signals that at least one of the interlocutors had evidence for a salient proposition – usually *p* itself – before the time of utterance. In the second sentence in (1), for example, *gi* is licensed because Michael had been told George’s name before. When *gi* appears in an interrogative clause, as in the first sentence in (1), it signals that at least one of the interlocutors should have known the answer to the question, or at least have heard the question itself, before the time of utterance. We will further argue that the effect of spatio-temporal distance – in particular the frequently cited connection between *gi* and ‘past tense’ (cf. Jóhannsdóttir 2006) – falls out from our analysis without having to be hardwired into the lexical meaning. We will also show that although prior knowledge by at least one interlocutor is required to license *gi*, not every context in which this condition is satisfied allows *gi*. We will derive the observed asymmetry between speaker knowledge and addressee knowledge from Gricean principles.

The paper is structured as follows. In the remainder of the introduction, we provide background on the language, our consultants, our methodology, and the syntactic distribution of *gi*. In Section 2 we summarize prior research on *gi*. Section 3 presents data on the use of *gi* in declaratives and interrogatives. Section 4 presents our preliminary analysis. Section 5 offers a preliminary test of our generalizations on some spontaneous narratives and conversation, and Section 6 concludes.

### 1.1 Language and speaker background

‘Gitksan’ is the name traditionally given by linguists to a chain of dialects spoken along the drainage of the upper Skeena River in northwestern British Columbia, Canada. Gitksan is currently endangered, with fewer than 400 remaining first language speakers (FPCC 2014). Together with neighbouring Nisga’a, spoken in the Nass River Valley, Gitksan comprises the Interior branch of the Tsimshianic language family; though Gitksan and Nisga’a are very closely related and mutually intelligible, both speech communities consider them to be distinct languages (see Rigsby 1987, Rigsby and Kari 1987).

This paper presents data from speakers of three dialects of Gitksan. Our
primary consultants for this research are Vincent Gogag from Git-anyaaw (Kitwancool), Hector Hill from Gijigyukwhla (Gitsegukla), and Barbara Sennott from Ansbayaxw (Kispiox). Some data were additionally checked with Ray Jones (Prince Rupert and Gijigyukwhla) and Louise Wilson (Ansbayaxw, and seasonally Prince Rupert). Each piece of data is annotated with the speaker’s initials. As we will outline below, there is some variation between speakers in their use of gi, though there are many commonalities.

1.2 Methodology

Our primary methods of data collection include the standard semantic elicitation techniques of asking for translations in either direction, asking for acceptability judgments of sentences in specified discourse contexts, and asking for volunteered sentences in specified discourse contexts (Matthewson 2004). We have also examined spontaneous narratives for instances of gi, as well as one recorded conversation between two fluent speakers.

A word is in order regarding the challenge of forming robust empirical generalizations about discourse-dependent elements like gi (see also Grenoble 2007 for discussion). Like all discourse particles, gi is extremely context-dependent, with even very subtle tweaks to the context affecting its acceptability. Even when rigorous efforts are made to control discourse contexts (as we have endeavoured to do throughout), it is never possible to be sure that the speakers are not adding extra contextual information in their minds before judging the utterance. Like most discourse particles, gi is virtually impossible to translate into English, and although speakers offer many insightful comments about the effect of gi, these are only clues to its contribution and are not always consistent. Further adding to the complexity of the situation is that gi is not obligatory even when it is licensed. And finally, cultural issues arise due to the fact that gi indicates prior knowledge, and therefore may be taken to suggest that the addressee should have known something before (even if they don’t). Our consultants often allude to the importance of politeness in Gitksan culture; this may be a factor which sometimes influences the acceptability of gi.

For all these reasons, we do not have results about gi’s usage which are 100% consistent from speaker to speaker and from context to context. However, we have extracted several fairly robust generalizations. Where there is significant or systematic inter-speaker variation, we note this below.

1.3 Distribution of gi

The particle gi appears clause-finally both in declarative sentences and in wh-questions, as shown in (1) above.2 Tarpent (1984) classifies gi in Nisga’a as a postclitic, and Rigsby (1987) marks it with an equals sign (=), the symbol for a clitic. Supporting this, gi is in complementary distribution with the clause-final

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2 There may be a separate gi which can attach to nominals, but we do not address it here.
yes-no question particle *aa*. This yes-no particle is obligatorily present in all (and only) yes-no questions, and *gi* may not co-occur with *aa*, as shown in (2).

(2) **Context:** I have been told Stacy’s name before, but forgot it. I think it might be ‘Stacy’, but I ask to check:

\[
\begin{align*}
\text{Stacy} &= \text{hl wa/we-n=aa?} \\
\text{Stacy} &= \text{CN name-2SG.II=YNQ} \\
\text{‘Is your name Stacy?’}
\end{align*}
\]

* Stacy=hl wa/we-n=aa=gi? \\
* Stacy=hl wa/we-n=gi=aa? (BS, VG)

For *aa*, there is clear phonological evidence that it encliticizes to the preceding word, since it induces voicing of a preceding voiceless obstruent. (See Hoard 1978, Rigsby 1986, Rigsby and Ingram 1990, and Brown 2008: sec. 4.3 on this voicing process.) Since *gi* appears to occupy the same slot as *aa*, we assume it is also an enclitic.

Imperatives also appear to allow *gi*, as shown in (3). The particle is not felicitous the first time Henry orders us to make food, but becomes acceptable when the command is repeated. (A parallel example gave rise to the same results with VG.)

(3) **Context:** Henry comes in to our elicitation session where we are working with Barbara and decides that she needs some food. He says:

\[
\begin{align*}
\text{Henry: } & \text{Jap=hl wineex a-s Barbara(=gi)!} \\
& \text{make=CN food PREP-PN Barbara(=PR.EVID)} \\
& \text{‘Make Barbara some food!’} \\
\text{T.J.: } & \text{Gwi?} \\
& \text{what} \\
& \text{‘What?’}
\end{align*}
\]

\[
\begin{align*}
\text{Henry: } & \text{Jap=hl wineex a-s Barbara(=gi)!} \\
& \text{make=CN food PREP-PN Barbara(=PR.EVID)} \\
& \text{‘Make Barbara some food!’} (BS)
\end{align*}
\]

Our preliminary data from imperatives are very much in line with the data from declaratives and interrogatives we will present below. However, *gi* in imperatives has not been investigated in any detail, so these constructions will be set aside for the remainder of the paper.

2 **Prior research on *gi***

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3 The alternation between *wa* and *we* for ‘name’ in (2) represents a dialect difference: *wa* for BS, *we* for VG. This is part of a systematic *a/e* alternation which will appear in other data in the paper.
Writing about Nisga'a (the 'Nass dialect'), Boas (1911:349–350) states that the suffix -gê marks distance in space and time. Tarpent (1984:366) similarly claims for Nisga'a that 'the postclitic -gi indicates that the topic of conversation is remote from the speaker in place or time or both.' One of Tarpent's examples is given in (4) (glosses slightly updated):

(4) 'Wii sim'ooogit t=nigwood-i'y=gi big chief PN=father-1SG.II=PR.EVID '[either] My father, who lives far away, is a great chief [or] My father, who is dead, was a great chief.' (Tarpent 1984:366)

Tarpent (1998) also presents a similar description of the Southern Tsimshian phrase-final enclitic =ga'a, saying it encodes deictic distance – either physical or psychological – from the speaker.

For Gitksan itself there is very minimal discussion of gi. Rigsby (1986), in his grammar of the language, glosses it as 'DIST' but does not provide discussion. Jóhannsdóttir (2006), in the context of an examination of some aspectual morphemes, analyzes gi as a distal adverb and glosses it as 'past', proposing that gi places the reference time before the utterance time. However, she observes that she has occasionally observed gi in a present tense context, and states that further research is required. The current paper aims to begin filling the gap in work on gi by providing the first detailed attempt at characterizing its empirical properties in Gitksan, and the first discourse-based analysis of it in any of the Tsimshianic languages.  

3 Function of gi in declarative and interrogative clauses

In this section we present the major empirical generalizations about the contexts where gi is and is not licensed, in both declarative and interrogative clauses.

3.1 Repetition of an assertion or question

One very robust case where gi is felicitous is when the speaker is repeating information that has been presented before. One common sub-case of this is in contexts where the addressee has forgotten what they had previously been told, as in (1) above. Further examples of forgetting contexts are given in (5)–(6).

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4 See Matthewson (2015) for analysis of two other discourse particles in Gitksan: ist, which signals that the question under discussion is being downrated, and k'ap/ap, which signals that the negation of the asserted proposition is in the set of projected future common grounds at the time of utterance.
(5) Context: T.J. and Aidan are in Moricetown. They’ve been talking about going there all day. T.J. wasn’t paying attention to where they were driving and he forgot the entire conversation.

T.J.: Hinda wil ‘wil wil-i’m? where COMP around LV-1PL.II
‘Where are we?’

Aidan: Moricetown wil wil-i’m(=gi).
Moricetown COMP LV-1PL.II(=PR.EVID)
‘We’re in Moricetown.’

Consultant’s comment: “The gi says that you weren’t paying attention.”

(6) Context: One of my really good friends is having a dinner party on May 12. He told me about the dinner a while ago, and I told him I will not be there because I’m going up north that week. But he forgot, so he asks me:

Friend: Dim ‘witxw ‘niin go’o=hl luu gwendins-y PROSP arrive 2SG.III LOC=CN in party-1SG.II
e=hl May 12=aa?
PREP=CN May 12=YNQ
‘Are you coming to my dinner party on May 12?’

Me: Nee, dim daa’whl ‘nii’y go’o=hl gigeenix NEG PROSP leave 1SG.III LOC=CN Gigeenix
e=hl ganoottxw tust(=gi).
PREP=CN week DEM.PROX(=PR.EVID)
‘No, that week I’m going up north (to Gigeenix territory).’

Consultant’s comment: “Yeah. Previously mentioned you can use gi.” [Researcher: “If I hadn’t mentioned it before, could I use gi?”] “The first time you don’t need it. No.”

A second subset of repetition cases involve scenarios where the addressee has expressed disbelief and the speaker repeats herself for that reason. An example of this type is given in (7).

(7) Context: Jack and Jill are at the library, reading books about animals. Jill is reading about the Chinese water deer.

Jill: Wan=hl ‘win-am=hl wan goo=hl China(#=gi) sit.PL=CN tooth-ATTR=CN deer LOC=CN China(#=PR.EVID)
‘There are toothed deer in China.’

Consultant’s comment about gi-version: “I would say no; it’s like when

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5 In a similar vein, BS comments in another context that gi “can be used as like a snarky way of saying ‘I told you!’” And HH comments about gi in a forgetting context that “That means he better not forget again. When you put the gi on, it’s like screaming at him, but you’re not really.”
you have to convince somebody.”

Jack: Nee=dii=n sim-e-din=hl he-n!
   NEG=FOC=1SG.I true-say-CAUS2=CN say-2SG.II
   ‘I don’t believe you!’

Jill: Nee! Ap lukw’il wan=hl ‘win-am wan goo=hl
   NEG ¬PPS very sit.PL=CN tooth-ATTRR deer LOC=CN
   China=gi.
   China=PR.EVID
   ‘No! Deer with teeth do live in China.’ (BS)

Consultant’s comment: “She could use the gi to emphasize to him that
she’s right.”

A third set of repetition uses of gi is where the addressee did not hear the
information the first time it was uttered. Examples of this are given in (8)
and (9).

(8) Mary: Hats’-d-i=hl us=hl duus.
    bite-T-TR=CN dog=CN cat
    ‘The dog bit the cat.’

John: Gwi?
    what
    ‘What?’

Mary: Hats’-d-i=hl us=hl duus=gi!
    bite-T-TR=CN dog=CN cat=PR.EVID
    ‘The dog bit the cat!’ (BS)

(9) Context: T.J. has asked Serena what her name is.

Serena: Serena=hl wa’-y(#=gi).
    Serena=CN name-1SG.II(#=PR.EVID)
    ‘My name is Serena.’

T.J.: Guu? Nee=dii=n lax’ni=hl he-n.
    what NEG=FOC=1SG.I hear=CN say-2SG.II
    ‘What? I didn’t hear what you said.’

Serena: Serena=hl wa’-y=gi.
    Serena=CN name-1SG.II=PR.EVID
    ‘My name is Serena.’ (LW)

The consultant for (9) rejects gi when Serena tells T.J. her name for the first
time, commenting that using gi the first time is “rude”, “like insinuating I don’t
have all my faculties. And that how dare I not remember something.”
However, gi is fine in Serena’s second sentence, as T.J. didn’t hear the
information the first time. LW comments that in the repeated sentence, “It’s re-emphasizing her name. Not being sarcast.” Another consultant, RJ, spontaneously commented “That’s when you use gi, when people are hard of hearing.”

Summarizing so far, prototypical contexts for gi in declarative clauses are where the speaker is asserting information that the addressee had prior exposure to (whether they have forgotten, didn’t believe it the first time, or failed to hear). With the two exceptions noted in footnote 6, gi is consistently accepted by our speakers in all these contexts.

We also see a ‘prior knowledge’ effect when gi appears in interrogatives. An example of this was given in (1) above, in which gi appears in the question because the speaker knew the answer before. A similar point is made by the minimal pair in (10)–(11). The consultant judges that gi is acceptable in Katie’s question if she had known before when the next full moon is and temporarily forgot (10), but not if she never knew the answer (11).

(10) Context: Katie wants to know when the full moon is. She knew when it is, but she temporarily forgot.

Daŋ gwi dim hoo luu mitxw hloxs-im aχxw(=gi)?
when what PROSP again in full sun-ATTR night(=PR.EVID)
‘When is the next full moon?’ (BS)

(11) Context: Katie wants to know when the full moon is. She never had any idea when it is.

Daŋ gwi dim hoo luu mitxw hloxs-im aχxw(=gi)?
when what PROSP again in full sun-ATTR night(=PR.EVID)
‘When is the next full moon?’ (BS)

Similarly in (10), gi is acceptable if the questioner has forgotten an answer they previously knew, but is not acceptable in an out-of-the-blue question.

(12) Context: Adam and Bill meet up, and across the room they see a woman who Adam has never seen before. Adam asks Bill:

# Naa=hl we=hl hanak’ tus=gi?
who=CN name=CN woman DEM.DIST=PR.EVID
‘What is that woman’s name?’ (HH)

Consultant’s comment: “If Adam forgot. When you put that, it means he

6 However, another consultant, HH, rejected gi in a failure-to-hear scenario on one occasion, and VG states that gi does not appear in the first repetition after a failure to hear, but only after a time lapse or after several repetitions. For VG, gi is systematically licensed by forgetting – as shown in (6) – but not by failure to hear. Further research is required into this variation; it could be that for some speakers, an addressee who did not hear the information is judged as not having been exposed to it. It could also be that for some speakers, there needs to be a longer time-span between the initial mention and the gi-sentence.
forgot.”

Interestingly, gi is licensed in questions by prior knowledge not just on the part of the speaker – as in (1) and (10) – but also of the addressee. And it can be either the answer, or the question, which was previously known. In (13), gi is accepted because the addressee had heard the question before, but forgot it.

(13) A: Nde win jog-an?
   where COMP live-2SG.II
   ‘Where do you live?’

   B: T’eg-i’y=hl guu=hl gidax-n.
      forget-1SG.II=CN what=CN ask-2SG.II
      ‘I forgot what you asked.’

   A: Nde win jog-an(=gi)?
      where COMP live-2SG.II(=PR.EVID)
      ‘Where do you live?’

   Just like with assertions, gi in questions is licensed not only by forgetting, but also by not hearing, at least for some speakers. In (14), A repeats his question because B did not hear it the first time.

(14) Context: At a noisy bar.

A: Naa=hl wa-n?
   who=CN name-2SG.II
   ‘What’s your name?’

B: Gwi? Nee=diī=n lax’ni=hl he-n!
   what NEG=FOC=1SG.I hear=CN say-2SG.II
   ‘What? I didn’t hear what you said!’

A: Naa=hl wa-n=gi?
   who=CN name-2SG.II=PR.EVID
   ‘What’s your name?’ (BS)

Gi is also licensed in interrogatives when a third person repeats a question that was not heard. This is shown in (15), where Clarissa fails to hear T.J.’s question and Katie repeats it.7

(15) Context: T.J., Katie, and Clarissa are in the room together. Clarissa has recently returned to Vancouver from Toronto.

   T.J.: Dax guu jiswīhl guks ‘witxw-in e=hl Vancouver?
      when what when return arrive-2SG.II PREP=CN Vancouver
      ‘When did you return to Vancouver?’

   7 BS gave parallel judgments on this example, modulo dialectal pronunciation differences.
C: Guu? Nee=di=n nax'ni=hl he-n!
   what NEG=FOC=1SG.I hear=CN say=2SG.II
   ‘What? I didn’t hear what you said!’

K: Dax guu jiswihl gukws 'witxw-in=gi?
   when what when return arrive=2SG.II=PR.EVID
   ‘When did you return?’ (VG)

Consultant’s comment: “That’s when you repeat and then you use [gi].”

This use of gi to repeat a third person’s question is reminiscent of the behaviour of the Cuzco Quechua reportative evidential, which is shown by Faller (2002) to be felicitous when somebody is reporting (i.e., repeating) somebody else’s question. We return to this in Section 3.6.

The preceding data illustrated cases where the question is old information, for whatever reason. The example in (16) is a case where it’s the answer which should already be known by the addressee. We see that gi is felicitous here as well.

(16) Context: The teacher teaches the children that ‘our lands’ is called ‘lax yip’. The next day she gives them a quiz and asks:

Gwi dip si-wa-di=hl ‘our lands’=gi?
what I.PL.I CAUS1-name-T=CN ‘our lands’=PR.EVID
   ‘What do we call ‘our lands’?’ (BS)

Consultant’s comment: “Yeah, you could because she told them yesterday.”

3.2 All-new contexts

In order to establish that gi is not merely compatible with repetition contexts, but requires some kind of prior knowledge, we need to establish that gi is rejected in situations where the information is brand new. For the reasons mentioned in Section 1.2 above, it is sometimes difficult to obtain clear and consistent rejections of gi. Speakers could, for example, always (perhaps subconsciously) enrich the context to infer that there was some prior knowledge. However, we do detect a difference in the acceptability status of gi in new-information contexts as opposed to prior-evidence contexts. For example, in (17) the consultant rejects gi unless the students have known the answer before.

(17) Context: A classroom, somewhere in the United States. The children know nothing about Gitksan territory. The teacher hands them all a map of Gitksan territory and is trying to see whether they can read the map to work out what the name of a river is. She asks:

Guu=hl aks galksi bax-t ga'a=hl lax yip=hl
what=CN water through run=3.II LOC=CN on land=CN
   Gitxsen(#=gi)?
   Gitksan(#=PR.EVID)
‘What river runs through Gitksan territory?’

Consultant’s comment: “When you put gi on there, they’ve already known it before … Not if they didn’t know it before.”

In (12) above, we saw that the consultant rejects gi if it is the first time Adam asks Bill the woman’s name. This result was confirmed with another speaker; as shown in (18), VG also rejects gi on Bill’s answer if it is the first time the information is given. This is evidence that gi is not merely compatible with prior knowledge contexts, it enforces them. (Note also that although Bill has prior evidence here, this is not sufficient to license gi in Bill’s answer. We return to this pragmatic bias towards address knowledge in Section 4.3.)

(18) Context: Adam and Bill meet up, and across the room they see a woman. Adam knows that Bill knows who she is.

Adam: Naa=hl we=hl hanak’(#=gi)?
who=CN name=CN woman(#=PR.EVID)
‘What’s the woman’s name?’

Bill: Daphne=hl we-t(#=gi).
Daphne=CN name-3.II(#=PR.EVID)
‘Her name is Daphne.’

Often, the effect of a new-information context is revealed primarily by consultant comments. In (19), for example, the consultant finds a way for the utterance to be acceptable, but her comment reveals that the speaker of the sentence must be incorrectly assuming he is not really in an out-of-the-blue context. This is consistent with our generalization about gi.

(19) Context: A stranger comes up to me on the street. We’ve never spoken before. He says:

# Yukw dim ha-nii-sgyad-i’y t’aahlakw=gi.
IPFV PROSP INS-on-be.born-1SG.II tomorrow=PR.EVID
‘It’s my birthday tomorrow.’

Consultant’s comment: “No. But if he was telling a complete stranger he might use gi – maybe he thinks he knows you.”

In (20), we again see that the speaker appears to accept gi in a new-information context (in this case, a context where the speaker is answering a question they have just been asked for the first time). However, the comment reveals that the consultant understands the speaker to be suggesting that the addressee should know the information already.

(20) Context: Lisa is married to Henry. T.J. asks her:

T.J.: Naa=hl siip’-in-in?
who=CN like-CAUS-2SG.II
‘Who do you love?’

Lisa: Henry=gi.
Henry=PR.EVID
‘Henry.’ (LW)

Consultant’s comment: “It’s like ‘How could you not know that it’s Henry?’”

In the context in (20), the addressee (T.J.) knows that Lisa and Henry are married, so it is not a solid new-information context. In a minimally different context where the interlocutors are strangers, gi is predictably rejected, as shown in (21).

(21) Context: Peter and Jack are strangers to each other.

Peter: Naa=hl siip’-in-in?
     who=CN like-CAUS-2SG.II
     ‘Who do you love?’

Jack: # T=Jill=hl siip’-in-i’y=gi.8
     DM=Jill=CN like-CAUS-1SG.II=PR.EVID
     ‘Jill is the one I love.’ (BS)

Examples (22)–(23) are a minimal pair illustrating the contrast between a situation where the addressee had no prior knowledge, and where they did. We see that gi is rejected in the former case, but accepted in the latter.

(22) Context: We’re at Totem Field Studios (the UBC Linguistics Department) and it’s Katie’s baby shower! An SFU undergrad who is thinking about applying to the UBC linguistics program opens the door and sees the party.

Student: Yukw=hl gwi-si’m?
     IPFV=CN what-2PL.II
     ‘What are you guys doing?’

Katie: Yukw dip jap=hl sii-sgyad-im party
     IPFV 1PL.I do=CN new-be.born-ATTR party
     (loo-’y)(#=gi)! (OBL-1SG.II)(#=PR.EVID)
     ‘We’re having a baby shower!’ (BS)

Consultant’s comment: “If he asks just after opening the door and seeing something going on, no gi.”

8 The initial determinate marker t in Jack’s reply is optional for BS, and would not be present for HH or VG.
(23) Context: As in (22), except instead of some random SFU student, it’s Katie’s husband Luke who wasn’t at the baby shower, and only came to UBC because he locked himself out of the house and thought he’d be able to swing by the department and pick up the keys. Luke says:

Luke: Yukw=hl gwi-si’m?
IPFV=CN what-2PL.II
‘What are you guys doing?’

Katie: Yukw dip jap=hl sii-sgyad-im party
IPFV 1PL.I do=CN new-be.born-ATTR party
(loo-’y)(=gi)! (OBL-1SG.II)(=PR.EVID)
‘We’re having a baby shower!’ (BS)

Consultant’s comment: “The more I think about it you definitely use the gi. ‘See we’re making a party for your baby, y’know.’”

Here is one more minimal pair showing the effect of prior knowledge in licensing gi. The same sentence with gi is rejected when it is the first answer to a question, but accepted when it is repeated.

(24) A: Gwi dim wi-n hiihluxw t’aahlakw?
what PROSP LV-2SG.II morning tomorrow
‘What are you doing tomorrow morning?’

B: Yug=uma dim yee-’y goo=hl sbagayt
IPFV=EPIS PROSP go-1SG.II LOC=CN together
gan(#=gi).
tree(#=PR.EVID)
‘I might go for a walk in the forest.’

Consultant’s comment: “The gi would be there if he’s answering for at least a second time.”

A: Nee=dii=n lax’ni=hl he-n=gi.10
NEG=FOC=1SG.I hear=CN say-2SG.II=PR.EVID
‘I didn’t hear what you said.’

B: Yug=uma dim yee-’y goo=hl sbagayt

9 BS frequently volunteers the comment that gi translates into English as ‘y’know’.
10 This is not a prototypical use of gi, since the addressee does not have prior knowledge of the proposition ‘I didn’t hear what you said.’ It is however parallel to other cases where prior speaker knowledge alone is apparently sufficient to license gi; cf. (25) and (26) below. When asked about the presence of gi in A’s utterance in (24), the consultant says that gi makes it more polite.
IPFV=EPIS PROSP go-1SG.II LOC=CN together
gan(\textlingua{=gi}).
tree(\textlingua{=PR.EVID})
‘I might go for a walk in the forest.’ (BS)

In summary, there is clear evidence that \textlingua{gi} requires some kind of prior knowledge on the part of at least one interlocutor.

3.3 Prior evidence for the speaker only

We have seen so far that prototypical contexts for \textlingua{gi} in declaratives include cases where the addressee is hearing the information for the second (or subsequent) time (if the addressee has forgotten, or is disbelieving, or has not heard). In the data seen so far (with the one exception noted in footnote 10), \textlingua{gi} in declaratives is rejected if the information is completely new to the hearer. Based on these facts alone, it seems like \textlingua{gi} in assertions could be restricted solely by a requirement for prior evidence for the addressee. This would differ from the situation in interrogatives, where we have seen that either the speaker or the addressee having had prior information is sufficient to license \textlingua{gi}.

However, there are data which show that even in declaratives, we cannot tie the effect of \textlingua{gi} solely to the addressee. There are cases where \textlingua{gi} is accepted or produced even when the information is completely new to the hearer, as long as the information is based on prior evidence on the part of the speaker. Consider, for example, (25)–(26).

(25) Context: I was in Gitksan territory last winter and I felt that it was really cold. Katie is going there now and asks me what the weather is like in winter there. I say:

Lukw’il sak\textlingua{=gi}.
very cold=PR.EVID
‘It’s very cold.’ (VG)

Consultant’s comment: “If she knew you’d been there, yeah.”

(26) Context: As in (25).

Ap lukw’il sak goo=hl lax yip tust\textlingua{=gi}.
¬PPS very cold LOC=CN on land DEM.DIST=PR.EVID
‘It’s very cold in the territory.’ (BS)

Consultant’s comment: “You wanna add the \textlingua{gi} because you’re telling her for the second time?” [Researcher: “No.”] “Well, you could say that just for emphasis.”

In both (25) and (26), the consultants make a comment which alludes to prior addressee knowledge, but nevertheless in both cases they accept the \textlingua{gi}-sentence in the absence of such knowledge. (In (25), the addressee may know that the speaker has been to Gitksan territory before, but she crucially does not
know the proposition to which gi attaches, namely that it is cold in the territory in winter.) Our interpretation of these facts is that while gi in assertions is strongly biased towards signalling addressee prior knowledge, speaker prior knowledge can suffice. We return to a possible explanation for the strong bias towards addressee knowledge in Section 4.3.

3.4 Evidence time must be before utterance time

In this sub-section we present data to show that gi crucially relies on evidence which was obtained prior to the utterance time, and therefore is rejected when the evidence obtains at the utterance time. This is true whether it is speaker or addressee evidence which is invoked.

Consider again (25)–(26) from the preceding sub-section, which we presented to show that speaker prior knowledge is sufficient to license gi. In these sentences, gi becomes bad if the evidence is not obtained before the utterance time, but instead holds at the utterance time. This is shown in (27). Both VG and BS accept and volunteer other versions of this sentence, either with no sentence-final particle or with ist (the ‘question under discussion downdate’ particle; Matthewson 2015). With gi, it is rejected. This is because the speaker is just now experiencing the cold for the first time.

(27) Context: I am in Gitksan territory in winter for the first time. I land and get out of the plane and the air is cold. I call my husband on my cellphone and say:

# Uuu, lukwil sak(=gi).
  oh very cold(=PR.EVID)
  ‘Oh, it’s very cold.’ (VG)

# Ap lukwil sak=gi.11
  ¬PPS very cold=PR.evid
  ‘It’s very cold.’ (BS)

The contrast between (25)–(26) and (27) suggests that gi is only felicitous when the evidence for the assertion was obtained prior to the utterance time.

The same point is made, this time with respect to addressee prior knowledge, by the triplet in (28)–(30). In (28), gi is felicitous in both question and answer because the information about the capital of Canada was taught earlier that day. In (29), gi is rejected, because the question comes out of the blue. And in (30), gi is rejected if the children are presently looking at the maps while the teacher asks them, but becomes good if they have put away the maps and are working from memory.

11 BS requires the Question Under Discussion downdate particle ist in this sentence, because “You know he wants to know if it’s really cold.”
Context: The teacher had taught the children what the capital of Canada is in the morning. In the afternoon she checks to make sure they remember the lesson from the morning.

Teacher: Nde=hl miinhlgalts'ep=hl Canada=gi? where=CN main.village=CN Canada=PR.EVID ‘What is the capital of Canada?’

Student: Ottawa=gi. Ottawa=PR.EVID ‘It’s Ottawa.’ (VG)

(29) Context: Following up on (28), the teacher has a bonus question. She has never talked about it before, but she asks the students:

# Nde=hl miinhlgalts'ep=hl Australia=gi? where=CN main.village=CN Australia=PR.EVID ‘What is the capital of Australia?’ (VG)

Consultant’s comment: “No. Not if she hadn't mentioned it.”

(30) Context: Now the teacher is asking about capitals in Africa. She passes out maps of Africa and says “Okay, everyone let's look at Kenya.” Then she asks the students:

# Nde=hl miinhlgalts'ep=hl Kenya=gi? where=CN main.village=CN Kenya=PR.EVID ‘What is the capital of Kenya?’ (VG)

Consultant’s comment: “Putting away the maps, yeah. If you’re not looking at it then yes. It’s memory.”

A further question is whether gi requires some prior personal evidence by an interlocutor, or whether common or general knowledge is sufficient. This issue frequently arises in the evidentials literature, and it could potentially be relevant for gi. For example, Faller (2002, 2011) argues that the Cuzco Quechua ‘direct’ evidential =mi actually marks the ‘best possible grounds’ a speaker can have for an utterance. She further argues that the best possible grounds may include propositions which were obtained by general knowledge rather than personally witnessed. On the other hand, some evidentials are specialized for sensory evidence and are incompatible with general knowledge (e.g., St’át’imcets (Lillooet Salish) lákw7a; Matthewson 2011, 2012).

Further research is required into this issue with gi, but our preliminary results suggest that for at least one speaker, common knowledge is not sufficient. VG displays a clear difference in judgment between (25), where the speaker personally witnessed the cold weather, and (31), where the claim relies on common knowledge. However, BS accepts (32). These results are preliminary.
(31) Context: I’m packing to go to Antarctica and T.J. asks me a silly question: ‘Why are you packing warm clothes?’ I answer:

E=hl  win  sak=gat  go'o=hl  Antarctica(#=gi).
PREP=CN  COMP  cold-REP  LOC=CN  Antarctica(#=PR.EVID)
‘It’s cold in Antarctica.’

(32) Context: as in (31).

Ap  lukw’il  sak  goo=hl  Antarctica(=gi).
¬PPS  very  cold  LOC=CN  Antarctica(=PR.EVID)
‘It’s very cold in Antarctica.’

Consultant’s comment: “Is she saying it more than two times now?”
[Researcher: “No.”] “It’s good because you’re just making a statement, but it’s emphasized by the gi.”

There is also evidence that a gi-interrogative is not felicitous when the answer will be based on pure guesswork. In (33), gi is acceptable if Bob had some prior evidence about where the pinecone is (as we expect), but (34) shows that gi is rejected if Bob is merely guessing and did not witness where the pinecone went.

(33) Context: Adam and Bob are playing a game. The table between them has three boxes; you cannot see inside the boxes. Adam shows Bob a pinecone, and while Bob is watching he puts the pinecone into one of the boxes. Adam and Bob have a conversation, and five minutes passes. Then Adam asks Bob:

Nde=hl  win  luu  sgi=hl  meek=gi?
where=CN  COMP  in  lie=CN  pinecone=PR.EVID
‘Where is the pinecone?’

(34) Context: Adam is running a sort of gambling game. Bob has to pay Adam $1 to play this game. He has to randomly guess which box Adam put the pinecone in. And if he’s right he wins $5. Bob closes his eyes, Adam puts the pinecone in one of the boxes, then Bob opens his eyes. Adam asks Bob:

Nde=hl  win  luu  sgi=hl  meek(#=gi)?
where=CN  COMP  in  lie=CN  pinecone(#=PR.EVID)
‘Where is the pinecone?’

3.5 The flexibility of gi

So far, we have seen that gi requires some information to have been available to at least one interlocutor, prior to the utterance time. This is the case both in declaratives and in wh-interrogatives. In this section we present data which show

12 This is also an acceptable question even without five minutes passing, if Bob is known by Adam to have an extremely bad short term memory.
that gi is flexible with respect to exactly what must be already known.

First, observe that it is not the case that gi in a declarative sentence requires gi’s prejacent proposition to be already known. We see this in (35), which is a continuation of the forgetting scenario in (12) above. While the gi in Bill’s answer is entirely expected (Bill is repeating information he had previously told Adam), the gi in Adam’s question is not as straightforward, because the fact that Adam forgot the name is not actually old information.

(35) Context: Adam and Bill meet up, and across the room they see a woman. Adam asks Bill the woman’s name, and he tells her. But Adam forgets it after a while.

Adam: T’eg-i’y=hl we=hl hanak’ tus=gi.
   forget-1SG.II=CN name=CN woman DEM.DIST=PR.EVID
   ‘I forgot the woman’s name.’

Bill: Daphne=hl we=hl hanak’ tus=gi.
    Daphne=CN name=CN woman DEM.DIST=PR.EVID
    ‘The woman’s name is Daphne.’ (HH)

This usage is vaguely reminiscent of English restitutive again, where for example ‘John opened the door again’ does not entail that the door was opened before (let alone by John), but only that it had previously been in an open position (perhaps it was built that way; see von Stechow 1996, a.o.). Similarly in (35), it is not old information that Adam forgot the name, but it is old information that he is in a state of needing to know the name.

A slightly different example, although again with the predicate t’ak ‘forget’, is given in (36). The presence of gi does not signal that the speaker forgot the berries before. The old information was that they were supposed to buy the berries.

(36) Context: I’m having a party tomorrow. And I’m in charge of the catering and I promised that I would bring huckleberries. And then tomorrow comes and I tell everyone:

T’ag-i’y dim sgals sim maa’y ky’oots=gi.
   forget-1SG.II PROSP buy real berry yesterday=PR.EVID
   ‘I forgot to buy the huckleberries yesterday.’ (BS)

Consultant’s comment: “Having the gi just emphasizes what you’re saying. It’s like if you say I forgot to bring berries yesterday, y’know, see.”

In short, gi requires some relevant information to be prior knowledge, but there is flexibility in what exactly needs to be already known.

3.6 No commitment to the speech act

13 Recall from Section 1.3 that the final consonant of t’ak voice before a vowel.
In (15) above, repeated here as (37), we saw an interesting case where gi can be used in a repeated question, even when the person using gi was not the original asker, and may not even want to know the answer themselves.

(37) Context: T.J., Katie, and Clarissa are in the room together. Clarissa has recently returned to Vancouver from Toronto.

T.J.: Dax guu jiswhl gukws 'witxw-in e=hl
when what when return arrive-2SG.II PREP=CN
Vancouver?
Vancouver
‘When did you return to Vancouver?’

C: Guu? Nee=dií=n nax'ni=hl he-n!
what NEG=FOC=1SG.I hear=CN say-2SG.II
‘What? I didn’t hear what you said!’

K: Dax guu jiswhl gukws 'witxw-in=gi'?
when what when return arrive-2SG.II=PR.EVID
‘When did you return?’

As mentioned above, Faller (2002) notes a similar ability of the Cuzco Quechua reportative evidential to appear in questions being repeated on behalf of a third person. A Quechua example is given in (38).\(^{14}\)

(38) Context: Martina asks the consultant’s sister a question, which the sister does not hear. The consultant repeats Martina’s question.

Martina: Imayna-ta-n ka-sha-nki
how-ACC-BPG be-PROG-2
‘How are you?’

Consultant: Imayna-s ka-sha-nki
how-ACC-REP be-PROG-2
‘(She says) How are you?’

Faller argues that the Cuzco Quechua reportative is an illocutionary operator which can scope over other illocutionary operators, such as a question operator. In (38), the consultant reports that Martina had asked ‘How are you?’ The consultant is not herself performing a speech act of questioning.

With gi, a similar effect may arise in declarative sentences as well. In (39), Adam asks Bill a question, Bill answers, Adam doesn’t hear, and Charlie repeats Bill’s answer but then indicates that he doesn’t himself believe it. Example (40) is a similar case, with forgetting rather than not hearing.

(39) Adam: Naa=hl wa=hl hanak’?
who=CN name=CN woman

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\(^{14}\) Faller (2007) gives a slightly different version of the same example.
‘What’s the woman’s name?’

Bill: Daphne=hl wa-d=ist.
Daphne=CN name-3.II=QUDD
‘Her name is Daphne.’

Adam: Gwi? Nee=dii=n lax’ni=hl he-n.
what NEG=FOC=1SG.I hear=CN say-2SG.II
‘What? I didn’t hear what you said.’

Charlie: Daphne=hl wa-t=gi, ii ap Erin=hl
Daphne=CN name-3.II=PR.EVID CL.CNJ ¬PPS Erin=CN
  dii ap wa-t.
  FOC ¬PPS name-3.II
‘Daphne is her name, but Erin is her name.’ (BS)

(40) Adam: Naa=hl we=hl hanak’?
who=CN name=CN woman
‘What’s the woman’s name?’

Bill: Daphne=hl we-t.
Daphne=CN name-3.II
‘Her name is Daphne.’

Time passes …

Adam: Oo t’eg-i’y=hl he-n. Naa=hl we=hl
  oh forget-1SG.II=CN say=2SG.II who=CN name=CN
  hanak’=gi?
  woman=PR.EVID
‘Oh, I forgot what you said. What’s the woman’s name?’

Charlie: Daphne=hl we-t=gi. Oo Erin=hl we=hl
Daphne=CN name-3.II=PR.EVID oh Erin=CN name=CN
  an-e-n.
  NMLZ-say-2SG.II
‘Her name is Daphne. Oh you meant to say [lit. ‘you said’] her name
  is Erin.’ (VG)

These uses have in common that the speaker of the gi utterance does not
themselves perform the relevant speech act. As mentioned, in (37), Katie is not
herself asking when Clarissa returned, and in (39)–(40), Charlie is not himself
asserting that Daphne is her name. Nor is the speaker merely repeating a third
person’s previous utterance verbatim, since they are adding gi. It seems that gi,
like the Cuzco Quechua reportative, is able to take scope over either the ordinary
semantic content of its prejacent, or over an entire speech act.

4 Steps toward an analysis
This paper is the first targeted investigation of gi in the literature, and our main goal is to establish the core empirical generalizations about its function. We are not yet able to provide a formal analysis which derives all of gi’s properties, but in this section we take steps towards an eventual analysis. We begin by dismissing an analysis which will not work.

4.1 Not a marker of past tense

As noted in Section 2, previous research has often claimed that gi enforces past tense. There are indeed data which seem to suggest a correlation with past tense, as for example in (41). VG construes the presence of gi here as indicating that the speaker no longer loves Jill; he judges that if Jack still loves Jill at the time of speech, gi is inappropriate.

(41) Context: Jack speaking to Peter.

Jill siip’-in-i’y=gi.
Jill like-CAUS-1SG.II=PR.EVID
‘I loved Jill.’

Consultants will also often spontaneously translate sentences containing gi into past-tense English sentences, while the corresponding gi-less sentences are translated with present tense. An example of this is given in (42), where the English translations were provided by the consultant.

(42) a. Yukw-t hats’-i=hl us=hl duus.
    IPFV-3.II bite-TR=CN dog=CN cat
    ‘The dog is biting the cat.’

    b. Yukw-t hats’-i=hl us=hl duus=gi.
    IPFV-3.II bite-TR=CN dog=CN cat=PR.EVID
    ‘The dog was biting the cat.’

Often, however, data which initially seem to support a past-tense analysis have another explanation. Consider (43)–(44). Here, VG judges that Aidan cannot use gi while the interlocutors are still at Anlaḵ, even if the sentence is being repeated due to Michael not having heard. He accepts gi in both Michael’s and Aidan’s utterances, only if the conversation is taking place the next day. This looks like a past-tense effect, especially in light of the consultant’s volunteered comment on (43).

(43) Michael: Nde win ’wihl wil-i’m=si, Aidan?
    where COMP around LV-1PL.II=PROX Aidan
    ‘Where are we, Aidan?’

    Aidan: Yukw=hl win ’wihl wil-i’m go’o=hl Anlaḵ.
    IPFV=CN COMP around LV-1PL.II LOC=CN Anlaḵ
    ‘We are at Anlaḵ.’
Michael: Nee=di=nl naa=ni=hl he-n! Pdeld-in=hl
NEG=FOC=1SG.I hear=CN say-2SG.II raise-2SG.II=CN
ame-n.
voice-2SG.II
‘I didn’t hear what you said! Say it louder.’

Aidan: Yukw=hl win ‘wil-im go'o=hl
IPFV=CN COMP around LV-1PL.II LOC=CN
Anlaḵ(#=gi).
Anlaḵ(#=PR.EVID)
‘We are at Anlaḵ.’ (VG)

Consultant’s comment: “The gi is used to remind that we were there previously, we were talking about it previously. But if it’s in the present you don’t use it.”

(44) The next day after (43).

Michael: T’ag-i’y win wil-i’m=gi.
forget-1SG.II COMP LV-1PL.II=PR.EVID
‘I forgot where we were.’

Aidan: ’Wihl wil ’nuu’m go'o=hl Anlaḵ(=gi).
around LV 1PL.III LOC=CN Anlaḵ(=PR.EVID)
‘We were at Anlaḵ.’ (VG)

However, the contrast between (43) and (44) is expected anyway for this consultant, and does not motivate a past-tense analysis of gi. As we noted above, VG often rejects gi in a context where the utterance is repeated due to the addressee not having heard, but accepts it in a forgetting context (see footnote 6).15

Our claim that gi does not enforce past tense is supported by evidence that gi is possible in sentences which talk about present or future events. For example, (28), repeated here as (45), includes a present-tense assertion with gi, and (46) is another present-tense scenario.

(45) Context: The teacher had taught the children what the capital of Canada is in the morning. In the afternoon she checks to make sure they remember the lesson from the morning.

Teacher:Nde=hl miinhgalts'ep=hl Canada=gi?
where=CN main.village=CN Canada=PR.EVID
‘What is the capital of Canada?’

---

15 In fact, there are indications that the ‘forgetting’ scenario does not always exclude gi for VG. The conversation in (43) was judged by him as felicitous with gi on a different occasion. Further investigation is required into this phenomenon; it could be that gi is undergoing a shift for some speakers.
(46) Context: Michael and Aidan have been hiking. They take a break and they sit down to have a picnic. Michael doesn’t know where they are. While they’re sitting down, having their picnic, he asks:

Nde wil 'wihl wil-i=m=gi, Aidan?
where COMP around LV-1PL.II=PR.EVID Aidan

‘Where are we, Aidan?’

Consultant’s comment: “Only if he had to repeat.”

With respect to future interpretations, (6), repeated here as (47), makes an assertion about a future event which contains gi, as does (48). Further indication that gi is acceptable in future sentences is given by the consultant’s comment in (49). The consultant rejects gi here due for an independent reason (the absence of prior evidence), but her comment reveals that gi is in principle fine when talking about the future.

(47) Context: One of my really good friends is having a dinner party on May 12. He told me about the dinner a while ago, and I told him I will not be there because I’m going up north that week. But he forgot, so he asks me:

Friend: Dim 'witxw 'niin go'o=hl luu gwendins'-y e=hl PROSP arrive 2SG.III LOC=CN in party-1SG.II PREP=CN
May 12=aa?
May 12=YNQ

‘Are you coming to my party on May 12?’

Me: Nee, dim daa'wihl 'nii'y go'o=hl Gigeeni{e=hl NEG PROSP leave 1SG.III LOC=CN Gigeeni{e=hl}
PROSP=CN week DEM.DIST(=PR.EVID) ganootxw tust(=gi).

‘No, that week I’m going up north to Gigeenix territory.’

(48) Context: I’m going to Chicago this summer, and I mentioned this to Aidan before. He forgets what I said, and he tells me he forgot. I say:

Dim wil 'nii'y go'o=hl Chicago sint tun(=gi).
PROSP LV 1SG.III LOC=CN Chicago summer DEM.PROX(=PR.EVID)

‘I’ll be in Chicago this summer.’

(49) Context: We have not yet discussed my plans for tomorrow. You haven’t asked me yet what I’m doing tomorrow, and you don’t know what I usually do on that day of the week. You ask me:

Gwi dim wi-n hiihluxw t'aahlakw(=#=gi)?
what PROSP LV-2SG.II morning tomorrow(#=PR.EVID)
'What are you doing tomorrow morning?' (BS)

Consultant’s comment: “You can use gi if you had to say it another time … You could have a gi if you had asked the question before.”

Interestingly, the cases where we have found gi to be acceptable when talking about the future all involve schedulable events, as in (47)–(49). Non-schedulable events, such as the weather, resist gi, as shown in (50). Here, the consultant rejects gi in Michael’s answer, even though it repeats information that T.J. was told before. We address this fact in the next sub-section.

(50) Context: At 11am Michael says:

Michael: Dim wis yuxwsa t’aahlakw.
PROSP rain evening tomorrow
‘It’s gonna rain tomorrow evening.’

T.J.: Nee=dii am!
NEG=FOC good
‘That’s not good!’

Michael and T.J. go their separate ways. At 4pm they see each other again.

T.J.: T’eg-i’y=hl he-n e=hl wila wi=hl
forget-1SG.II=CN say-2SG.II PREP=CN manner COMP=CN
wis=gi.
rain=PR.EVID
‘I forgot what you said about rain.’

Michael: Dim wis yuxwsa t’aahlakw(#=gi).
PROSP rain evening tomorrow(#=PR.EVID)
‘It’s gonna rain tomorrow evening.’ (VG)

4.1.1 Deriving the past-tense effect

We just showed that gi is not restricted to sentences which talk about past events; we conclude from this that gi does not hardwire a requirement that the described event took place in the past. Any apparent past tense effects must be derived from the core meaning of gi (that at least one interlocutor had prior evidence for the proposition).

This will work roughly as follows, taking the dog-biting case in (42) as an example. If at least one interlocutor needs prior evidence for the dog-biting, it is very likely that the biting took place in the past. In fact, as shown in (27) (the case where I have just arrived in Gitksan territory and am experiencing the cold), the prior-evidence requirement of gi renders it infelicitous in contexts where the evidence for the utterance holds only at the utterance time. Given this, it follows that the consultant’s default translation of the gi-sentence of (42) will use an English past-tense verb.

What about the cases where gi is felicitous with present- or future-time
events, as for (45)–(49)? Notice that these contexts have the special property that there was past-time evidence for a present or future eventuality. In (45), the students learned earlier that the capital of Canada is Ottawa, and in (47)–(49) I had previously stated my future plans. And in (50), we suggest that the reason *gi* is infelicitous is because with un-schedulable events like rain, it is not possible to have obtained past evidence that they will occur.

Hence, our proposal that *gi* requires prior evidence accounts for both the fact that *gi* does not enforce past tense, as well as for the fact that it favours past tense as a default.

### 4.2 A marker of prior evidence

The core generalizations we have discovered about *gi* are listed in (51).

(51) a. **In declaratives**, *gi* is licensed if at least one interlocutor had prior evidence for some salient proposition, usually the prejacent proposition to which *gi* attaches.

(Sub-cases: The addressee was told the proposition but forgot it; the addressee did not hear the previous utterance; the addressee did not believe the previous utterance; the speaker had prior personal evidence for the proposition.)

b. **In interrogatives**, *gi* is licensed if at least one interlocutor had prior evidence for either the question or the answer.

(Sub-cases: The speaker is repeating the question due to the addressee’s having forgotten it, or failed to hear it; the speaker expects that the addressee had prior evidence for the answer to the question; the speaker is re-asking the question because they knew the answer previously but have forgotten it; a third person is repeating someone else’s question due to the addressee’s not having heard it the first time.)

It is clear that there is a unifying core to the licensing contexts for *gi*, which we have roughly summarized as a ‘prior evidence’ requirement. We are, however, several steps away from being able to present a formal unified analysis which derives all of *gi*'s uses. Challenges include firstly the question of how to allow *gi* to be flexible about what is required to be already known (cf. discussion in Section 3.5), but not to be too flexible so as to over-generate. Another important challenge is how one might lexically encode the prior evidence requirement in a way which allows *gi* to attach compositionally to both declaratives and interrogatives, with the desired individual effects. It is also challenging to compositionally derive the flexible effect of *gi* in interrogatives. The fact that *gi* allows prior evidence of *either* the question or the answer already poses difficulties, let alone the fact that *gi* allows a ‘speech act’ reading whereby the questioner is merely reporting somebody else’s question.

For these reasons we have to delay a formal analysis till some future time. In the next sub-section we will nevertheless sketch how one might derive the fact that *gi* strongly prefers the prior evidence requirement to target the addressee, but nevertheless allows speaker prior evidence to be sufficient in
some contexts.

4.3 Deriving the addressee bias

Suppose that we are correct in claiming that *gi* requires prior evidence on the part of at least one interlocutor for the speech act being performed. How might we then account for the bias towards *gi* being used only when the addressee has prior evidence? We would like to propose that this preference falls out from Gricean reasoning and from standard assumptions about the felicity conditions on assertions (cf. Stalnaker 1978).

If a speaker is asserting a proposition *p*, the default assumption (by Grice’s Quality maxim) is that she has sufficient evidence for *p*. And simple world knowledge dictates that she obtained her evidence before she began to speak. So we propose that the prior evidence constraint, if applied to the speaker, achieves little beyond duplicating the existing conditions on the assertion of *p*. For this reason, *gi* is used mostly to signal addressee evidence. However, *gi* can also be used to signal speaker evidence, and this is naturally more likely to happen when for some reason, the speaker wishes to emphasize that they had prior evidence for their utterance.

This approach predicts that *gi* will be perceived as having an emphatic effect when it signals only speaker evidence. This appears to be correct, based on consultant’s comments during elicitation sessions. For example, BS frequently summarizes her views on *gi* by means of a disjunctive definition, highlighting either the prior-knowledge effect or an emphasis effect. Thus, she comments that “We use *gi* for emphasis or to show that we’re repeating ourselves.” On another occasion BS commented that “The *gi* is for repeating yourself or ‘That's what happened.’” And in (52), a case where *gi* signals only speaker prior evidence, she spontaneously mentions the emphatic effect.

(52) **Context**: An answer to (11) above. Katie has asked Michael when the next full moon is; she has never had any idea when it is. He replies:

```
Dim luu mitxw hlox̱s-im axxw ji hlaa
PROSP in full sun-ATTR night IRR INCEP
xwsdins sa=gi.
five day=PR.EVID
‘The full moon will be in five days.’
```

Researcher: “And he’s not reminding her?”
Consultant: “No, he’s just emphasizing. Sometimes it’s just used to emphasize.”

We predict that whenever *gi* indicates only speaker evidence, there will be an emphatic effect. Further testing is required to establish whether this is upheld.

5 Investigating *gi* in stories and conversation

Investigating discourse-dependent markers based on corpus data is fraught with
difficulty. It is often extremely difficult to determine what licensed a particular marker found in a narrative or conversation; one can often only guess. Another major problem is the absence of negative evidence. The researcher does not know whether an utterance containing the marker in a discourse would have been felicitous without it, or whether an utterance lacking the marker in a discourse would have been felicitous with it. Obviously, one also cannot extract from a corpus information about how the meaning would have been altered, were the marker to be inserted or deleted.

Nevertheless, it is important to at least attempt to test our empirical generalizations on spontaneous data. In this section we report on some preliminary findings based on seven stories told by VG, and on one conversation between BS and VG. We do find evidence which supports our generalizations. We also find a number of cases of gi where it is difficult to tell why it appears. There may be an emphatic effect, but this information is not extractable from the corpus itself.

In (53), taken from the conversation, we have a case where gi may well be licensed because BS is assuming that VG knows the information already. Alternatively (or as well), gi may be licensed here because Walter is dead (cf. Tarpent’s translation of (4) above).

(53) BS: Ii 'nit=hl k'uuhl wil hetxw=hl gya=hl
   CL.CNJ 3SG.II=CN year COMP stand=CN pierce=CN
   gan-s Walter=gi. Geel.
   tree-PN Walter=PR.EVID Geel
   ‘And that was the year when they raised Walter’s, Chief Geel’s, totem pole.’

   BS: Nee-m amgood=aa?
   NEG-2SG.1 remember=YNQ
   ‘Do you remember?’

Example (54), from the same conversation, is a case where gi appears in a question because the speaker knew the answer before, but has forgotten it.

(54) Ii hlaa Friday ii bakw=hl hlogots'uu-diit,
   CL.CNJ INCEP Friday CL.CNJ arrive.PL=CN other-3SG.II
   sim'oogit Alice Jeffrey, naa=hl wa=hl hanak'=gi,
   chief Alice Jeffrey who=CN name=CN woman=PR.EVID
   Benson, Rena Benson
   Benson, Rena Benson
   ‘And on Friday, the others came, chief Alice Jeffrey (what’s the woman’s
   name?), Benson, Rena Benson, …’ (BS)

In (55) there is no obvious reason why gi is used – that is, there is no reason to suppose that this is repeated information for the addressee – so perhaps gi is licensed here only by the fact that the speaker had prior evidence for the relevant proposition. As outlined above, we predict that gi has an emphatic effect here,
but this is impossible to confirm (or deny) based on the transcription of the conversation.

(55) BS: Ii 'nit=hl wil-i'y. hlis=hl graduate-'y.
CL.CNJ 3SG.III=CN LV-1SG.II COMPL=CN graduate-1SG.II
‘And that’s what I did, I already graduated.’

[overlapping:]

BS: Hlis-hlisxw-'y ii—
COMPL-COMPL-1SG.II CL.CNJ
‘And I finished—’

VG: Ii dii hlis galka-x-hl-xw-in.
CL.CNJ FOC COMPL through-mouth-?-PASS-2SG.II
‘And you got through (it).’

BS: Ii am wil-a daa'wihl
CL.CNJ good MANNER leave
sa-goot-xw-i'y=gi.
CAUS1-heart-PASS-1SG.II=PR.EVID
‘And my plan went very well.’

The preceding examples were all from the conversation. The relative frequency of gi in conversation is in line with consultants’ comments that gi is informal. For example, BS states that gi would not be used in a speech at a feast, because such speeches are formal, while gi is “conversational”. LW similarly comments that gi “puts it in the informal”, and that gi is “casual”.

In narratives, gi has more variable frequency. The stories in Smith (2004) contain many gis, but the instances of it in seven stories by VG can be counted on the fingers of one hand. Here is one example of gi from the story ‘War with the Jits'aawit’. It is unclear why gi is present here. It could be either that the information is judged to be already known by the addressee, or it could be an emphatic usage.

(56) Sim luu tk'al good-in-diit=hl Jits'aawit go'o=hl
true in against heart-CAUS2-3PL=CN Jits'aawit LOC=CN
T'aan Meji'aadn
lake Meji'aadn.
‘They completely killed off all the Jits'aawit at Meji'aadn Lake.’

'Nit gan wi=hl gi'nam=hl Gitwinhlguu'1
3SG.III SUBORD COMP=CN give=CN Gitwinhlguu'1
ha-anak' dim niiniks-xw=hl xsdaa-t=gi.
PL~woman PROSP spouse.PL-PASS=CN win-3.II-PR.EVID
‘That is why Gitwinhlguu'1 offered women to marry these victors.’ (VG)

Further investigation of spontaneous uses of gi will be most useful if it is
combined with follow-up elicitation with the original speakers, in an attempt to elicit more information about why gi appears where it does.

6 Conclusion

In this paper we have provided the first targeted investigation of the particle gi in Gitksan. Contrary to previous literature, which has classified gi as a spatio-temporal distal marker, we have argued that gi is a discourse particle which encodes a prior evidence requirement. Our core empirical findings are repeated in (57). (Recall from section 4.3 that there are further pragmatic complexities which govern when gi is used, even when the conditions in (57) are met.)

(57) a. In declaratives, gi is licensed if at least one interlocutor had prior evidence for some salient proposition, usually the prejacent proposition to which gi attaches.
   (Sub-cases: The addressee was told the proposition but forgot it; the addressee did not hear the previous utterance; the addressee did not believe the previous utterance; the speaker had prior personal evidence for the proposition.)

b. In interrogatives, gi is licensed if at least one interlocutor had prior evidence for either the question or the answer.
   (Sub-cases: The speaker is repeating the question due to the addressee’s having forgotten it, or failed to hear it; the speaker expects that the addressee had prior evidence for the answer to the question; the speaker is re-asking the question because they knew the answer previously but have forgotten it; a third person is repeating someone else’s question due to the addressee’s not having heard it the first time.)

Although we have not yet provided a unified formal analysis, we believe that our findings represent a significant step forward in the empirical understanding of gi. In addition, our generalizations suggest that gi is a particle with a cross-linguistically interesting property: it requires prior evidence or knowledge, but it does not care which interlocutor has that evidence or knowledge. This makes it different from presuppositional elements (which specifically require information to be in the shared common ground, Stalnaker 1973), and also potentially different from German discourse particles like ja or doch, which at least under many analyses specifically encode information about the addressee’s knowledge state (Zimmermann 2011).

6.1 For future research

There are many avenues for future research with gi. In this sub-section we present just one outstanding puzzle, which is a potential interaction with lexical aspect (Aktionsart), at least for one of our consultants. Although (58a) and (58b) both convey approximately the same information, the eventive version in (58a) allows gi, while the stative version in (58b) does not. We have no explanation for this at this time, and further research is necessary to establish whether the
effect is systematic.

(58) Context: I meet a guy, he introduces himself, and in the middle of conversation with him, I realize I’ve forgotten his name.

a. Teg-i'y=hl we-n(=gi).
   forget-1SG.II=CN name-2SG.II(=PR.EVID)
   ‘I forgot your name.’ (VG)

b. Nee=dii=n amgoo=hl we-n(#=gi)
   NEG=FOC=1SG.I remember=CN name-2SG.II(#=PR.EVID)
   ‘I don’t remember your name.’ (VG)

References


Connect Four!
The morphosyntax of argument marking in Tsimshianic

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Clarissa Forbes
University of Toronto

Abstract: The NP-introducing connective morphemes are an enduring puzzle in Tsimshianic linguistics, their distribution obscured by opaque morphophonology and considerable homophony. We present a novel account of the Gitksan connective paradigm which reduces the distinction between t and s to a matter of morphophonology, in contrast to the case-related analysis proposed by Hunt (1993). As a result, the connective system is simplified so as to only reference the distinction between common and proper/determinate nouns. We then extend the analysis to Coast Tsimshian, demonstrating the fundamental similarity of the two systems while exploring some points of variation which indicate interesting differences in agreement patterns between the Coast and Interior varieties.

Keywords: Gitksan, Tsimshianic, connectives, pronouns, agreement, case

1 Introduction

In the Tsimshianic literature, the term ‘connective’ has been used since Boas (1911) to identify a set of article-like morphemes which precede noun phrases. The distribution of these morphemes shows a basic distinction between ‘determinate’ and ‘common’ (non-determinate) NPs (Rigsby 1986); determinates include proper names, demonstrative pronouns, and ascending kinship terms, while non-determinates include all other NPs. In both Coast Tsimshian (CT) and Interior Tsimshianic (IT), the connective for non-determinates is invariant (a in the former and hl in the latter); however, within the class of determinates, there are two apparently competing elements (t and s) whose distribution is sensitive to clause type and grammatical function. In IT, the situation is further complicated by a number marking distinction within the determinates, which partially neutralizes the distinction between s and t.

This paper focuses on the connective system of Gitksan, one of the two members of the IT branch (that of the other member, Nisga’a, is basically identical, at least on the evidence presented in Tarpent 1987b, 1988). We develop an analysis of the Gitksan connective system that considerably simplifies its surface

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1 We extend our deepest thanks to the Gitksan speakers we have worked with (the wonderful Barbara Sennott (nee Harris), Vince Gogag, Hector Hill, BM, and many others); all unreferenced examples are attributed to them. Ha'miiyaa! We also acknowledge Lisa Matthewson and Margaret Anderson for their valuable contributions and comments on this work, and are grateful for the support and collaborative environment provided by the UBC Gitksan Research Lab.

2 Ascending kinship terms mark kin above the level of the ego, such as parents, parents’ siblings, grandparents, and so on.

complexity, reducing the pattern from one which relies on common/determinate, singular/plural, and syntactic role contrasts, to one which only references the determinate/non-determinate distinction. We argue that the difference in number marking for determinate NPs is best recognized as an independent contrast, and that the difference in connective usage for NPs with different syntactic roles is ultimately morphophonological in nature. Consequently, our analysis of the connective paradigm posits only two members: determinate $t$ and non-determinate $hl$. We then extend our findings on IT to the connective system of CT: we show that in spite of apparent surface differences the two systems are nearly identical, and our account of IT can be extended to CT with minimal adjustments.

The paper is structured as follows. In the rest of Section 1, we provide some background information on the syntax and inflectional morphology of Gitksan. In Section 2, we give an overview of the Gitksan connective system, exemplifying each different connective pattern, before introducing the two major analytical approaches that have been proposed in the previous literature on IT, those of Rigsby (1986) and Tarpent (1987b). In Section 3 we explore Hunt’s (1993) analysis (itself partly based on Tarpent 1987b), which is the most detailed and successful of previous accounts. We then present our own alternative in Section 4, before extending it in Section 5 to the CT connective system. Section 6 concludes.

1.1 Brief background on Interior Tsimshianic syntax and morphosyntax

Here we provide a skeletal outline of certain key features of IT syntax that will be relevant to the argumentation in following sections. We make no attempt to be comprehensive: for detailed descriptions see Rigsby (1986) (Gitksan) and Tarpent (1987b) (Nisga’a).

Clausal morphosyntax in all Tsimshianic languages is organized around a clause-typing distinction, variously characterized as ‘indicative’ versus ‘subjunctive’ (Boas 1911), ‘independent’ versus ‘dependent’ (Rigsby 1986), and ‘predicate focused’ versus ‘regular’ (Tarpent 1987b, 1988). We will adopt Rigsby’s Gitksan-based terminology here. The distinction is particularly important in regulating the function of the three pronominal series (named prosaically but efficiently Series I, II and III by Rigsby 1986). All subordinate clauses are dependent, but not all main clauses are independent: a set of pre-predicative ‘dependent markers’, including certain aspectual operators, negation, and clausal coordination, also induce dependent inflection. See Rigsby (1986), Tarpent (1987b), and Hunt (1993) for details of the IT system. The CT system is very similar, differing only in which elements trigger dependent inflection: see Dunn (1979a), Mulder (1994), Bach (2004), and Anderson and Ignace (2008).

The three pronominal series are most easily distinguished on morphological grounds, as shown in Table 1:
### Table 1: Morphological type and position of pronouns

<table>
<thead>
<tr>
<th>TYPE</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SERIES I</td>
<td>clitic</td>
</tr>
<tr>
<td>SERIES II</td>
<td>affix</td>
</tr>
<tr>
<td>SERIES III</td>
<td>independent word</td>
</tr>
</tbody>
</table>

Their distribution is complex, but can be roughly characterized as ‘pivoting ergative’, with the Series II pronouns acting as the pivot.\(^3\) The basic distribution of the three pronominal series is shown in Table 2, with A, S and O standing for subject of a transitive clause, subject of an intransitive clause, and object, respectively, as is standard practice in the literature on ergativity.\(^4\)

### Table 2: Basic distribution of pronominal series

<table>
<thead>
<tr>
<th>INDEPENDENT</th>
<th>DEPENDENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERG A</td>
<td>II</td>
</tr>
<tr>
<td>S</td>
<td>III</td>
</tr>
<tr>
<td>ABS O</td>
<td>III</td>
</tr>
</tbody>
</table>

Both Series I and Series II pronouns co-occur with lexical (NP) arguments (and on occasion with each other, as we will see); however, Series III pronouns (whose syntax is closest to that of NPs) never co-occur either with lexical NPs or other pronouns.

---

\(^3\) These affixes also mark possessors and the complements of prepositions; we discuss the latter function in Section 4.3.

\(^4\) Transitivity (obviously, crucial to ergative systems such as those of Tsimshanic languages) is not systematically marked on verbs, though various transitivizing and intransitivizing affixes are quite common. However, in transitive independent clauses, a ‘transitive’ suffix (glossed -TR here) appears immediately before the Series II suffix which marks the A argument (although sometimes it is obscured for phonological reasons). As noted by Hunt (1993), this suffix (which also appears in O extraction contexts) is in strict complementary distribution with Series I pronouns, and as such is never found in dependent clauses.
Lexical arguments in all Tsimshianic languages follow the predicate, except in contexts of A’-extraction; word order is strictly VSOX. All arguments aside from A, S and O must be introduced either by the general oblique preposition \( a = \) or the specialized locative preposition \( g_0(')a = \).

2 The Gitksan connective system

The basic elements of the Gitksan connective paradigm are presented in Table 1. Connectives are obligatory before noun phrases in argument positions, including those introduced by prepositions.

<table>
<thead>
<tr>
<th>Table 3: The Gitksan connective paradigm, version 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common</td>
</tr>
<tr>
<td>Determinate 1</td>
</tr>
<tr>
<td>Determinate 2</td>
</tr>
</tbody>
</table>

NPs headed by common (non-determinate) nouns are uniformly introduced by the morpheme \( =hl \), which appears as an enclitic on the previous prosodic word. This connective shows no sensitivity to linear position, grammatical function, or clause type.

5 A’-extraction contexts include relativization, WH-question formation, and focus movement. In each case, a constituent (sometimes null in the case of relativization) moves to a pre-predicative A’-position, leaving a distinct morphological signature which differs between A, S, and O functions, as well as between arguments and adjuncts. For details, see Davis and Brown (2011) and references therein.

6 The one exception to this, discussed by Rigsby (1989:250) involves an alternative VOS ordering limited to cases with a pronominal (Series III) object, as shown in (i). Even in the 1970s and 1980s, this ‘right-extraposed’ order was apparently confined to older speakers, and now seems to have been replaced by the ‘regular’ VSO order for all speakers (ii).

(i) hlimooyit 'nuu'm t Mary help-TR-3.II 1PL.III DM Mary ‘Mary helped us.’

(ii) hlimooyis Mary 'nuu'm help-TR=PN Mary 1PL.III ‘Mary helped us.’

7 The common noun connective \( =hl \) (or a homophous morpheme) is also used to introduce certain clausal complements, following for example imperfective \( yuukw \). We set aside these uses here.

8 The orthography used here is a variant of the Gitxsan orthography established by Hindle and Rigsby (1973), with minor changes to the representation of palatovelars (e.g. \( gya \) rather
(1) a. ba\(=\text{hl}\) hanak' \\
run=CN woman \\
‘The woman ran.’

b. needii ba\(=\text{hl}\) hanak' \\
NEG=FOC run=CN woman \\
‘The woman didn’t run.’

(2) a. gya'a\(=\text{hl}\) hanak'\(=\text{hl}\) gyat \\
see[TR]=CN woman=CN man \\
‘The woman saw the man.’ (Hunt 1993:200)

b. neediiit gya'a\(=\text{hl}\) hanak'\(=\text{hl}\) gyat \\
NEG=FOC=3.1 see=CN woman=CN man \\
‘The woman didn’t see the man.’

The examples in (1) contain an intransitive subject (S), those in (2) a transitive subject (A) and an object (O): all are introduced by =hl. The (a) cases also differ from the (b) cases by clause type: the (a) examples involve independent clauses, while the (b) examples involve dependent clauses; again, this has no effect on the form of the connective.

In contrast, determinate NPs (personal names, demonstrative pronouns, and ascending kinship terms) are introduced by the morphemes =s and t, as well as dip when plural or coordinated.9 The distribution of these morphemes is complex, and is governed by three factors: the distinction between independent and dependent clauses, the linear position of noun phrases relative to the verb, and the

---

9 The morphophonological properties of these elements differ from each other as well as from =hl. Determinate =s (glossed =PN for ‘proper noun’ here) is a bound morpheme which only ever surfaces at the right edge of the predicate (usually, but not always, a verb). It is given the status of an enclitic rather than a suffix here because of its linear position following other elements which are themselves clearly enclitic, notably the reportative marker =gat and the modal =ima(')a (Tarpent 1987b, Hunt 1993, Peterson 2010). In contrast the determinate marker t (glossed DM) is a ‘floating’ clitic which can either dock to a preceding or following host, or even remain ‘unmoored’ as a stray consonant. And finally, the plural marker dip is prosodically independent, and as such has the status of a ‘particle’, rather than a clitic. See Stebbins (2003), Mulder and Sellers (2010) for remarks on the morphophonological properties of various closed-class elements in CT.
distribution of agreement morphology. Below, we lay out the possibilities for the
determinate connectives systematically, beginning with independent clauses.

(3) singular determinate S in independent clause

\[
\text{bax t Gidi} \\
\text{run DM Katie} \\
\text{‘Katie ran.’}
\]

(4) plural determinate S in independent clause

\[
gol dip \text{[Michael gan t Aidan]}^{10} \\
\text{run.PL ASSOC [Michael PH.CNJ DM Aidan]} \\
\text{‘Michael and Aidan ran.’}
\]

(5) singular determinate A in independent clause

a. gya’as Michael t Gidi

\[
\text{see[TR]=PN Michael DM Katie} \\
\text{‘Michael saw Katie.’}
\]

b. gya’as Michael (’nit)

\[
\text{see[TR]=PN Michael (3.III)} \\
\text{‘Michael saw him/her.’}
\]

(6) plural determinate A in independent clause

a. gya’as dip [Michael gan t Aidan] t Gidi

\[
\text{see[TR]=PN ASSOC [Michael PH.CNJ DM Aidan] DM Katie} \\
\text{‘Michael and Aidan saw Katie.’}
\]

b. gya’as dip [Michael gan t Aidan] (’nit)

\[
\text{see[TR]=PN ASSOC [Michael PH.CNJ DM Aidan] (3.III)} \\
\text{‘Michael and Aidan saw him/her.’}
\]

(7) singular determinate O in independent clause

a. gya’as Gidi t Michael

\[
\text{see[TR]=PN Katie DM Michael} \\
\text{‘Katie saw Michael.’}
\]

b. gya’at t Michael

\[
\text{see[TR]-3.II DM Michael} \\
\text{‘S/he saw Michael.’}
\]

---

10 The determinate \text{t} marking the second conjunct of the coordinated noun phrase here is
used for non-initial determinate conjuncts by speakers from the Eastern (Gigyeenix)
dialects; Western dialect (Geets) speakers use \text{=}s, which is also employed by Nisga’a
speakers.
(8) **plural determinate O in independent clause**

a. gya'as  Gidi  dip  [Michael  gan  t  Aidan]  
   see[TR]=PN  Katie  ASSOC  [Michael  PH.CNJ  DM  Aidan]  
   ‘Katie saw Michael and Aidan.’

b. gya'at  dip  [Michael  gan  t  Aidan]  
   see[TR]=3.II  ASSOC  [Michael  PH.CNJ  DM  Aidan]  
   ‘S/he saw Michael and Aidan.’

(9) **singular determinate S in dependent clause**

needii  baxs  Michael  
NEG=FOC  run=PN  Michael  
‘Michael didn’t run.’

(10) **plural determinate S in dependent clause**

needii  gols  dip  [Michael  gan  t  Gidi]  
NEG=FOC  run.PL=PN  ASSOC  [Michael  PH.CNJ  DM  Katie]  
‘Michael and Katie didn’t run.’

(11) **singular determinate A in dependent clause**

a. neediit  gya'as  Michael  t  Aidan  
   NEG=FOC=3.1  see=PN  Michael  DM  Aidan  
   ‘Michael didn’t see Aidan.’

b. neediit  gya'as  Michael  (’nit)  
   NEG=FOC=3.1  see=PN  Michael  (3.III)  
   ‘Michael didn’t see him.’

(12) **plural determinate A in dependent clause**

a. neediit  gya'as  dip  [Michael  gan  t  Gidi]  t  Aidan  
   NEG=FOC=3.1  see=PN  ASSOC  [Michael  PH.CNJ  DM  Katie]  DM  Aidan  
   ‘Michael and Katie didn’t see Aidan.’

b. neediit  gya'as  dip  [Michael  gan  t  Gidi]  (’nit)  
   NEG=FOC=3.1  see=PN  ASSOC  [Michael  PH.CNJ  DM  Katie]  (3.III)  
   ‘Michael and Katie didn’t see him/her.’

(13) **singular determinate O in dependent clause**

a. neediit  gya'as  Michael  
   NEG=FOC=3.1  see=PN  Michael  
   ‘S/he didn’t see Michael.’

b. neediit  gya'as  Gidi  t  Michael  
   NEG=FOC=3.1  see=PN  Katie  DM  Michael  
   ‘Katie didn’t see Michael.’
(14) **plural determinate O in dependent clause**

a. neediit gya'as dip [Michael gan t Gidi]
   
   NEG=FOC=3.1 see=PN ASSOC [Michael PH.CNJ DM Katie]
   
   ‘S/he didn’t see Michael and Katie.’

b. neediit gya'as Gidi dip [Michael gan t Aidan]
   
   NEG=FOC=3.1 see=PN Katie ASSOC [Michael PH.CNJ DM Aidan]
   
   ‘Katie didn’t see Aidan and Michael.’

Table 4 summarizes the distribution of both determinate (DM) and common (CN) NPs.

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>A</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IND</td>
<td>DEP</td>
<td>IND</td>
</tr>
<tr>
<td>V-S\textsubscript{CN}</td>
<td>=hl</td>
<td>=hl</td>
<td></td>
</tr>
<tr>
<td>V-S\textsubscript{DM}</td>
<td>t/dip</td>
<td>=s/=s dip</td>
<td></td>
</tr>
<tr>
<td>V-A\textsubscript{CN}:O\textsubscript{CN}</td>
<td>=hl</td>
<td>=hl</td>
<td>=hl</td>
</tr>
<tr>
<td>V-A\textsubscript{CN}-O\textsubscript{DM}</td>
<td>=hl</td>
<td>=hl</td>
<td>t/dip</td>
</tr>
<tr>
<td>V-A\textsubscript{CN}</td>
<td>=hl</td>
<td>=hl</td>
<td></td>
</tr>
<tr>
<td>V-A\textsubscript{DM}</td>
<td>=s/=s dip</td>
<td>=s/=s dip</td>
<td></td>
</tr>
<tr>
<td>V-A\textsubscript{DM}:O\textsubscript{CN}</td>
<td>=s/=s dip</td>
<td>=s/=s dip</td>
<td>=hl</td>
</tr>
<tr>
<td>V-A\textsubscript{DM}-O\textsubscript{DM}</td>
<td>=s/=s dip</td>
<td>=s/=s dip</td>
<td>t/dip</td>
</tr>
<tr>
<td>V-O\textsubscript{CN}</td>
<td></td>
<td>=hl</td>
<td>=hl</td>
</tr>
<tr>
<td>V-O\textsubscript{DM}</td>
<td>t/dip</td>
<td>=s/=s dip</td>
<td></td>
</tr>
</tbody>
</table>

**How to read the table:**

i. As specified in the left-hand column, connectives are classified according to their distribution in clauses with S, A, and O arguments headed either by common nouns (CN) or determinates (DM).

ii. Clauses listed with a single A or O (e.g. V-A\textsubscript{CN}, V-O\textsubscript{DM}) have no *overt* O and A argument, respectively; however, a covert argument is present, recoverable via pronominal morphology and/or the discourse context.

iii. For each grammatical function (top row), clauses are cross-classified (second row) as independent (IND) or dependent (DEP).
iv. For determinates, both singular and plural values are given, with the singular preceding the plural (sg/pl).

2.1 Four generalizations and two potential analyses

The following generalizations immediately emerge from an inspection of Table 4.

A. The distribution of the common noun connective $=hl$ is completely uniform across clause type and grammatical function.
B. The singular determinate connectives $t$ and $=s$ are in complementary distribution.
C. The plural marker $dip$ is in complementary distribution with $t$, but co-occurs with $=s$.
D. $=s$ only occurs on an argument immediately left-adjacent to the verb.

Since $=hl$ poses no morphosyntactic challenges, we will set it aside here, focusing on the interaction of $=s$, $t$ and $dip$. There are two basic ways to understand this interaction:

I. $t$ and $=s$ are allomorphs, and $dip$ is a separate marker of plurality

II. $dip$ is the plural allomorph of $t$, and $=s$ marks something else

Analyses based on both interpretations have been proposed previously in the IT literature. An analysis based on (I) and schematized in Table 5 was assumed in early work by Rigsby and Tarpent (Tarpent 1982, Rigsby 1986), but later abandoned in favour of an analysis based on (II), developed by Tarpent (1987b, 1988) and later modified by Hunt (1993). Tarpent’s version is schematized in Table 6 (see also Rigsby 1989, note 1).

<table>
<thead>
<tr>
<th>Table 5: A type I analysis of the connective paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTEXT 1</td>
</tr>
<tr>
<td>CN connective</td>
</tr>
<tr>
<td>DM connective</td>
</tr>
<tr>
<td>DM PL</td>
</tr>
</tbody>
</table>

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Table 6: A type II analysis of the connective paradigm

<table>
<thead>
<tr>
<th></th>
<th>SG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN connective</td>
<td>(hl)</td>
<td></td>
</tr>
<tr>
<td>PN connective</td>
<td>(s)</td>
<td></td>
</tr>
<tr>
<td>DM marker</td>
<td>(t)</td>
<td>(dip)</td>
</tr>
</tbody>
</table>

In Table 5, there are two sets of connectives, common noun and determinate; the latter may be pluralized by a separate plural marker. In Table 6, there are common noun and proper noun connectives, with separate singular and plural ‘determinate markers’.

Both proposals face analytical challenges. For Type I analyses, there are two: (a) specifying the contexts in which the allomorphs \(t\) and \(=s\) surface, and (b) explaining the failure of \(t\) to co-occur with \(dip\). For Type II analyses, the main challenges both involve the restricted distribution of \(=s\): (a) explaining the failure of \(t\) to co-occur with \(=s\), and (b) explaining the failure of \(=s\) to occur anywhere except immediately adjacent to the predicate.

In the following sections we will explore these analyses in more detail. We will begin with Type II analyses, since these have been favoured recently, either in Tarpent’s original version or the modified account given by Hunt (1993). We will then return to Type I analyses, ultimately arguing for a greatly modified version of Rigsby’s original account.

3 Type II analyses: Tarpent (1987b) and Hunt (1993)

Of the two challenges faced by Type II analyses, the first (accounting for the complementary distribution of \(=s\) and \(t\)) admits of a fairly straightforward solution: a morphophonological rule which deletes \(t\) immediately after \(=s\) and before a following consonant.

\[
\text{(15) Cluster Simplification (Tarpent 1986:31 note 3b)}
\]

\[
t \rightarrow \emptyset / =s \_ C
\]

DM PN

Hunt (1993) observes that this rule must be morphologically conditioned, because clusters of \([stC]\) occur not infrequently elsewhere in the language, as in the following examples:

\[
\text{(16) akst\(h\)l gudaksi’y}
\]

\[
wet-INTR=CN \quad \text{coat-1SG.II}
\]

‘My coat is wet.’ (Hunt 1993:17)
The second problem, the limited distribution of \( =s \), is more problematic for the Type II analysis. Recall that unlike \( t \) or \( =hl \), \( =s \) only ever shows up immediately to the right of the predicate. As far as we can tell, Tarpent offers no explanation for this restriction.

Hunt (1993), however, does. Hunt adopts the outlines of Tarpent’s account, but rather than treating \( =s \) as a connective, she proposes that it is a case marker. As such, it is not expected to act as the determinate counterpart of \( =hl \), which appears uniformly on common noun arguments (that function is assumed by \( t \) and \( dip \)); rather, as a case marker, it should be sensitive to grammatical function. Hunt’s system is schematized in Table 7.

**Table 7: Hunt’s (1993) connective paradigm**

<table>
<thead>
<tr>
<th></th>
<th>SG</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN connective</td>
<td>( hl )</td>
<td></td>
</tr>
<tr>
<td>DM connective</td>
<td>( t )</td>
<td>( dip )</td>
</tr>
<tr>
<td>(in ( s )-case context)</td>
<td>( s \ (t \rightarrow \phi) )</td>
<td>( s \ dip )</td>
</tr>
</tbody>
</table>

Like Tarpent, Hunt appeals to cluster simplification (15) to account for the absence of the \( =s \ t \) combination, but otherwise her system is rather different. In particular, \( t \) and \( dip \) are restored to their original roles as connectives rather than being treated as a separate set of determinate markers, accounting for their relatively unrestricted distribution (like \( =hl \) but unlike \( =s \), they appear on objects in V-A-O\( _{DM} \) clauses, for example). The anomalous element in Hunt’s system is clearly \( =s \).

### 3.1 Generalizations on the distribution of \( =s \)

There is good justification for Hunt’s breakdown of the paradigm this way: \( =s \) is the only one of the four connective elements to be restricted to immediately post-predicative position, and the only one to show sensitivity to the particular form of agreement on the predicate. These two unique properties are combined in what Hunt refers to as the ‘/\( s \)/-case-assignment condition’:

\[
\text{\( /s\)/case-assignment condition} \\
\text{\( /s\)/case is assigned to an NP if and only if} \\
\text{a. it is adjacent to a lexical head and} \\
\text{b. it is coreferent with the Series II suffix on that head} \\
\text{(Hunt 1993:200)}
\]
A glance back at examples (5)–(14) above will reveal that part (b) of this condition is almost never motivated on the surface, because =s actually appears to be in complementary distribution with Series II -t. However, Tarpent (1987b, 1988) makes the crucial observation that if the adjacency relation between =s and Series II -t is disrupted, both show up. This happens specifically when one of two evidential enclitics, =gat ‘reportative’ and =ima(‘)a ‘epistemic’ intervenes between the suffixal pronoun and the connective, as shown in the (b) examples in (19) and (20).

(19) a. hlimooyis Kathy t John
    help-TR=PN Kathy DM John
    ‘Kathy helped John.’

b. hlimooyitgas Kathy t John
    help-TR-3.II=REPORT=PN Kathy DM John
    ‘I heard that Kathy helped John.’ (Hunt 1993:19)

(20) a. needii yees John go’ohl Vancouver
    NEG=FOC go=PN John LOC=CN Vancouver
    ‘John didn’t go to Vancouver.’

b. needii yeedimaas John go’ohl Vancouver
    NEG=FOC go-3.II=EPIS=PN John LOC=CN Vancouver
    ‘John apparently didn’t go to Vancouver.’ (Hunt 1993:115)

Hunt follows Tarpent in concluding that third person Series II -t is always underlyingly present, irrespective of the presence of a following overt argument, but is deleted under adjacency with a following =s. This second t-deletion rule, termed deaffrication by Tarpent (1988), also applies before the common noun connective =hl, and is formulated as in (21):

(21) Deaffrication
    -t → Ø/ __ {=s, =hl}
    3.II PN, CN

Like the cluster simplification rule in (15), rule (21) is limited to specific morphological contexts: for example, it fails to apply when suffixes beginning with s (e.g., -si’m ‘2PL Series II’) are added to stems ending in t. Thus, we get lit-si’m ‘your (pl.) wedge’, not *lisi’m (Rigsby 1986:147). However, we observe

---

11 The final t in gat is deleted here by the deaffrication rule (21), which deletes t before =s or =hl.
12 The d which surfaces here is underlyingly -t, changed by the pervasive rule of Tsimshianic obstruent voicing which affects all stops and affricates before a vowel: see e.g. Rigsby (1986).
13 Though Hunt (1993:116, note 63) points out that ‘deaffrication’ is a misnomer, because the rule applies to a sequence of t +fricative, not to an affricate, we retain it here for reasons of continuity with earlier work.
that counterexamples to both of these rules involve the lexical root as part of the relevant environment for deletion. Turning this observation around, we see that a /t/ or /s/ in a lexical root may serve neither as a valid trigger nor target of any deletion process. This is suggestive of a larger phonological generalization: lexical roots are protected from reduction processes like (15) and (21) (cf. work on Root Faithfulness, e.g. McCarthy and Prince 1995). We therefore expect reduction processes to occur only amongst inflectional elements like the person suffixes and connectives, as attested, without requiring reference to specific morphemes.

Adoption of the above establishes that =s always co-occurs with Series II -$t$. But what about the /s/-case condition’s coreference requirement? At first sight, this appears counter-intuitive, since =s may introduce arguments bearing any of the three grammatical functions: determinate A in both independent and dependent clauses, determinate S in dependent clauses, and determinate O in dependent clauses without a lexical subject. The coreference condition therefore entails that third person Series II -$t$ can switch allegiance between A, S and O functions, not only between but also within clause types.

However counter-intuitive it might seem, there is in fact strong evidence that the coreference condition is correct. Switching functions between clause types is a hallmark of Series II pronouns, which are employed as ergatives (i.e., in A function) in independent clauses, and (usually) as absolutes (i.e., in S an O functions) in dependent clauses (as shown in Table 2 above). Since in independent transitive clauses Series II is always linked to the A argument, and A arguments are always immediately adjacent to the right edge of the predicate, (18) correctly predicts that =s will occur on all and only overt A arguments in transitive independent clauses.

The situation is more complicated in dependent clauses, where Series II pronouns normally mark the S and O arguments (i.e., they show an absolutive distribution), but sometimes unexpectedly mark the A argument instead, contrary to the basic pattern shown in Table 2.

The exceptional cases all involve a third person Series II pronoun ‘doubling’ the third person Series I clitic pronoun $t$, which uniformly marks the A function in dependent transitive clauses. The most obvious such case involves the third person plural Series II suffix -$diit$, which marks the A rather than the O argument in dependent clauses with a third person plural subject and a lexical object.14

(22) neediit gya'adiit $t$ Michael
neg=loc=3.1 see-3PL.II DM Michael
‘They didn’t see Michael.’

14 Since the language simply lacks a third person plural Series I clitic, the exceptional use of the Series II third person plural suffix here seems to be a way of circumventing a lexical gap in the Series I paradigm, with ‘knock on’ effects elsewhere in the pronoun system.
The A function is marked overtly here both by the Series I pre-predicative third person (number neutral) clitic *t* and by the Series II suffix *-diit*. In order to express a third person singular A with a third person plural O, the language resorts to using the Series III (independent) plural pronoun *'nidiit*, which occupies the regular post-predicative object argument slot, as shown in (23):

(23) neediiit  gya'as  Michael  *'nidiit*
    NEG=FOC=3.1  see=PN  Michael  3PL.III
    ‘Michael didn’t see them.’

By hypothesis, the appearance of *=s* above in (23) forces deletion of an underlying third person singular Series II suffix *-t* (via the deaffrication rule in (23)). This predicts that if an evidential enclitic is inserted between *-t* and *=s*, *-t* will surface. It does:

(24) neediiit  gya'adimaas  Michael  *'nidiit*
    NEG=FOC=3.1  see-3.II=EPIS=PN  Michael  3PL.III
    ‘Perhaps Michael didn’t see them.’

But in this case, what is the Series II suffix *-t* marking? It cannot be the O, because Series III pronouns (unlike Series I clitics) *never* double other arguments, either lexical or pronominal (see Section 1.1 above). This leaves only one

---

15 In the absence of a lexical (NP) object, *-diit* is able to mark either the object or the subject in dependent clauses:

(iii) Neediiit  t'isdiit
    NEG=FOC=3.1  hit.with.fist-3PL.II
    (a) ‘They hit him/her.’
    (b) ‘S/he hit them.’

This ambiguity can be resolved either contextually or grammatically. In the latter case, a Series III pronoun is employed in object position: since Series III pronouns cannot be cross-referenced with any other pronominal marking, a subject interpretation for *-diit* is forced (iv).

(iv) Neediiit  t'isdiit  *'nit*
    NEG=FOC=3.1  hit.with.fist-3PL.II  3SG.III
    ‘They hit him/her.’ (unambiguous)

16 Unlike Series II *-t*, 3rd plural Series II *-diit* never co-occurs with a lexical DP (Tarpent 1988, Hunt 1993:182), as shown in (vi) below. In contexts where a Series II pronoun doubles a plural argument, the third person singular (or rather, number-neutral) suffix *-t* appears instead (v).

(v) hlisxwhl  simimmaksdimaas  dip  John  gan  t  Mary
    finish=CN  together-marry-3.II=EPIS=PN  ASSOC  John  PH.CNJ  DM  Mary
    ‘John and Mary apparently just got married.’

(vi) *hlisxwhl  simimmaksdiidimaas  dip  John  gan  t  Mary
    finish=CN  together-marry-3PL.II=EPIS=PN  ASSOC  John  PH.CNJ  DM  Mary
possibility: both Series I and Series II pronouns mark the A function in dependent clauses such as (23) and (24).

This finding extends to non-plural contexts. A sentence such as (25) with a single overt argument is surface ambiguous:17

(25) needii\textsubscript{t} gya’as Michael
\textsc{neg=fo}\textsubscript{c}=3.i \textsc{see}=pn Michael
(i) ‘S/he didn’t see Michael.’
(ii) ‘Michael didn’t see him/her/it.’

On reading (i), the underlying Series II -t refers to the O function, and is coindexed with the lexical argument Michael, just as it would, for example, in a parallel sentence with a first person Series I (ergative) clitic:

(26) needi\textsubscript{n} gya’as Michael
\textsc{neg}=fo\textsubscript{c}=1sg.i \textsc{see}=pn Michael
‘I didn’t see Michael.’

But on reading (ii) of (25), the Series II -t refers to the A function, just as in (23) and (24). We can see this if we replace the null object with a third person singular Series III pronoun:18

(27) needi\textsubscript{t} gya’as Michael ’nit
\textsc{neg}=fo\textsubscript{c}=3.i \textsc{see}=pn Michael 3sg.iii
‘Michael didn’t see him/her.’ (unambiguous)

And just as in the plural case, insertion of an evidential clitic leads to the re-emergence of the covert -t:

(28) needi\textsubscript{t} gya’adimaas Michael ’nit
\textsc{neg}=fo\textsubscript{c}=3.i \textsc{see-3.i}=ep\textsc{is}=pn Michael 3sg.iii
‘Perhaps Michael didn’t see him/her.’ (unambiguous)

---

17 See Tarpent (1988:114) who gives similarly ambiguous cases from Nisga’a. Tarpent (1987a:155) had earlier attempted to argue that interpretation (i) of these cases is disfavoured, due to her claim that Nisga’a is ‘syntactically ergative’ and more specifically that it has an absolutive rather than a nominative ‘pivot’ in discourse contexts. Furthermore, she claims that sentence-level stress systematically distinguishes between the two interpretations, since the A always has weaker prominence than the O. We have found neither of these claims to be true in Gitksan. There is no preference for interpretation (ii) over (i) – in fact, if anything, the contrary is true, since speakers prefer to insert an overt Series III pronoun in object position for (ii) – and in a pilot phonetic study of examples such as (25), elicited with the help of storyboards, McClay (2015) found no prosodic difference between the two cases. See also note 18 immediately below, and Hunt (1993:42–44), who comes to the same conclusion.

18 The variant in (27) with an overt object pronoun is actually more common than the version without (interpretation (ii) of (25)), at least in elicitation contexts where a discourse antecedent is not provided for the null object.
Notice that in (28), as in its plural counterpart in (24), all three pronoun series are represented: the Series I pre-predicative clitic t and the Series II suffix -t both mark the A function, while the Series III independent argument pronoun 'nit marks the O function.

In fact, this configuration is not even restricted to cases with third person objects. It is also possible to employ other Series III pronouns in O function in dependent clauses, as in (29), which is an acceptable alternative to the more standard agreement configuration in (29). Just as elsewhere with a covert Series II -t, insertion of an evidential enclitic blocks deletion and allows the -t to surface (29).

(29) a. neediiit gya'a'y t Michael
    NEG=FOC=3.I see=1SG.II DM Michael
    ‘Michael didn’t see me.’

b. neediiit gya'as Michael 'nii'y
    NEG=FOC=3.I see=PN Michael 1SG.III
    ‘Michael didn’t see me.’

c. neediiit gya'adimaas Michael 'nii'y
    NEG=FOC=3.I see=3.II=EPIS=PN Michael 1SG.III
    ‘Michael didn’t see me.’

In all of these cases, =s appears if and only if an overt or covert Series II -t suffix is present on the predicate, and is coindexed with an immediately adjacent determinate argument. In short, Hunt’s /s/-case condition in (18) is an accurate description of the facts.

3.2 Is =s a case-marker?

Having provided evidence for Hunt’s generalization, let us now, however, ask whether it supports her contention that =s is a case marker. This is not a simple question to answer, since ‘case’ covers a multitude of theoretically heterogeneous notions. Hunt, furthermore, never attempts to justify her claim, but is content to label =s as ‘/s/-case’ and leave it at that.

Most approaches to case, however, agree on some version of the following basic properties:19

A. Case is a form of dependent marking (i.e., it marks an argument rather than a predicate)
B. Case at least partially reflects a hierarchy of grammatical functions which may or may not be instantiated in phrase structural terms.

19 These properties are characteristic of ‘structural case’, as opposed to ‘inherent’ or ‘semantic’ case, which is tied to specific thematic roles; the latter is clearly not relevant to =s.
C. Case is relational: that is, within a grammar, cases are only defined relative to each other.

We can now ask to what extent /s/-case meets these criteria.

Concerning A.: Since =s is always prosodically attached to the (immediately left-adjacent) predicate, and not to an argument, it is not surface obvious that it meets the dependent marking criterion. A case-based analysis must come up with a supplemental explanation for its distribution.

Concerning B.: Because it tracks agreement so closely, =s shares the idiosyncratic behaviour of third person Series II -t. In particular, while it is associated with A function in independent clauses, and (usually) S and O functions in dependent clauses (see Table 2), in cases of doubling =s may also mark A in dependent clauses. Thus, while =s must presumably ultimately be linked to a functional hierarchy, the mapping is indirect, via agreement. Furthermore, there is no evidence that =s-marked arguments occupy a unique syntactic position, since, as far as we know, there are no structural tests in IT which pick out just the class of nominals which are linked to Series II agreement (for a survey of structural tests in Gitksan, see Hunt 1993: Chapters 3 and 4).

Concerning C.: To the extent that it marks case at all, the basic distinction in IT is between ‘direct’ and ‘oblique’ arguments; the former are unmarked, while the latter are introduced by a preposition. Direct arguments include S, A, and O, but =s does not mark any of them consistently, and there is no evidence of a second (unmarked) case to which it is opposed.

We conclude that though it is difficult to produce knock-down arguments against a case-based analysis of =s, simply because the notion ‘case’ can be interpreted so variably, =s clearly does not fit the typological profile of a case-marker: it forms a prosodic constituent with the predicate, marks all three grammatical functions, and does not form part of a standard case opposition. In short: /s/-case is not case.

4 A new Type I analysis of the connective system

In view of the problems with treating =s as a case marker, we would like to suggest a new approach – or rather, a new variant of the older Type I approach to the connective system – containing the following core claims: (i) =s is in fact an allomorph of connective t, with its appearance conditioned by adjacency to a predicate containing a coindexed Series II -t suffix; and (ii) dip is not part of the connective system at all, but is a separate associative marker (Forbes 2013a).

In Table 8, we schematize our version of the Type I analysis (cf. Table 5 above).
Table 8: A new Type I analysis of the connective paradigm

<table>
<thead>
<tr>
<th>CONTEXT 1</th>
<th>CONTEXT 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN connective</td>
<td>(hl)</td>
</tr>
<tr>
<td>DM connective</td>
<td>(t)</td>
</tr>
<tr>
<td>Associative PL</td>
<td>(dip)</td>
</tr>
</tbody>
</table>

The basic ingredients of this analysis are as follows:

A. \(=s\) is derived from determinate \(t\) by a *softening rule* which applies under adjacency with the right edge of the predicate, with the additional condition that the argument introduced by \(t\) be coindexed with a third person Series II \(-t\) on the predicate.

B. The softening rule is crucially ordered before a *degemination rule* that deletes \(t\) before the associative marker \(dip\).\(^{20}\)

C. The softening rule is also crucially ordered before the *deaffrication rule* (21), which deletes Series II \(-t\) before \(=s\) or \(=hl\).

We assume softening takes the form in (30), and degemination the form in (31). Deaffrication is repeated here as (32).

\[(30) \text{Softening} \quad t \rightarrow =s /-t_i [NP]_i \]
\[
\text{DM} \quad \text{PN} \quad 3.\text{II}
\]

\[(31) \text{Degemination} \quad t \rightarrow \emptyset /\_ dip \]
\[
\text{DM} \quad \text{ASSOC}
\]

\[(32) \text{Deaffrication (=21)} \quad -t \rightarrow \emptyset /\_\{=s, =hl\} \]
\[
3.\text{II} \quad \text{PN, CN}
\]

The rules operate as follows. Determinate \(t\) is softened to \(=s\) when following a coindexed Series II suffix \(-t\). The suffix that triggered this change is then deleted before the \(=s\) it has produced via deaffrication, in a classic case of feeding order opacity. Otherwise, \(t\) remains \(t\). In environments where \(dip\) follows this \(t\), the \(t dip\) sequence is degeminated to simply \(dip\).

To illustrate this rule interaction, let us work through a couple of the example sentences given above. We begin with (6a), repeated below as (33):

\[^{20}\text{The} \(d\) \text{in} \(dip\) \text{is itself derived from a phonemic} \(t\) \text{by obstruent voicing, as mentioned in note 12.}\]
By hypothesis the underlying form is as in (34).

(34)  
gya'a\text{at}   t  \text{dip}  \text{[Michael  gan  t  Aidan]}  t  \text{Gidi}  
\text{[see[TR]-3.II]}  \text{DM ASSOC [Michael  PH.CNJ  DM  Aidan]};  \text{DM  Katie}  

The environment for softening is met, so the DM following the verb becomes \(=s\):

(35)  
gya'ats  \text{dip}  \text{[Michael  gan  t  Aidan]}  t  \text{Gidi}  
\text{[see[TR]-3.II]}=\text{PN  ASSOC [Michael  PH.CNJ  DM  Aidan]};  \text{DM  Katie}  

Now deaffrication (21) applies to delete the Series II -t, yielding (33).

Next, let us take a case where softening fails to apply. One such case is (8b), repeated as (36):

(36)  
gya'at  \text{dip}  \text{[Michael  gan  t  Aidan]}  
\text{see[TR]-3.II}  \text{ASSOC [Michael  PH.CNJ  DM  Aidan]}  
‘S/he saw Michael and Aidan.’  

The underlying form here is (37):

(37)  
gya’at  t  \text{dip}  \text{[Michael  gan  t  Aidan]}  
\text{see[TR]-3.II}  \text{DM  ASSOC [Michael  PH.CNJ  DM  Aidan]};  

The Series II -t on the verb is contra-indexed with the adjacent nominal, so softening is blocked, and since softening feeds deaffrication, the latter also fails to apply. However, the environment for degemination is met, and therefore DM t deletes before dip, yielding the surface form (36).

4.1 Consequences

The analysis outlined above has the following consequences.

A. The determinate connective \(t\) and its plural counterpart \(\text{dip}\) are no longer part of the same paradigm: \(\text{dip}\) is a separate associative marker, as independently argued by Forbes (2013a,b).

B. There is no longer a number distinction in any part of the connective system.

C. DM \(t\) is now present underlyingly with all determinates, mirroring the behavior of CN =hl.

D. PN \(=s\) has been reduced to a reflex of \(t\): hence it is just an allomorph of the determinate connective. There is no ‘/s/-case’.

E. Since determinate noun phrases always show up with \(=s\) when they are complements to the prepositions \(a\) and \(go(')o\), we must assume that
prepositions are themselves inflected for third person Series II -t agreement.

Of these consequences, we take (B), (C) and (D) to be both self-evident and to constitute clear advantages of our analysis over previous accounts; (A) and (E), however, merit more discussion, and are further elucidated in Sections 4.2 and 4.3 below, respectively.

4.2 Dip as an associative marker

Consequence (A) of our analysis concerns the ‘determinate plural’ particle dip, which we propose need not be considered a counterpart of the connective morpheme t with which it appears to alternate. Instead, we argue following Forbes (2013a,b) that it independently marks an associative or group interpretation for determinate nouns, and co-occurs underlyingly with a number-neutral t. The lack of surface co-occurrence with t is explained by morphophonological means (specifically, the degemination rule in (31)).

As remarked by all who have discussed this morpheme (e.g. Rigsby 1986; Tarpent 1981, 1987b), dip introduces a “group” interpretation when used with a determinate noun. The noun in a dip NP sequence serves as the representative member of a group whose other members are identified contextually.

(38) dip nigwood’y
    ASSOC father-1SG.II
    ‘my parents’ or ‘my dad and his friends’

(39) jabis dip ts’iits’ ahl jam miyup
    make-TR=CN ASSOC grandmother OBL=CN cook rice
    ‘The grandmothers made rice.’
    BS: There could be grandfathers there too, and only one ts’iits’.

Corbett’s (2001) crosslinguistic discussion of number identifies this as a specific associative subset of plurality, which sometimes overlaps with a more familiar additive interpretation. The terminological distinction between additive and associative plurals is important to make in Gitksan, however, as dip is crucially restricted to an associative interpretation, contrasting semantically with numerous other morphological plurals in the language.\(^\text{21}\)

As shown in (40), reduplicative plural morphology is not able to perform this semantic function:

---

\(^{21}\) Other subsets of the general ‘plural’ notion are similarly marked in Gitksan; Rigsby (1986) notes distributive and collective plural morphemes (ga- and -(t)xw respectively). The specifically distributive vs. collective usage of these morphemes, in contrast to other plural interpretations, merits further investigation.
‘There are bones on the ground.’

Researcher: Could there be one bone, and other dog toys on the ground, like balls (hli’t)?

Consultant: No.

Further, as demonstrated by native speaker judgements to (41)–(42), it does not seem to be possible for dip to function as a traditional additive plural, as is for example possible when names are pluralized in English.

The absence of an additive interpretation for determinate nouns suggests that dip is strictly associative.

With the semantic interpretation of dip clarified, we now consider some motivation for removing this morpheme from the connective system.

First, to our knowledge there is no previously identified case of an article sensitive to this semantic category (though this is not to say such a thing would not be possible). Instead, associatives crosslinguistically tend to be linked to other types of plural markers, whether by sharing their form or other properties of their distribution. We note that in Tsimshianic, dip is homophonous with the 1st plural Series I clitic, which appears pre-predicatively rather than pre-nominally. Given

An additive interpretation is possible for kinship terms, though this is usually accomplished with the distributive. Dip may co-occur with this morpheme.

Gitksan generally allows different types of plural markers to co-occur in this fashion, e.g. simultaneous prefixation and reduplication on common nouns. We therefore do not take the co-occurrence facts as evidence against an analysis of dip as a plural marker.
the inherent associativity of first person plurals (which mark the self and a group of others, rather than multiple selves), it seems that these two morphemes are likely diachronically linked, though we do not speculate which usage might have been derived from the other.

Second, we note some optionality in the distribution of *dip* that goes unexplained under an analysis of this morpheme as a connective. Tarpent (1981:400) notes that *dip* may co-occur with Series III independent pronouns as a way of emphasizing a group interpretation.

(43)  

\begin{itemize}
  \item a. (dip) 'nuu’m  
    \hspace{1cm} (ASSOC) 1PL.III  
    \hspace{1cm} ‘us (guys)’
  
  \item b. (dip) 'nisi’m  
    \hspace{1cm} (ASSOC) 2PL.III  
    \hspace{1cm} ‘you guys’
  
  \item c. (dip) 'nidiit  
    \hspace{1cm} (ASSOC) 3PL.III  
    \hspace{1cm} ‘them (guys)’
\end{itemize}

The use of *dip* with coordinated determinate nouns is also optional, as shown in (44) below:

(44)  

\begin{itemize}
  \item si’anaax (dip) Henry gans Lisa   
  \hspace{1cm} CAUS-bread (ASSOC) Henry PH.CNJ=CN Lisa  
  \hspace{1cm} ‘Henry and Lisa baked bread.’
\end{itemize}

Such a pattern more closely resembles that of nominal plural marking, which is often required to achieve a plural interpretation, but is not strictly obligatory; speakers we have worked with occasionally omit it, and when asked comment that an added plural marker makes a sentence “more correct.”

In light of these facts, it is clear that the inclusion of *dip* in the connective system does not simply introduce a distinction on the basis of number. Rather, it introduces optionality on a semantic basis into a system which otherwise obligatorily marks a noun class distinction, and obligatorily alternates for grammatical function. The connective system without *dip* can be described cleanly in terms of agreement with syntactic properties. Given that *dip* can be understood equally well as an independent marker of associativity, we argue that this added simplicity is worth the cost of removing it from the connective system.

We now consider the precise nature of this cost: the mechanisms required to explain why, of all three of the connectives, *dip* only co-occurs with *=s*.

Its inability to co-occur with *=hl* is easy to explain: all accounts of *dip* require that it be restricted to the class of determinate nouns. This clashes with the strictly non-determinate properties of *=hl*. Such a distribution is even more restricted than is crosslinguistically common for associatives, usually restricted to use only with human or animate nouns, and is illustrated in (45).
(45) a. bakw dip John (ganhl hliguutxwt)
come.PL ASSOC John (PH.CNJ=CN family-3SG.II)
goohl li'ligit
LOC=CN feast

‘John and his family arrived at the feast.’

b.*bakwhl dip sim'oogit (ganhl hliguutxwt)
come.PL=CN ASSOC chief (PH.CNJ=CN family-3.II)
goohl li'ligit
LOC=CN feast

intended: ‘The chief and his family arrived at the feast.’

_Dip_ also fails to co-occur overtly with _t_. We accomplish this by assuming that they appear together underlyingly (as presented in (36) and (37) above), but that _t_ procliticizes to _dip_, and is deleted via the degemination rule presented in (31) and repeated below as (46).

(46) Degemination

\[
\begin{align*}
  t & \rightarrow \emptyset / \_ \_ dip \\
  \text{DM} & \quad \text{ASSOC}
\end{align*}
\]

As this rule is phonologically motivated, with the effect of deleting two adjacent coronal stops in onset position, we are of the view that the cost incurred is relatively minor compared to the simplification of the overall system afforded by shifting _dip_ from ‘connective’ to ‘associative marker’.

### 4.3 The morphosyntax of PPs

We now turn to consequence (E) of our analysis, which concerns the connective system in prepositional phrases. IT has only two prepositions (or oblique markers): the general purpose preposition _a_, and the specifically locative preposition _go(')_o_. Both induce =s when their complement is a determinate noun phrase:

(47) gi'namis Johnhl anaax as Mary
give-TR=PN John=CN bread PREP=PN Mary

‘John gave the bread to Mary.’

(Hunt 1993:113)

---

23 For more on the proclitic properties of _t_, refer to note 9.

24 We further note that the only other instances of adjacent coronal stops in onset position are those involving names, such as _t_ Tom; we have already noted that phonemes within roots tend to be immune to processes of deletion. If names were to be considered as roots, then the degemination rule in (46) could potentially be reformulated as a more general phonological rule which did not refer to _dip_ in particular.

25 This statement has to be slightly qualified: _a_ has a suppletive alternate _loo_ which is used with Series II suffixes to yield oblique forms of pronouns (e.g., _loo-t_ P-3.II, _loo-n_ P-2SG.II). We set these forms aside, since they are not directly relevant to the issue at hand.
(48) ‘witxw t John go’os Mary
    come DM John LOC=PN Mary
    ‘John went to Mary’s place’ (Hunt 1993:113)

By hypothesis, this means that the underlying representation for a preposition with a determinate noun phrase complement must include Series II -t, which induces softening of determinate t to =s and then deletes by deaffrication, as shown in the schematic derivation in (49).²⁶

(49) a-t t Mary → a-t=s Mary → a=s Mary
    (softening) (deaffrication)

This means in turn that we must effectively treat all prepositions in IT as inflected. We see no objection to this move, either empirically or theoretically, though it must also be admitted we have no independent evidence to support it.

5 Extending the analysis to Coast Tsimshian

On any analysis, the IT connective system and its relation to the pronominal system raises questions as to how it arose, and which of its components are shared by its CT relatives. In this section, we therefore compare the IT system with what we can deduce of the CT system from Dunn (1979a,b), Mulder (1994), Stebbins (2003), Bach (2004), and Anderson and Ignace (2008). This is not the first time the comparison has been made: Peterson (2004) is an earlier attempt, though with somewhat different analytical assumptions (in particular, he adopts Hunt’s /s/-case analysis).

In Tables 9 and 10, we compare the two systems systematically, first in independent and then in dependent clauses. Differences between the CT and IT systems are bolded.

Several comments are in order involving the CT forms. First of all, we have confined ourselves to the ‘plain’ connective system, eschewing an analysis of the more complex formal or ‘elaborate’ system first recorded by Boas (1911) and discussed in detail by Mulder (1994).²⁷ Second, we have glossed over certain

²⁶ Series III pronouns can also optionally be preceded by as (yielding e.g. as ’niin ‘to you’, as ‘nidiit ‘to them’, etc.) as an alternative to the specialized oblique pronominals beginning with loo (see note 25). There is an added complication here in that Series III pronouns do not normally occur with DM t: however, cases where the two do co-occur are reported in Davis and Brown (2011), along with the suggestive comment that “today, they’d leave it out”. It seems that independent pronouns used to conform to the general determinate pattern, but have recently lost their initial t in IT (it is retained after the phrasal coordinator gan, and is still present in CT). For present purposes, we will assume a late local t-deletion rule for Series III pronouns only, ordered after softening.

²⁷ It is worth mentioning here Tarpent’s interesting take on the CT elaborated system, presented in an unpublished 1998 paper using mostly Southern Tsimshian (Sgüüxs) data. She segments the ‘complex’ forms into the simple forms plus two ‘optional postclitics’ =da’a and =ga’a with deictic meanings (absent/proximal and remote/distal, respectively). She then claims that because the postclitics appear in phrase- as well as sentence-final position (unlike their IT counterparts) they end up adjacent to connectives, and various
phonological complications: in particular, the common noun $=a$ connective is deleted systematically before vowels and resonants, and the vowel that we have given as simply ‘$V$’ (which we treat as epenthetic, following Bach 2004) varies between $a$ and $i$ under conditions which we do not understand. And third, following Bach (2004) and Peterson (2004) but contra Dunn (1979a,b,c), Mulder (1994), and Anderson and Ignace (2008), all of whom follow

<table>
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<td>CT</td>
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<tr>
<td>$S_{CN}$</td>
<td>$=a$</td>
<td>$=hl$</td>
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<tr>
<td>$S_{DM}$</td>
<td>$(V)s/t$</td>
<td>$t$</td>
<td></td>
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<tr>
<td>$A_{CN-O_{CN}}$</td>
<td>$=a$</td>
<td>$=hl$</td>
<td>$=a$</td>
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<td>$A_{CN-O_{DM}}$</td>
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<td>$(V)t$</td>
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<td>$(V)t$</td>
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Table 10: CT-IT connective comparison: Dependent clauses

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<td>=a</td>
<td>=hI</td>
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<tr>
<td>$S_{DM}$</td>
<td>=($V)s$</td>
<td>=s</td>
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<tr>
<td>$A_{CN-O_{CN}}$</td>
<td>=a</td>
<td>=hI</td>
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<td>$A_{CN-O_{DM}}$</td>
<td>=a</td>
<td>=hI</td>
</tr>
<tr>
<td>$A_{CN}$</td>
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<td>=hI</td>
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<tr>
<td>$A_{DM}$</td>
<td>=($V)t$</td>
<td>=s</td>
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<tr>
<td>$A_{DM-O_{CN}}$</td>
<td>=($V)t$</td>
<td>=s</td>
</tr>
<tr>
<td>$A_{DM-O_{DM}}$</td>
<td>=($V)t$</td>
<td>=s</td>
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<tr>
<td>$O_{CN}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$O_{DM}$</td>
<td></td>
<td>=($V)s$</td>
</tr>
</tbody>
</table>

Boas’s original (1911) analysis, we treat the A connectives as simply =a and =($V)t$, rather than =da and =d$V$t, with the initial t (voiced to $d$) actually representing the very same Series II third singular suffix -t that much of our analysis of the IT system has revolved around.

Once we have ‘cleaned up’ the CT connective system in this way, it is clear that it is very close to the IT system. The common noun connectives have different forms (CT has =a where IT has =hI), but there are traces of =hI in the CT system (it replaces =a in certain irrealis environments, including under negation and in questions and conditionals: Dunn 1979a, Tarpent 1998, Bach 2004).28 The likelihood is that both =hI and =a originated from a Proto-Tsimshianic *=ahl connective.29

As far as the determinate connectives are concerned, the first point to make is that the same elements (t and =s) appear in more or less the same environments

---

28 Peterson (2004:336) points out that the correspondence between IT =hI and CT =a extends to non-standard uses of the CN connective: in particular, where the IT imperfective marker yukw selects =hI before its complement, its CT cognate yagwa can be analyzed as consisting of a root yakw plus the common noun connective =a.

29 A fluent speaker whom we have worked with from Gitsegukla, but with extensive family connections further west in CT territory, systematically uses =ahl instead of =hI as the common noun connective in Gitksan. We do not know if this represents a hitherto undocumented ‘interlanguage’ between IT and CT or if her dialect represents a throwback to an earlier form of IT.
in both systems. Of note is the limited distribution of \( =s \) in CT: just as in IT, it only ever appears immediately adjacent to the predicate.

In fact, there are only two significant differences between the two systems. The first is in intransitive independent clauses with determinate subjects: whereas \( t \) is consistently used in IT (see (3) above), Dunn (1979b) and Mulder (1994) report that \( =s \) is used in CT, as shown in (50) and (51).

\[
(50) \text{ada nah manyaas üünalda la huup\!} \\
\text{then PFV walk.up=PN Arnold=PREP INCEP dark} \\
\text{‘Arnold used to walk up from the shore in the dark.’} \quad \text{(Dunn 1979b:133)}
\]

\[
(51) \text{nah ts'im'wihiawtgas Mardzi da nawaabu} \\
\text{PFV into.from-cry=PN Margie PREP POSS-house-1SG.II} \\
\text{‘Margie came into my house crying.’} \quad \text{(Mulder 1994:57)}
\]

This CT pattern suggests that there should be a Series II \(-t\) suffix present in intransitive independent clauses, which triggers softening of the determinate marker \( t \) to \( =s \) and then undergoes deletion via deaffrication. Interestingly, there is evidence that this is indeed the case, offering rather striking support for our account. Unlike in IT, in CT Series III independent pronouns are not used in absolutive contexts in independent intransitive clauses: instead, a fourth suffixal paradigm consisting of reduced variants of the independent pronouns is employed, termed the ‘definite objective’ paradigm by Dunn (1979c), and the ‘marked absolutive’ paradigm in Dunn (1979a). Significantly, this paradigm overlaps in first person singular and third person with the Series II paradigm: in particular, the third person form is simply \(-t\). Assuming, then, that this ‘marked absolutive’ \(-t\) acts exactly like Series II \(-t\) for the purposes of softening and deaffrication, the difference between CT and IT falls out without stipulation.

However, there is a further interesting wrinkle in the CT data.\(^30\) Anderson and Ignace (2008) (see also Sasama 1995:7, note 8) give a number of examples of intransitive clauses introduced by perfective \( nah \) with subjects introduced not by \( =s \) but by the determinate marker \( t \) (with epenthetic vowel insertion):

\[
(52) \text{nah yaawxgat} \quad \text{Meli} \\
\text{PFV eat[INTR]=DM Mary} \\
\text{‘Mary has eaten.’}
\]

\[
(53) \text{nah hadiksat} \quad \text{Sally} \\
\text{PFV swim=DM Sally} \\
\text{‘Sally has swum.’}
\]

\[
(54) \text{nah sisaaxsat} \quad \text{Doug} \\
\text{PFV laugh=DM Doug} \\
\text{‘Doug has laughed.’}
\]

\(^30\) We are grateful to Margaret Anderson for help with the CT data here.
This is, of course, identical (except in phonetic detail) to the IT system. There are two possible explanations. The first is that the cases in (50) and (51) are actually dependent clauses, introduced exceptionally by nah. Dunn (1979a) raises this possibility by claiming that in CT – unlike in IT – the dependent-independent clause distinction is not categorically induced by a set of designated ‘dependent markers’, but is clinal, with certain tense-aspect markers (yagwa) most likely to induce dependent inflection, others (dm) least likely, and still others (la and nah) intermediate in status.

The other alternative is that there is a language shift taking place, with older speakers preferring =s and younger speakers shifting to t. The shift would involve a change in the pronominal paradigm used by CT speakers in independent intransitive clauses, with the ‘definite objective’ or ‘marked absolutive’ -t being eliminated altogether, thus bringing CT in line with IT in these contexts. Interestingly, the paradigms for this pronoun series in Dunn (1979c:226) and in Anderson and Ignace (2008:303) differ in exactly this way: Dunn gives -t, where Anderson and Ignace have Ø.

The second difference between the connective systems of CT and IT is found in transitive dependent clauses, where the A argument is marked with t in CT, but =s in IT. This is shown in (55) and (56):

(55)  *Coast Tsimshian*

a. yagwat łmoomdit Meli
    IPFV=3.1 help-3.1=DM Mary
    ‘Mary is helping him.’

*b. yukwt hlimooś Mary ‘nit’
    IPFV=3.1 help=PN Mary (3.11)  
    ‘Mary is helping him.’

(56)  *Coast Tsimshian*

a. yagwat łmoomdit Melit31 Dzon
    IPFV=3.1 help-3.1=DM Mary=DM John
    ‘Mary is helping John.’

*b. yukwt hlimooś Mary t John
    IPFV=3.1 help=PN Mary DM John
    ‘Mary is helping John.’

31 The determinate connective t is usually written together with the preceding word in CT, unlike in most work on IT. This possibly signifies that it is more closely bound to the preceding prosodic word (like the common noun connectives =hl/=a), although given that t may front together with its NP complement in focusing constructions in CT (as is also possible for more conservative IT speakers), the difference is more likely to be simply orthographic.
Note that in CT, both the third person Series II suffix -t and the determinate connective t surface overtly in the sequence -d=it, separated by what we assume to be an epenthetic vowel [i], which triggers voicing on the immediately preceding -t. Softening fails in this environment: but why?

There is an obvious answer to this question: in CT, the third person Series II suffix -t is not coindexed with the subject, but with the object, and therefore the coindexation condition on softening is not met. This means that the difference between the languages falls out from the lack of ‘double A’ marking in CT, whose Series II -t shows a straightforward absolutive pattern in dependent clauses, just as in Table 2 above.

We take it as a significant advantage of the analysis we have provided for the IT connective system that it extends so straightforwardly to the CT system, with two truly ‘micro-’parametric adjustments. Otherwise, exactly the same set of morphophonological rules, operating in the same order, accounts for both systems.

6 Conclusion

We believe the account we have given of the Tsimshianic connective system, which has drawn on the important contributions of Tarpent, Hunt, Dunn, Bach, and Peterson, is the most successful description yet. Even so, our analysis is far from simple: it appeals to three morphophonological rules (softening, deaffrication and degemination) which are not only specific to particular morphological environments, but in the case of softening, also subject to a syntactic condition on coindexing. We welcome suggestions on how to simplify the analysis we have provided without losing its empirical coverage.

Beyond the details of our analysis, however, we also think it is important to point out that any analysis will have to confront the fact that the Tsimshianic connective system is both quite regular and remarkably opaque. Generally, morphological complexity is measured in terms of the sheer number of morphemes per word, leading both Rigsby and Tarpent to comment that IT is less morphologically complex than e.g., Wakashan and Salish. However, the combination of rampant homophony within the inflectional system (how many t morphemes can a language tolerate?) and significant morphophonological opacity (with complex rule-ordering necessary to derive the surface forms) would appear to make Tsimshianic uniquely difficult from the viewpoint of language acquisition. And yet the same system in its essentials characterizes both IT and CT, suggesting a surprising degree of diachronic stability, and therefore learnability. Not for the first time, we are struck with wonder at the human capacity for learning complex grammar.

References


A morphemically glossed Kwak’wala text from the Boas-Hunt corpus

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Abstract: This paper provides a morphemically glossed excerpt from a Kwak’wala text. It is intended as an instructional tool for linguists and others who are interested in accessing and analyzing the narratives in the Boas-Hunt corpus.

Keywords: Kwak’wala, George Hunt, Franz Boas

1 Introduction

This publication reproduces a portion of a narrative from the Kwak’wala textual corpus assembled by Franz Boas and George Hunt, along with a transcription into the orthography of the North American Phonetic Association, morphemic glosses, and an interlinear translation. It is meant to assist linguists and students of oral literature who are interested in accessing narratives from the Boas-Hunt corpus in their original language, but who may have difficulty interpreting the texts’ morphological features or deciphering Boas’s Kwak’wala orthography. The excerpt that I reproduce is the second half of a narrative that Boas titled “Star Story” (Boas 1935a:92–94, 1943:92–94), in which a sea otter drags several human hunters into the sky, where they are transformed into the Pleiades and the constellation Orion.

The provenance of “Star Story” is unclear. The tale focuses on a Gusgimaxw (Koskimo) hunting party and mentions two Gusgimaxw and Gopínuxw hunters by name. This likely suggests that the story originated in the Quatsino Sound region of northwestern Vancouver Island, where the Gusgimaxw and Gopínuxw tribes had their territories (Galois 1994:347–349). However, whereas most of the narratives published alongside “Star Story” are prefaced with introductory labels identifying the tribe to which each tale belongs, Boas does not provide this information for...

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2 Here, I have followed Boas’s (1966:48) transcription (G.ósg-imexw) and analysis of this tribal name. However, in my morphemic analysis of “Star Story,” I transcribe the name as Gusgimuxw, in accordance with how Boas transcribes it (g.ובע-ינוכ-ו) in his edition of the text. The initial consonant in Gusgimaxw is uvular. The initial consonant in Gopínuxw is velar, but I capitalize the G at the beginning of this proper noun.

“Star Story.” He simply labels it as having been “Recorded by George Hunt.” The text also lacks the dialect-specific features (such as frequent use of the suffix -kas, special vocabulary, and certain phonological tendencies) that appear in some of the narratives Hunt documented among the tribes of northwestern Vancouver Island. Hunt may have drawn “Star Story” from his own narrative repertoire without consulting a Gusgamxʷ or Gopinuχʷ narrator. I cannot determine how Hunt first became familiar with the tale or whether it originated in the Quatsino Sound region.

The etiological content of “Star Story” differs from depictions of the constellation Orion in other Kwak’wala texts (see Boas 1935b:126). Two other narratives (Boas and Hunt 1905:383–387, 127–128) associate Orion with a heavenly canoe bearing either nine or fourteen crewmen and a skipper. One of the skipper’s names, “Harpooneer-of-Heaven” (translation from Boas and Hunt 1905:383), is nearly identical to the name for Orion’s Belt that appears in “Star Story.” The skipper of the canoe gives supernatural gifts to the tales’ protagonists. In one of the narratives, the protagonist is a celestial ancestor figure who travels across the sky-world before descending to the earth and becoming the progenitor of a Gusgamxʷ iə̱mi. His encounter with “Harpooneer-of-Heaven” occurs

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3 E.g. spirantization of velar and uvular stops in word-final position (Boas 1947:295).
4 While a small fraction of the texts in the Boas/Hunt corpus were dictated directly to Boas by Kwak’wala speakers, Hunt documented most of the narratives, and he typically recomposed them in writing after they were told to him (Berman 1991:34, 1994:491). As Berman notes, “The narratives we have are Hunt’s tellings of the story, not the words of the Indian who told the story to Hunt and whose name Boas often appended to the text in the published version” (Berman 1991:34). Furthermore, Berman has adduced strong evidence to the effect that “Hunt altered the material…to conform to his own narrative style” (Berman 1983:21). Therefore, the dialect-specific features to which I refer reflect Hunt’s efforts to imitate the dialects of northwestern Vancouver Island. Boas made the following statement regarding a narrative cycle that exhibits these linguistic features: “Mr. Hunt has tried to record the following traditions in the Lálsiaqwala dialect. The language is, however, not quite consistent” (Boas and Hunt 1906:185).
5 Hunt did not always imitate regional dialects when recomposing narratives that originated among groups from northwestern Vancouver Island. Therefore, the fact that “Star Story” does not exhibit special dialectal features should not be taken as evidence against a northwestern provenance. However, the absence of these distinctive features leaves us without a firm basis on which to establish the geographic origins of the narrative, given that Boas did not supply an introductory label identifying the tribe to which the story belongs. For examples of texts that Hunt wrote in northwestern dialects, see Boas and Hunt (1905:393–397, 1906:185–224) and Boas (1910a:244–285, 296–352).
6 Professor Daisy Rosenblum made me aware of the fact that some of the narratives in the Boas-Hunt corpus originated this way. It should be noted that in the anthology containing Boas’s translation of “Star Story” (Boas 1935a), Boas frequently labels texts as having been “Recorded by George Hunt.” Normally, he does not italicize the name, “George Hunt.” However, when Boas identifies the narrators who told the stories in the anthology, he italicizes their Kwak’wala names. Interestingly, above his translation of “Star Story,” Boas prints the label, “Recorded by George Hunt,” with “George Hunt” in italics. This may indicate that Hunt was not only the documenter, but also the source, of “Star Story.”
7 For a definition and brief discussion of this type of social division, see Codere (1990:366–368).
while he is still in the sky. In another narrative, the personified constellation Orion is depicted as the owner of a “fog-box” (translation from Boas 1910a:165), which causes foggy weather when it is opened. None of these narratives gives the impression that the constellation Orion was once a human being or a group of human beings who lived on earth before being pulled into the sky and transformed into stars. Nevertheless, like “Star Story,” two of the other tales I have cited (Boas and Hunt 1905:383–387, 127–128) associate Orion with sea-mammal hunting.

In the morphemic analysis that follows, seven separate tiers are used to represent each segment of the text. In the first tier, I reproduce the originally published text of “Star Story” in Boas’s orthography. The second tier contains a transcription of the text into the NAPA orthography. My transcriptions of vowels, particularly Boas’s ē and e, are extremely tentative. The next three tiers contain segmented morphemes, morphemic glosses, and a word-level translation. Then, I reproduce Boas’s sentence-level translation, followed by a modified version of his translation that more closely matches my morphemic analysis of the text.

An explanatory list of abbreviated morphemic glosses appears at the end of this paper. However, it is helpful to introduce in advance a particularly complex set of suffixes and the glosses I use to represent them. Boas (1947:271–272, 284–285) analyzes a morphological pattern involving words that express spatial relationships and that are formed from the following three items, in order: (1) a postural or other root; (2) a locative suffix; and (3) either the suffix -eʔ, -ala, or -d. The first of these three components (a postural or other root) denotes the figure in the spatial relationship that the word expresses, while the second of these three components (a locative suffix) denotes the ground. The third component (-eʔ, -ala, or -d) indicates whether the subject of the verb is the figure, the ground, or a separate entity. If -eʔ (which I gloss as LOC1) is used, then the root denotes

8 In his discussion focusing on depictions of the sky-world in Kwak’wala oral literature, Boas (1935b:126) has already assembled and compared each of the narratives I have reviewed, implicitly calling attention to the differences between how the constellation Orion is portrayed in “Star Story” and how it is depicted in the other tales. I rely on Boas’s identification of the figures depicted in these narratives as personifications of the constellation Orion (ibid.). Presumably, Boas relied, in turn, on information supplied by Hunt. Berman (1991:599) states this identification in more tentative terms, suggesting that the canoe and its crewmen “seem to represent the constellation Orion” (Berman 1991:599, emphasis added).

9 Incidentally, narratives paralleling “Star Story” have been documented among Inuit groups. In a discussion focusing on genres of Inuit oral literature, Boas (1904:4) summarizes one narrative as follows: “A number of bear-hunters, their sledge, and the bear which they were pursuing, rose to the sky and became the constellation Orion.” A fuller form of this narrative can be found in Boas (1901:174), “The Hunters transformed into a Constellation.” See, also, the examples cited in Boas (1901:360).

10 My transcription is guided by the table of Kwak’wala orthographies that has been produced by the School District 85 First Nations Education Council (2010:6).

11 Throughout the discussion that follows, I merely reiterate Boas’s analysis of the paradigm in question (1947:271–272, 284–285).

12 The form of the third suffix varies considerably depending on its phonetic environment (see Boas 1947:273, 365).
the subject, and the locative suffix denotes where the subject is. The resulting word means, roughly, “the [root] is at the [locative suffix].” If -ala (which I gloss as LOC2) is used, then the locative suffix denotes the subject or a spatially circumscribed part of the subject (such as a body-part, if the subject is animate), and the root denotes a primary object that the subject possesses at the location denoted by the locative suffix. The resulting word means something along the lines of, “the [subject] has the [root] at the [locative suffix].” Finally, if the suffix -d (which I gloss as LOC3) is used, then the verb describes the act of placing the item or entity denoted by the root at the location denoted by the locative suffix.\(^\text{13}\) The resulting word means, roughly, “to place the [root] at the [locative suffix].” For purposes of illustration, I now reproduce a set of examples cited by Boas (1947:272) in his discussion of this morphological paradigm. The words exhibiting the phenomenon and the segmented suffixes -eʔ, -ala, and -d are printed in bold:

(1) \[\begin{align*}
\text{we} & \quad \text{laʔa?i} & \quad \text{ʔumxʔumgila} \\
\text{we} & \quad \text{la-la}=i & \quad \text{ʔumx-ʔum-gila} \\
\text{well} & \quad \text{AUX-QUOT=SBJ} & \quad \text{RED-wealth-MAKE (PN)}
\end{align*}\]

\[\begin{align*}
\text{ŋexwənalaxida} \\
\text{ŋexw-ʃən-ala}=\chiida \\
\text{be.close-SURFACE.OF.LONG.BODY-LOC2}=\text{OBJ} \\
\text{ʔiʔasGəmi} \\
\text{ʔiʔa-sGəm}=i \\
\text{RED-sea.otter-ROUND}=\text{DEM}
\end{align*}\]

“to have blanket on body” (Boas 1947:272)

\[\begin{align*}
\text{ŋexənaʃə} \\
\text{ŋexw-ʃən-en-e}=a \\
\text{be.close-SURFACE.OF.LONG.BODY-LOC1}=\text{DEM}
\end{align*}\]

“blanket” (Boas 1947:272) (i.e. nominalised form of ‘being close to surface of body’)

“Wealthy [PN] wore a marten blanket” (Boas and Hunt 1905:74).

(2) \[\begin{align*}
\text{we} & \quad \text{laʔa?i} & \quad \text{Gʷala} & \quad \text{laʔi} \\
\text{we} & \quad \text{la-ʃ}=i & \quad \text{Gʷal-a} & \quad \text{la}=i \\
\text{well} & \quad \text{AUX-QUOT=SBJ} & \quad \text{finish-?= AUX=SBJ}
\end{align*}\]

\[^{13}\text{The suffix I gloss as ‘LOC3’ is homophonous with a more general transitivizing suffix (Boas 1947:273, 365) that I label ‘TRANS’. I believe LOC3 and TRANS are, in fact, the same morpheme. Boas (1947:273) has already implied that this is the case: in his discussion of the suffix I label ‘TRANS’, Boas provides several examples of words in which this suffix functions in the same manner as the suffix that I label ‘LOC3’. Nevertheless, I use the gloss ‘LOC3’ when the morpheme in question occurs in complementary distribution with LOC1 and LOC2.}\]

\[^{14}\text{Boas (1947:357).}\]
be.close-SURFACE.OF.LONG.BODY-LOC3-

\[ \text{PRONOMINAL}=\text{OBJ}=3\text{.POSS} \]

“to put blanket on body” (Boas 1947:272)

be.close-SURFACE.OF.LONG.BODY-LOC1=DEM

“blanket” (Boas 1947:272) (i.e. nominalised form of ‘being close to surface of body’)

“Then he finished, and put on his blanket” (Boas and Hunt 1905:65).

In sentence (1), we find a word that denotes being a blanket on the surface of a body (\( \text{nəx}\text{wə} \text{ʔ} \), formed with -eʔ, ‘LOC1’) alongside of a word that denotes having a blanket on the surface of one’s own body (\( \text{nəx}\text{wə} \text{ʔ} \text{ala} \), formed with -ala ‘LOC2’). In sentence (2), we find a word that denotes putting a blanket onto the surface of a body (\( \text{nəx}\text{wə} \text{nd} \), formed with -d ‘LOC3’).

2 Morphemic analysis of “Star Story”

<table>
<thead>
<tr>
<th>Key</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Kwak’wala text as it was first published (Boas 1943:93–94) in Boas’s orthography.</td>
<td></td>
</tr>
<tr>
<td>c. Morphemic segmentation.</td>
<td></td>
</tr>
<tr>
<td>d. Morphemic glossing.</td>
<td></td>
</tr>
<tr>
<td>e. Word-level translation.</td>
<td></td>
</tr>
<tr>
<td>g. Modified version of Boas’s sentence-level translation.</td>
<td></td>
</tr>
</tbody>
</table>
1.

<p>| | | | | |</p>
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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>a. wä</td>
<td>ləlää</td>
<td>lënts</td>
<td>les</td>
<td>lāxa</td>
</tr>
<tr>
<td>b. wε</td>
<td>laʃɔ?i</td>
<td>lɔncis</td>
<td>laγa</td>
<td></td>
</tr>
<tr>
<td>c. wε</td>
<td>la-fa=i</td>
<td>la-ançiš</td>
<td>la=γa</td>
<td></td>
</tr>
<tr>
<td>d. well</td>
<td>SEQ-QUOT=SBJ</td>
<td>go-DOWN,TO.BEACH</td>
<td>PREP=OBJ1</td>
<td></td>
</tr>
<tr>
<td>e. Well, then, it is said</td>
<td>they went down-beach</td>
<td>to the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Then q</td>
<td>they went down the</td>
<td></td>
<td></td>
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<tr>
<td>g. Well, then, it is said that they went down to the</td>
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2.

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<tr>
<th></th>
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<tbody>
<tr>
<td>a. !emáise</td>
<td>lax</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. χɔma?isi</td>
<td>laγ</td>
<td></td>
<td></td>
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<tr>
<td>c. ɔma-is=i</td>
<td>la=γ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. beach-ON.BEACH=DEM</td>
<td>PREP=OBJ1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. beach</td>
<td>to</td>
<td></td>
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<tr>
<td>f. beach to</td>
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<tr>
<td>g. beach to</td>
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3.

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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>a. hânêdzasases</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. hɔnizasasis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. han-is-as=as=is</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. hollow.object.is.located</td>
<td>-ON.BEACH-PLACE=GEN=3.POSS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. location on the beach of their</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. where</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>g. where their</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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15 I follow Berman (1983:1; 1991:288–321) in glossing and translating we as “well.”
16 Boas (1947:304). I have drawn extensively on lexicographic sources throughout. I generally provide citations to specific sources when I borrow unusual or multi-word glosses from them, especially (but not exclusively) when I reproduce these multi-word glosses verbatim.
17 I follow Boas (1947:245) in translating the suffix -ιθ as “it is said.”
18 The letter q, short for “quotative,” is Boas’s representation of the suffix -ιθ (see Berman 1991:357).
19 The first half of the text, which I have not reproduced, describes the hunters’ preparations for the expedition that follows.
### 4.

| a. ålêwats!e | xwâxwagwâma. |
| b. ?əliwâči | xʷaxʷagwəma. |
| c. ?əlixʷ-ači | xʷa-xʷakʷ-əm=a |
| d. sea.mammal.hunting[HOLLOW.CONTAINER] | RED-canoe-DIM=DEM |
| e. container used for hunting sea mammals | little canoe. |
| f. the small hunting canoe was, | |
| g. little sea-mammal-hunting canoe was. | |

### 5.

| a. wä, á̄məléwise | háyaxstáliseleda |
| b. weʔ oʔəmʔawisi | hayaxstalisəlida |
| c. weʔ o-μʔa-wis=i | hi-χsta-lis-oʔla=ida |
| d. well just-OI-QUOT-CONN=SBJ | go.straight-OPENING-BEACH-CONT=SBJ |
| e. Well and so, it is said, they just went straight to the shore[23] the | |
| f. (See below)[24] | |
| g. (See below) | |

### 6.

| a. åléwinoxwe | qaʔs |
| b. ?əliwʔinuχʔi | qaʔʔs |
| c. ?əlixʷ-inuχʷ=i | qaʔʔ= s |
| d. sea.mammal.hunting-PROF=DEM | PURP=3.POSS |
| e. sea-mammal hunters | in order to |
| f. and so q, the sea hunters went straight down to the shore and | |
| g. Well, and so, it is said, the sea-mammal hunters just went straight to the shore and | |

---

23 A more literal translation would be, “went straight to the mouth of the beach.” I follow Boas (1935a:93), who gives the translation, “went straight down to the shore.”
24 Owing to the differences between Kwak’wala and English syntax, it often makes sense to delay sentence-level English translations until after both the verb and the subject have appeared in the original Kwak’wala sentence.
7. a. "mógwale"sexes  dâákwe  làxa
b. níngwali?sixis  ds?akwa  laya

c. ŋíu? -ga?í=s=x=is  da-kw=i  la=χa

d. load-ONTO-NMLZ=3.POSS=OBJ1=3.POSS  CARRY-PASS=DEM  PREP=OBJ1

e. load their things that were carried onto the

f. put down what they carried at the

g. loaded what they were carrying at the

8. a. mág-exsta'lisasa  démxi.e.  wä,
b. magχsta'lisasa  démxi.  we

c. mak-χsta'-ís27-asə  dém-sxi  we

d. next.to-OPENING-BEACH=GEN  salt29-?30  well

e. shore of the sea. Well,

f. edge of the sea.

g. shore of the sea. Well,

9. a. g-áx'lāe  xwêlax'wesdes  làxa
b. gaχlő'i  xwilaχwəsdis  laya

c. gaχ-fa=i  xwît-aqa-ωsdis  la=χa

d. AUX-QUOT=SBJ  go.back-PAST-UP.FROM.BEACH31  PREP=OBJ1

e. then, it is said go back up-beach from the

f. Then q they came up again on the

g. then, it is said that they went back up from the

26 See Boas (1947:246).
27 See Boas (1947:239) and Rosenblum (2014) regarding the status of the f at the beginning of this suffix. (Cf. also Boas [1900:718] for an early interpretation of this phenomenon).
30 I use question marks in the fourth tier to indicate that I am unable to determine the meaning of a morpheme.
### 10.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>!emáise</td>
<td>qa²s</td>
</tr>
<tr>
<td>b.</td>
<td>ʃɔmaʔisi</td>
<td>qaʔs</td>
</tr>
<tr>
<td>c.</td>
<td>ʃɔma-ìs=i</td>
<td>qaʔ=s</td>
</tr>
<tr>
<td>d.</td>
<td>beach-BEACH=DEM</td>
<td>PURP=3.POSS</td>
</tr>
<tr>
<td>e.</td>
<td>beach</td>
<td>in order to</td>
</tr>
<tr>
<td>f.</td>
<td>beach and</td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>beach, and</td>
<td></td>
</tr>
</tbody>
</table>

### 11.

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<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>LELÍlbendxə</td>
<td>xwâxwagwëme</td>
</tr>
<tr>
<td>b.</td>
<td>ʃɔlʃəlbôndχa</td>
<td>xʷaxʷagʷəmï</td>
</tr>
<tr>
<td>c.</td>
<td>ʃəl-ʃəl-ba-nd=χa</td>
<td>xʷa-xʷakʷ-əm=i</td>
</tr>
<tr>
<td>d.</td>
<td>RED-carry.canoe³²-HORIZ.END-TRANS=OBJ1</td>
<td>RED-canoe-DIM=DEM</td>
</tr>
<tr>
<td>e.</td>
<td>carry the canoe by its ends the little canoe</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>carried at each end the small canoe,</td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>they carried by its ends the little canoe,</td>
<td></td>
</tr>
</tbody>
</table>

### 12.

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<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>LÊwís</td>
<td>k!waxlátʃye</td>
</tr>
<tr>
<td>b.</td>
<td>ɬəwís</td>
<td>ʃəxəɬaʃi</td>
</tr>
<tr>
<td>c.</td>
<td>luʔ=is</td>
<td>ʃəa-ɬə-ɛʔ=i</td>
</tr>
<tr>
<td>d.</td>
<td>with=3.POSS</td>
<td>sit-STERN-LOC1=DEM</td>
</tr>
<tr>
<td>e.</td>
<td>with their sitting at the stern man</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>with their spearsman,</td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>with their spearsman,</td>
<td></td>
</tr>
</tbody>
</table>

### 13.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>qa²s</td>
<td>lä³</td>
</tr>
<tr>
<td>b.</td>
<td>qaʔs</td>
<td>leʔ</td>
</tr>
<tr>
<td>c.</td>
<td>qaʔ=s</td>
<td>la-iʔ</td>
</tr>
<tr>
<td>d.</td>
<td>PURP=3.POSS</td>
<td>go-NMLZ</td>
</tr>
<tr>
<td>e.</td>
<td>in order to</td>
<td>go</td>
</tr>
<tr>
<td>f.</td>
<td>and they launched it</td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>and they carried it into the water</td>
<td></td>
</tr>
</tbody>
</table>

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³³ Boas (1910b:511).
³⁴ Rosenblum (2014).
14.  

| a. lax | l.'asa-fisasa | ʰme²w̃džasasa | g.wiG.wałäs. |
| b. lay | ʰfasa-fisasa | ʰnɔwizasasa | G'ülG'eleš. |
| c. la=χ | ʰas-íis=as | ʰmu-is-as=asa | G'ülG'ela-as. |
| d. PREP=OBJ1 seaside-BEACH=GEN (un)load-BEACH-PLACE=GEN clothing-3.POSS |
| e. at | area of the beach to unloading place on the | the seaside of | belonging. |
| f. outside of where they had put down their belongings. |
| g. seaward from where they had put down their belongings on the beach. |

15.  

| a. wä, | lá̃læe | ʰmóxsaq | láxes |
| b. we | laʃaʔi | ʰmùxsaq | layis |
| c. we | la-ʃa=i | ʰmu-x=q | la=χ=is |
| d. well | SEQ-QUOT=SBJ load-IN.CANOE=OBJ1.PRON PREP=OBJ1=3.POSS |
| e. Well, then, it is said | they loaded them [i.e. their | into their |
| | belongings] into the canoe |
| f. Then q they put them aboard their |
| g. Well, then, it is said that they loaded [their belongings] into their |

16.  

| a. xwáxwagweme. | wä, | lá̃læe | ʰwÎla | hóg.wesa |
| b. wəx'axwag-wəmi. | we | laʃaʔi | ʰwila | huG'w̃xsa |
| c. xwa-xwaq-əm=i | we | la-ʃa=i | ʰwil-a | huq'w̃-x̂s-a |
| d. RED-canoe-DIM=DEM well | SEQ-QUOT=SBJ all-? | go.plural-IN.CANOE-? |
| e. little canoe. | Well, then, it is said | they all went into canoes |
| f. small canoes. (See below) |
| g. little canoes. (See below) |

17.  

| a. ēsâlê'winoxwe | láxes |
| b. ʔisʔašliwim[i | layis |
| c. ʔisʔašliw[i-inuχ= =i | la=χ=is |
| d. RED-sea.mammal.hunting-PROF=DEM PREP=OBJ1=3.POSS |
| e. sea-mammal hunters | into their |
| f. Then q all the hunters went aboard their |
| g. Well, then, it is said that all the sea-mammal hunters went aboard their |

---

35 I follow Boas (1935a:93) in translating this word as “belongings,” although elsewhere (1948:329), he indicates that “clothing” is a more literal translation.

18.
a. ēlēwats’e  \( \text{Xw} \text{Xw} \text{Xw} \text{wagwema} \).
b. ?i?əliwači  \( \text{Xw} \text{Xw} \text{Xw} \text{wagwema} \).
c. ?i-ʔolixʷ-ači  \( \text{Xw} \text{a-Xw} \text{Xw} \text{akw} \text{-om=a} \).
d. RED-sea.mammal.hunting-HOLLOW.CONTAINER  RED-RED-canoe-DIM=DEM

e. containers for hunting sea mammals  little canoes.
f. small hunting canoes

g. little sea-mammal-hunting canoes.

19.
a. wā, laʔemɬәe  yūdxε̣ts’âle  yâqela  \( \text{le} \text{wís} \).
b. we  laʔəmʔəʔi  yudəxʷəcoli  yaqila  \( \text{λwís} \).
c. we  la-ʔi-ʔa-i  yudəxʷ-ʔo-Gola=ʔi  \( \text{wís} \).
d. well  SEQ-OI-QUOT=DEM three-IN-TOGETHER 38=SBJ  PN  with=3.POSS

e. Well  and then, it is said  they were three inside together  Yaqila  and his

f. and q there were three in one canoe, Yaqela and his

g. Well, and then it is said that there were three together inside [the canoe], Yaqila and his

20.
a. maʔlōkwe  ɁLẸlẹyá.  wā  lạ̄laxāe
b. maʔfukʷi  λuʔəlīya.  we  laʔaxəʔi

c. maʔl-ukʷ=i  λu-λuʔiʔ=a  we  la-fa-xəʔoʔ=i

d. two-HUMAN=DEM  RED-nephew=DEM  well  SEQ-QUOT-ALSO 39=SBJ

e. two  nephews.  Well  then, also, it is said

f. two nephews.  Then q there were also

g. two nephews.  Well, then, it is also said that

37 I use question marks in the third tier to indicate that I am unable to segment a sequence into its constituent morphemes.
21.

<table>
<thead>
<tr>
<th></th>
<th>yùdəxʷts!ále</th>
<th>yáyag.exts!a</th>
<th>le³wís</th>
<th>ts!áts!a’ya</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>yudaxʷçole</td>
<td>yayaGəčə</td>
<td>λəwís</td>
<td>čačəyə</td>
</tr>
<tr>
<td>c.</td>
<td>yudaxʷ-çο-Gola=i</td>
<td>?</td>
<td>λuʔ=is</td>
<td>ča-čəyə</td>
</tr>
<tr>
<td>d.</td>
<td>three-IN-TOGETHER=SBJ PN</td>
<td>with=3.POSS RED-younger.sibling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>they were three inside together</td>
<td>YayaGəčə</td>
<td>with his younger brothers</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>three in one canoe, Yáyag.exts!a and his younger brothers,</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>g.</td>
<td>there were three together in [another canoe], YayaGəčə and his younger brothers,</td>
<td></td>
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</tbody>
</table>

22.

<table>
<thead>
<tr>
<th></th>
<th>yexs</th>
<th>ōlē=winoxwəe</th>
<th>yâqela</th>
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</thead>
<tbody>
<tr>
<td>b.</td>
<td>yəχs</td>
<td>?əliwiwinuyʷ=əʔi</td>
<td>yaqila</td>
</tr>
<tr>
<td>c.</td>
<td>yə=χs</td>
<td>?əliw-inuyʷ=əʔi</td>
<td>?</td>
</tr>
<tr>
<td>d.</td>
<td>PRONOM=SUBORD</td>
<td>sea.mammal.hunting-PROF=DEM.SUBORD PN</td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>as that one</td>
<td>was a sea-mammal hunter</td>
<td>Yaqila</td>
</tr>
<tr>
<td>f.</td>
<td>for Yaqela was the sea hunter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>as that one, Yaqila, was the sea-mammal hunter</td>
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<td></td>
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</tbody>
</table>

23.

<table>
<thead>
<tr>
<th></th>
<th>yəs</th>
<th>əne⁶mëmutasa</th>
<th>naénsx-äsa</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>yəs</td>
<td>ʔəmëmutasa</td>
<td>naʔënsxesə</td>
</tr>
<tr>
<td>c.</td>
<td>yə=s</td>
<td>ʔəm-ima-ut=asa</td>
<td>na-nəs-sxe=sa</td>
</tr>
<tr>
<td>d.</td>
<td>PRONOM=OBJ one-CLASS⁴⁰-FELLOW⁴¹=GEN RED⁴²(rot)-TOOTH=GEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>of clan of the Dirty-Tooth of the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>of the numaym Naénsx-a of the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>of the clan Naʔënsxa of the</td>
<td></td>
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</tr>
</tbody>
</table>

24.

<table>
<thead>
<tr>
<th></th>
<th>g. ōsg-imuxwe</th>
<th>wä, la³læe</th>
<th>ōlē=winoxwəe</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>Gus-gimuxʷi</td>
<td>we laʔ=ʔi</td>
<td>?əliwiwinuyʷ</td>
</tr>
<tr>
<td>c.</td>
<td>Gus-giməxʷ⁴²=i</td>
<td>we la-Ła=i</td>
<td>?əliw-inuyʷ=i</td>
</tr>
<tr>
<td>d.</td>
<td>ʔ?-=DEM well SEQ-QUOT=SBJ</td>
<td>sea.mammal.hunting-PROF=SBJ</td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>Gusgimuxʷ</td>
<td>Well then, it is said</td>
<td>was a sea-mammal hunter</td>
</tr>
<tr>
<td>f.</td>
<td>Koskimo. (See below)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>Gusgimuxʷ. (See below)</td>
<td></td>
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<tr>
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<tbody>
<tr>
<td>a.</td>
<td>yāyag.exts!asa</td>
<td>ꞇŋɛ́mɛ́mʊ̀tasa</td>
<td>ꞇqɔ́lɛ́lɛ́nxwaša</td>
<td>g-áp!ɛ́nxuw</td>
</tr>
<tr>
<td>b.</td>
<td>yayaGəχćasa</td>
<td>ꞇŋɛ́mɛ́mʊ̀tasa</td>
<td>ꞇqɔ́ximʊ́nxwaša</td>
<td>gop-ɪnxuq</td>
</tr>
<tr>
<td>c.</td>
<td>ꞇ</td>
<td>=sa</td>
<td>ꞇŋɛ́mɛ́mʊ̀tasa</td>
<td>ꞇqɔ́ximʊ́nxwaša</td>
</tr>
<tr>
<td>d.</td>
<td>PN=GEN</td>
<td>one-CLASS-FELLOW=GEN</td>
<td>ꞇ⁻̣-TRIBE=GEN</td>
<td>ꞇ⁻̣-TRIBE</td>
</tr>
<tr>
<td>e.</td>
<td>YayaGəχča</td>
<td>clan of the</td>
<td>Q’o’ximʊ́nxwa of the Go’pinuxw</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>Yāyag.exts!a q was the sea hunter of the numaym Q’áL’ɛnxu of the G-áp!ɛnxu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>Well, then, it is said that YayaGəχća was the sea-mammal hunter of the clan Q’o’ximʊ́nxwa of the Go’pinuxw.</td>
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<tbody>
<tr>
<td>a.</td>
<td>wā</td>
<td>ɛ́mɛ́læ</td>
<td>ɛ́nxɛ́wida</td>
<td>ɛ́nxɛ́wida</td>
</tr>
<tr>
<td>b.</td>
<td>wə</td>
<td>la?omǐʔi</td>
<td>ŋɔ̃main</td>
<td>siχwida</td>
</tr>
<tr>
<td>c.</td>
<td>wə</td>
<td>la-ʔiʕa=</td>
<td>ŋɔ́m-aʔi</td>
<td>siχwida</td>
</tr>
</tbody>
</table>
| d. | well | SEQ-OI-QUOT=SJ | one-?-MOM | paddle-MOM-?
| e. | Well and then, it is said simultaneously started to paddle|
| f. | and q they started paddling at the same time,|
| g. | Well, and then it is said that they started to paddle simultaneously,|

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<tbody>
<tr>
<td>a.</td>
<td>lāqexs</td>
<td>hāyāqą̃xax</td>
<td>hāyąqą̃xax</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>laqixs</td>
<td>hāyąqą̃xax</td>
<td>hāyąqą̃xax</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>la=q=ïx</td>
<td>hi-aqa=şʔiχ</td>
<td>hi-aqa=şʔiχ</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>PREP=OBJI.PRON=SUBORD</td>
<td>straight-Go.PAST</td>
<td>=SUBORD.DEM</td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>when were more than</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>as there were more than</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>when there were more than</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

44 Boas (1935a:94): “at the same time.”
45 See the seventh entry in the chart of subordinate forms in Boas (1947:274).
28.  
| a. maŋtsemg-ustéwe          | b. maʔícamgustówi               | c. maʔí-sGámgusto=i            | d. two-MULTIPLE.OF.TEN=DEM     | e. twenty                        | f. twenty                        | g. twenty                        |

29.  
| a. éálewats!äs               | b. ?iʔéliwaʔes                  | c. ?iʔélíxʷ-áci=as              | d. RED-sea.mammal.hunting-HOLLOW.CONTAINER=GEN | e. containers for hunting sea mammals | f. small sea hunting          | g. little sea-mammal-hunting      |

30.  
| a. xwáxwęxwagwema wä, lạ́lääe  lág-ääa lax          | b. xʷaxʷaxʷagʷoma. we laʃ̣ʔi       lagaʔ̣a laχ           | c. xʷa-xʷa-xʷakʷ-om=a. we la-fa=i la-gaʔ̣a la=χ        | d. RED-RED-canoe-DIM=DEM well SEQ-QUOT=SBJ go-ARRIVE PREP=OBJ1 | e. little canoes.          | f. canoes. Then they arrived at | g. canoes. Well, then, it is said that they arrived at |

31.  
| a. kľáwaq. wä lậlääe wáx·          | b. żáwaq. we laʃ̣ʔi wax             | c. ? we la-fa=i wax            | d. GN. well SEQ-QUOT=SBJ not.knowing.whether.successful48 | e. żáwaq. Well then, it is said they tried | f. K’žáwaq. Then q they would | g. K’žáwaq. Well then, it is said that they tried to |

32.

a. ālāx q!āsa lāxa lāq.
b. ?aleχ ρāsa laya laq.
c. ?ale=χ ρāsa la=χa la=q
d. search=OBJ1 sea.otter PREP=OBJ1 PREP=OBJ1.PRON

e. search for sea otters at the [place] at it.
f. search for sea otters that might be there.
g. search for sea otters at that [place].

33.

a. wā k'eyās¹λ!a q'āso²s lāq. wā lā¹lāe
b. we Kiyos'αa qαsu³s laq. we laʃ?i
c. we Kiyos-fa-ʃa qα-su⁴=sl a=q we la-fa=i
d. well none-QUOT-BUT find-PASS=OBJ2 PREP=OBJ1.PRON well SEQ-QUOT=SBJ

e. Well but none, found by them at it. Well then, it is said

f. but q none were found there. Then q

g. Well, it is said that none were found by them at that [place]. Well, then, it is said that

34.

a. sēx⁵wid qa⁶s lā² lax ā²yāx-siwe⁶.
b. sιξ[wid qa⁷s lē⁴ laya ?aγo⁸əxsiwe⁸?
c. sιξ[x²-ʃid qa⁹=sl a-i⁷ la=χ²-xsiu⁹-e?
d. paddle-MOM PURP=3.Poss go-NMLZ PREP=OBJ1 -RIVERMOUTH-LOC1
e. they started in order to go to ?aγo⁸əxsiwi⁹?

to paddle

f. they started paddling and went to A²yaax-siwe⁶
g. they started paddling in order to go to ?aγo⁸əxsiwe⁸?

35.

a. wā, laʃ=ʃlāe q!āxa q!ënemë q!āsa lax
b. we laʃomʃi⁲i qαxα qinomi qāsa laya
c. we la-rj-fa=i qα=qα qι-nəm=i qāsa la=χ⁴

d. well SEQ-OI-QUOT=DEM find=OBJ1 many-NOM=DEM sea.otter PREP=OBJ1

e. Well and then, it is said they found many sea otters at

f. and now q they found many sea otters

g. Well, then, it is said that they found many sea otters in
36. 

a. āwēstāsa ˹mek·āla.

b. ?swi?stēsa ʔmekola.

c. ĭu-si?sta=asa ʔmekʷ-ola.

d. locative-AROUND=GEN round.object.is.located⁴⁹-STATIONARY.ON.WATER⁵⁰

e. the environs of the island.

f. all around the island.

g. the area around the island.

37. 

a. wā, laʔemlāe qːap!ex·sā yāqela Lōg

b. we laʔomśʔi qːapixse yaqila ﺇ=E

c. we laʔֿm-fa=i qaʔ/p-i-xse ? ﺇ=E

d. well SEQ-OI-QUOT=DEM be.situated⁵¹-MUTUAL⁵²?-STILL PN with

e. Well, and then, it is said still remained together Yaqila with

f. And q Yaqela and Yāyag.EXTS!a kept together,

g. Well, and then it is said that Yaqila and YayaGə stayed together.

38. 

a. yāyag.EXTS!a. wā, laʔemlāwise gwēlaʔ-laʔyeda

b. yayaGəxła. we laʔomlawisi gʷiʔlaʔxəʔida

c. ? we laʔm-fa-wis=i gʷiʔ-tمخ-ʔiʔ=ida

d. PN well SEQ-OI-QUOT-CONN=SBJ scatter?-AT.SEA⁵³=SBJ

e. YayaGəxła. Well and so, then, it is said scattered at sea the

f. (See below)

g. (See below)

39. 

a. ělēwats!e ɔwxwexwëxwegweimsa

b. ?iʔəliwaci ɔwxwəxwagweimsa

c. ?iʔəlixʷ-əći ɔwxwə-ɔxʷakʷ-əm=sa

d. RED-sea.mammal.hunting-HOLLOW.CONTAINER RED-RED-canoe-DIM=GEN

e. hollow containers for hunting sea mammals little canoes of the

f. (See below)

g. (See below)

40.

| a. ēstələwinoxwe | lax |
| b. ?is?əliwinuxẉi | laχ |
| c. ?is-əḷịnx̣ẉ=i | la=χ |
| d. RED-sea.mammal.hunting-PROFESSIONAL=DEM PREP=OBJ1 |
| e. sea-mammal hunters according to |
| f. and so q the small hunting canoes of the sea hunters were scattered in |
| g. Well, and so then it is said that the little sea-mammal hunting canoes of the sea-mammal hunters scattered in accordance with |

41.

| a. g.ẉəg-ilasasa | q̣ḷɑq!asɑ̱axs |
| b. Gʷigịfasasa | ɡ̣a̱qasə?axs |
| c. Gʷị54-gịa-as=asa | ɡ̣a̱-ɡ̣asa-a=χs |
| d. thus-GO.IN.DIRECTION⁵⁵-WAY. OF⁵⁶=GEN RED-sea.otter-TRY.TO.GET⁵⁷=SUBORD |
| e. procedure of the trying for [i.e. hunting for] sea otters when |
| f. the way it is done in sea otter hunting when |
| g. the method of hunting for sea otters, when |

42.

| a. x̣e̱me̱sṭənḍa̱xa | q̣ḷəsa | qa̱s |
| b. x̣ə̱ṃịsṭənḍə?axa | ɡ̣asa | qa̱s |
| c. x̣ə̱ṃ-sị?sta-nḍ=ə?ə=χa | ɡ̣asa | qa̱=s |
| d. snare-AROUND-LOC⁴⁵²=SUBORD.DEM=OBJ2 sea.otter PURP=3.POSS |
| e. they trap by encircling the sea otters and |
| f. they surround the sea otters |
| g. they surround the sea otters and |

43.

| a. hádzεxstáleε | qaε |
| b. hazoχstaleʔ | qaʔ |
| c. has-γsta-ʔa-iʔ | qaʔ |
| d. make.loud.noise⁵⁸-VOICE⁵⁹-CONT-NMLZ | PURP |
| e. being noisy | so that |
| f. shouting in order to |
| g. make noise so that |

| a. wibalisēme⁶⁴s | wā | la⁶ēm⁶láwise |
| b. wibalisamiʔs. | we | laʔom⁷lawisi |
| c. wi-ba-lis-ʔom-iʔ=s | we | la-ʔiʔ-ʔa-wis=i |
| d. fail-HORIZ.END-BEACHʔ-NMLZ=3.POSS | well | SEQ-OI-QUOT-CONN=SBJ |
| e. fail to be on the shore. | Well | and then, it is said |
| f. drown them. And so q |
| g. [the sea otters] cannot get to the shore. Well, and then it is said that |

45.

| a. k’lwág-ila | la | dzãqwà. | la⁶ēm⁶lāe | qʰeyóla |
| b. kʷeʔgila la | la | zaqʷa. | laʔom⁷giʔi | çʰoyu⁹a |
| c. kʷaʔ-gila | la | zaqʷ-a | la-ʔiʔ-ʔa=i | çʰoy-u⁹-a |
| d. quite-GO.IN.DIRECTION⁶⁰ then eveningʔ-?⁶¹ SEQ-OI-QUOT=SBJ many-OBTAINʔ-?⁶² | | | |
| e. it was towards then evening. And then, it is said |
| f. it was towards evening and q |
| g. it was towards evening. And then it is said that |

⁶¹ I do not know whether this terminal morpheme -a/=a is a demonstrative clitic of the type that often occurs at the end of sentence-final verbs (Boas 1947:257) or a “default verb ending” (Black and Greene 2010:6).
⁶² It is conceivable that this final morpheme is a form of the subject marker =ida (see Table IV in Boas [1947:253] and Paragraph 5 in Boas [1947:256]).
46.

a. wăôkwe éśälëwinoxʷxa q'âsa.

b. wəʔukʷi ?isʔəliwinuχʷχa qasə.

c. wəʔukʷ=î ?isʔəlixʷ-inuχʷ=χa qasə

d. other DEM RED-sea.mammal.hunting-PROFESSIONAL=OBJ sea.otter

e. the other sea-mammal hunters sea otters.

f. the other hunters had caught many sea otters.

g. the other sea-mammal hunters caught many sea otters.

47.

a. wâ lálæ k·leyás yânem'lasa

b. we laʔəʔi ŋiyos yanəm'lasa

c. we la-fə=i ŋiyos ya-anəm-fə=asa

d. well SEQ-QUOT=SBJ none act63-OBTAINED-QUOT=OBJ

e. Well then, it is said there was nothing caught, it is said, by the

f. Then q there was no game now of the

g. Well, and then it is said that there was nothing caught by the

48.

a. ma闩ǐts!âqeq xwâxweχwagwema, yex yäqela

b. maʔịcaq̱i xʷaχxʷagʷəma, yəχ yaqila

c. maʔl-caq̱i xʷa-xʷə-xʷakʷ-əm=a yə=χ ?

d. two LONG=DEM RED-RED-canoe DIM=DEM PRONOM=OBJ PN

e. two little canoes those ones Yaqila

f. two small canoes (of) Yaqela

g. two little canoes [belonging to] that Yaqila

49.

a. lō闩ǐlæ yâyag.exts!a. wä, laʔəm'läwíse

b. ɬuʔəʔi yayaGəχ̱ca. we laʔəm'lawísi

c. ɬuʔ-fə=î ? we la-rə-fə-wis=i

d. with QUOT=DEM PN well SEQ-OF-QUOT-CONN=SBJ

e. with, it is said YayaGəχ̱ca. Well and so, then, it is said

f. and Yâyag.exts!a, and so q

g. and, it is said, YayaGəχ̱ca. Well, and so then it is said that

50.

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<tbody>
<tr>
<td>a.</td>
<td>g-ālabā́ye</td>
<td>yāqela</td>
<td>lṓe</td>
</tr>
<tr>
<td>b.</td>
<td>galabā́yî</td>
<td>yaqila</td>
<td>Ĺu?</td>
</tr>
<tr>
<td>c.</td>
<td>gal-ba-č?=i</td>
<td>?</td>
<td>Ĺu?</td>
</tr>
<tr>
<td>d.</td>
<td>first-HORIZ.END-LOC1=SBJ</td>
<td>PN &amp; PN=GEN=3.POSS</td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>first at the end were</td>
<td>Yaqila &amp; YayaGɔchiąśa of their</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>Yaqela &amp; Yāyag.exts!a were the first among their</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>Yaqila and YayaGɔchiąśa were first in front [of the hunting party] of their</td>
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51.

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<tbody>
<tr>
<td>a.</td>
<td>ēs̕āl̕ē̕winox̕w̕tte.</td>
<td>wā,</td>
<td>la̱em̕lāe</td>
</tr>
<tr>
<td>b.</td>
<td>?is̕̕opliwine̕w̕wuti.</td>
<td>we</td>
<td>la̱em̕ʃi</td>
</tr>
<tr>
<td>c.</td>
<td>?is̕̕opliwine̕̕w̕̕wut=i</td>
<td>we</td>
<td>la̱-i̱-ʃa̱=i</td>
</tr>
<tr>
<td>d.</td>
<td>RED-sea.mammal.hunting-PROF-FELLOW=DEM</td>
<td>well</td>
<td>SEQ-OI-QUOT=SBJ</td>
</tr>
<tr>
<td>e.</td>
<td>fellow sea-mammal hunters.</td>
<td>Well &amp; then, it is said</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>sea hunting fellows, and q</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>fellow sea-mammal hunters. Well, and then it is said that</td>
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52.

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<tbody>
<tr>
<td>a.</td>
<td>ālaq</td>
<td>p!edex-čida.</td>
<td>wā</td>
</tr>
<tr>
<td>b.</td>
<td>?al̕aq</td>
<td>p̕d̕ox̕ida.</td>
<td>we</td>
</tr>
<tr>
<td>c.</td>
<td>?al̕aq</td>
<td>p̕d̕ox̕id=a</td>
<td>we</td>
</tr>
<tr>
<td>d.</td>
<td>almost</td>
<td>dark-MOM=DEM</td>
<td>well</td>
</tr>
<tr>
<td>e.</td>
<td>almost</td>
<td>it started to be dark. Well &amp; then, it is said</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>it began to be nearly dark. Then q</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>it was almost getting to be dark. Well, then, it is said that</td>
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53.

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<tbody>
<tr>
<td>a.</td>
<td>yāqela</td>
<td>dṓx̕wał̕ela̱xa</td>
<td>ę̱wał̕ase</td>
</tr>
<tr>
<td>b.</td>
<td>yaqila</td>
<td>dox̕wał̕el̕a̱xa</td>
<td>ə̱wałasi</td>
</tr>
<tr>
<td>c.</td>
<td>?</td>
<td>doq̕̕wa?al̕ęla=cha</td>
<td>ə̱wał̕as=i</td>
</tr>
<tr>
<td>d.</td>
<td>PN</td>
<td>see-SUDDENLY=OBJ1</td>
<td>large=DEM</td>
</tr>
<tr>
<td>e.</td>
<td>Yaqila</td>
<td>suddenly saw</td>
<td>large</td>
</tr>
<tr>
<td>f.</td>
<td>Yaqela</td>
<td>saw a large sea otter</td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>Yaqila</td>
<td>suddenly saw a large sea otter</td>
<td></td>
</tr>
</tbody>
</table>
54.

a. dzágwëfnákwèla.  wài  lá’lâce
b. zagwënakwèla.  wë  laf’i

c. zakwënakwèla.  wë  la-fa=i

d. spread.apart.with.hands64-GRADUAL.MOTION65  well  SEQ-QUOT=SBJ

e. swimming.along.  Well  then, it is said

f. swimming.along.  Well, then, it is said that

g. swimming.along.  Well, then, it is said that

55.

a. ’megwáp!alaxa  x’ixsemala.

b. ṭægʷapalaxa  xiχsəmala.

c. ṭækʷap-ala=χa  xiq-sGəm-ala

d. round.object.is.located66-NAPE.OF.NECK67-LOC2=OBJ1  blaze-ROUND-CONT

e. it had on the back of its neck  a round blazing object

f. On the nape of its neck q was a ball of fire.

g. it had a round blazing object on the back of its neck.

56.

a. wài,  lá’lâce  yaqela  sex-’ideq.  wài,  lá’lâce

b. we  laf’i  yaqila  səx?idaq.  we  laf’i

c. we  la-fa=i  ?  sək-x?id=q  we  la-fa=i

d. well  SEQ-QUOT=SBJ  PN  spear-MOM=OBJ1.PRON  well  SEQ-QUOT=SBJ

e. Well  then, it is said  Yaqila threw a harpoon at it.  Well  then, it is said

f. Then q Yaqela speared it.

g. it had a round blazing object on the back of its neck.

57.

a. ògwaqa  sex-’ide  yåyag.exts!áxa  ëwàlase  qu’åsa.  wài

b. ?ugʷaqa  səx?idi  yayaGəχ’èχa  ñalasi  qu’sa.  wë

c. ?ugʷaqa  sək-x?id=i  ?=χa  ñalasi=i  qu’sa  wë

d. also  spear-MOM=SBJ  PN=OBJ1  large=DEM  sea.otter  well

e. also  threw a harpoon  YayaGəχ’è  large  sea otter.  Well,

f. Yåyag.exts!a q also speared the large sea otter.

g. YayaGəχ’è also speared the large sea otter.  Well,

---

64 Boas (1948:193).
58.

| a. g-ělëmëlawise | la ́wëla  k-ëxëmëye |
| b. gəl?əmlawisi | la ́wila  ́kəxəməyi |
| c. gəl-țə-əwis-ı | la ́wila  ́kəq-sGam-e?-ı |
| d. first-CONN-QUOT-CONN=SBJ then all-? load.is.located ROUND-LOC=1=SBJ |
| e. and so as soon as then all were on the surface of the round body.69 |
| f. and so q as soon as |
| g. and so it is said that as soon as all |

59.

| a. t-ëleg-ekwás | lāxa  q'āsa  läe |
| b. ́ləχəqəkʷ=as | la=χa  qəsa  laʔi |
| c. ́lə-χək-kʷ=as | la=χa  qəsa  la=i |
| d. RED-notch PASS=3.POSS PREP=OBJ sea. otter then=? |
| e. their harpoon points in the sea otter then |
| f. their spears had hit the sea otter, |
| g. their harpoon points were on the sea otter, then |

60.

| a. ́ləståxʷwidəda | q'āsa  qa=ʃ  ́e=k-ëste=ə |
| b. ́ståuxwɨdi ́da | qəsa  qaʔs  ?iʔkíʔsteʔ |
| c. ́xasʔ-stu-xʔid=ida | qəsa  qaʔ=ʃ  ?iʔk-siʔsta-iʔ |
| d. seaward-PATH MOM=SBJ sea. otter PURP=3.POSS up-GO.IN.DIRECTION NMLZ |
| e. started to go seaward the sea otter and went up |
| f. the sea otter went out seaward and went up |
| g. the sea otter began to go seaward and went upward |

---

69 Here, I follow Boas (1947:343), one of whose glosses for -sGam is “round surface.”
73 Boas (1947:343) glosses this suffix as “around,” but I believe that in some cases, it means ‘to go in a direction.’
61.  

<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>a. lāxents</td>
<td>Ũnālax.</td>
<td>wä, laºem³lāe</td>
</tr>
<tr>
<td>b. laχ̃onc</td>
<td>Ũnalax.</td>
<td>wε laʔem³siʔi</td>
</tr>
<tr>
<td>c. la=χ=οnc</td>
<td>Ũa=ŋa=iχ</td>
<td>wε la-μa=</td>
</tr>
<tr>
<td>d. PREP=OBJ1=INCL.POSS sky³¹=CONT=DEM well SEQ-OI-QUOT=DEM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. to our</td>
<td>sky.</td>
<td>Well and then, it is said</td>
</tr>
<tr>
<td>f. toward our sky, and q</td>
<td></td>
<td></td>
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<tr>
<td>g. to our sky. Well, and then it is said that</td>
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62.  

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<thead>
<tr>
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<tbody>
<tr>
<td>a. qwe²lx=elxlâlaxa</td>
<td>ma⁴nts!åqe</td>
<td></td>
</tr>
<tr>
<td>b. qʷəlxəhλalaχa</td>
<td>maʔčaqi</td>
<td></td>
</tr>
<tr>
<td>c. qʷəlx-ə-χla=ʔla=χa</td>
<td>maʔl-čaq=i</td>
<td></td>
</tr>
<tr>
<td>d. gather.long.things⁷⁵?-BEHIND-CONT=OBJ1 two-LONG=DEM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. it dragged behind the</td>
<td>two</td>
<td></td>
</tr>
<tr>
<td>f. it was dragging behind the two</td>
<td></td>
<td></td>
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<tr>
<td>g. it dragged behind [itself] the two</td>
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63.  

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<tbody>
<tr>
<td>a. xwæxwe=xwagwemnxs</td>
<td>lāe</td>
<td>ʾek-³lo³la</td>
</tr>
<tr>
<td>b. xʷaxʷəxʷagxʷemχs</td>
<td>laʔi</td>
<td>ʔikʷu³la</td>
</tr>
<tr>
<td>c. xʷa-xʷə-xʷakʷ-əm=χs</td>
<td>la=ʔʔi</td>
<td>ʔik- útil-³la</td>
</tr>
<tr>
<td>d. RED-RED-canoe-DIM=SUBORD then=SUBORD.DEM up-GO.IN.DIRECTION⁷⁶-CONT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. little canoes when then</td>
<td>it was going upward</td>
<td></td>
</tr>
<tr>
<td>f. small canoes as it was going upward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. little canoes as it was going upward,</td>
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64.  

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<tbody>
<tr>
<td>a. qa²s</td>
<td>lāe</td>
<td>k!wedezôdχents</td>
</tr>
<tr>
<td>b. qaʔs</td>
<td>leʔ</td>
<td>kʷədəzudχ̃onc</td>
</tr>
<tr>
<td>c. qaʔ=ʒs</td>
<td>la-iʔ</td>
<td>kʷət-ud=χ=ənc</td>
</tr>
<tr>
<td>d. PURP=3.POSS go-NMlz stick.on⁷⁷-FLAT-TRANS=OBJ1=INCL.POSS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. and then</td>
<td>stuck onto the flat surface, our</td>
<td></td>
</tr>
<tr>
<td>f. and stuck on our</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. and then it stuck onto our</td>
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</tbody>
</table>

⁷⁴ Lincoln and Rath (1981:131) list “firmament” among the meanings of this root.  
65.

<table>
<thead>
<tr>
<th>a.  &quot;nålax.</th>
<th>wä,</th>
<th>hē'</th>
</tr>
</thead>
</table>
| b.  "nalax. | wɛ | heri
| c.  "na-ola=i' | wɛ | he-\text{ā}i
| d.  sky-CONT=DEM | well | that-\text{OJ=SBJ}
| e.  sky. | Well and that | former sea otter
| f.  sky. | That was the sea otter, the Pleiades.
| g.  sky. | Well, and that [constellation], the Pleiades, is the former sea otter. 

66.

| a.  wä, | hē'em\=lawis | Āl\=wadzā\=ya
| b.  wɛ | he\=om\=lawis | ?əliwazo\=ya
| c.  wɛ | he\=m\=la-wis | ?əlix\=zu\=e?=a
| d.  well | that-\text{OJ-QUOT-CONN} | sea.mammal.hunting-FLAT-LOC1=DEM
| e.  Well | and so that is | Orion’s Belt
| f. and so q that is the hunter in the sky (Orion)
| g.  Well, and so it is said that that one, Yaqila, is Orion’s Belt.

67.

| a.  yex | yāqela. | wä, | hē\=mis
| b.  yəχ | yaqila. | wɛ | heri
| c.  yə=χ | ? | wɛ | he\=m-wis
| d.  PRONOM=OBJ1 | PN | well | that-\text{OJ-CONN}
| e.  that | Yaqila. | Well | and so that
| f.  Yaqela, and
| g.  Well, and so that one,

78 Boas (1948:306; 1947:324) provides examples of words beginning with the sequence \(\text{k}^\text{\=e}=\text{ni}\), formed from \(\text{k}^\text{\=g}\), “to sit,” and \(-\text{mi}\), “nearby.” I do not know whether \(\text{k}^\text{\=a}m\=ai\text{zo}=\text{yi}\) can be interpreted as related to these forms.

79 In assigning the Pleiades the role of subject and translating this as an “equative” sentence, I am following Littell (2012). I believe the same understanding of this sentence underlies Boas’s translation of it, but Boas tries to maintain the syntax of the original text, obscuring the sentence’s equative meaning.


81 Here, I have followed Boas’s dictionary (1948:14), which glosses a similar form, \(\text{i}ə\text{liwazo}=\text{y}a\), as Orion’s Belt, rather than Boas’s translation (1935a:94) of the form \(\text{ʔəliwazo}=\text{ya}\) as “Orion.” This allows us to interpret the form \(\text{ʔəliwιn}=\text{w}i\) in the next sentence as Orion, in line with Boas’s dictionary (1948:14, citing the attestation of this word in “Star Story”), and in contrast to his ambiguous translation (1935a:94) of this form as “the hunter with him,” which does not seem to take into account the passive suffix -s\=əw.  

210
68.

| a. áálēwēⁿāsēwe | yāyatext!a | hēt |
| b. ?aʔəliwišqəwi | yayaGəχəa. | hēt |
| c. ?aʔəlixʷ-ʔənu-suʔ=i | ? | he-t |
| d. RED-sea.mammal.hunting-AT.PASSERBYʔʔ-PASS=SBJ PN | that-? |
| e. Orion was | YayaGəχəa. | That |
| f. the hunter with him is Yayanext!a. And |
| g. YayaGəχəa, is Orion. The |

69.

| a. låg-iłas | q'áleda | ēśəlēq’inowxwaq |
| b. lagılas | q'alida | ?isʔəliwiňůxʷwaq |
| c. la-giʔ-as | qə-əla=ida | ?isʔəlixʷ-ínuxʷ=q |
| d. go-REASON=GEN find-CONT=SBJ RED-sea.mammal.hunting-PROF=OBJ1.PRON |
| e. reason knew the sea-mammal hunters it |
| f. therefore the hunters know about them, |
| g. reason why the sea-mammal hunters knew it [i.e. these events] |

70.

| a. yeys | sľaxwašmē | dōqwelaqexs |
| b. yəχs | ňaxʷaʔəʔi | duqʷəlaqixs |
| c. yə=χs | ňaxʷ-a-ʔiʔaʔi | duqʷ-əla=q=χs |
| d. PRONOM=SBORD allʔ-ʔ=SBORD.DEM see-CONT=OBJ1.PRON=SBORD |
| e. because all saw it when |
| f. for they all saw them |
| g. is because they all saw when |

71.

| a. låē | ëk!ōləla | qaʔs |
| b. laʔi | ?iʔuʔala | qaʔs |
| c. la=əʔi | ?iʔuləla | qaʔs |
| d. then=SBORD.DEM up-GO.IN.DIRECTION-CONT PURP=3.POSS |
| e. then they were going up and |
| f. going up and |
| g. they [i.e. the sea otter, Yaqila, and YayaGəχəa] went up and |

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72.  

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<tbody>
<tr>
<td>a. lā́</td>
<td>k!wētālela</td>
<td>lax</td>
<td>la</td>
<td>āxtātsa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. leʔ</td>
<td>ēkwałəla</td>
<td>laχ</td>
<td>la</td>
<td>?χʔaca</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. la-iʔ</td>
<td>ēkwa̱̱gəłəla</td>
<td>la=χ</td>
<td>la</td>
<td>?χʔas=sa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. go-NMLZ stick.on83-SUDDENLY PREP=OBJ then be.in.position84-PLACE=GEN</td>
<td></td>
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<tr>
<td>e. then suddenly stuck on to then place of the</td>
<td></td>
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<tr>
<td>f. sticking where the place is of</td>
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<tr>
<td>g. then suddenly stuck to the new place of</td>
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73.  

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<tbody>
<tr>
<td>a. ālēwadzâye</td>
<td>LEwá</td>
<td>k!wâma̱dzâye</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. ?əliwazoʔi</td>
<td>əwa</td>
<td>kwaʔaʔzoʔi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. ?əelixʷ-зу-ʔ=i</td>
<td>luʔ=a</td>
<td>kwaʔ-зу-ʔ=i</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>d. sea.mammal.hunting-FLAT-LOC1=DEM with=SBJ85 sit?-FLAT-LOC1=DEM</td>
<td></td>
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<tr>
<td>e. Orion’s Belt and the Pleiades</td>
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<tr>
<td>f. Orion and of the Pleiades</td>
<td></td>
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<tr>
<td>g. Orion’s belt and the Pleiades</td>
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74.  

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<tbody>
<tr>
<td>a. LEwá</td>
<td>ālēwēʷnâsewe.</td>
<td>wá,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. əwa</td>
<td>ʔaʔəelixʷʔosəwi.</td>
<td>we</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. luʔ=a</td>
<td>ʔaʔəelixʷ-ʔino-suʔ=i</td>
<td>we</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. with=SBJ RED-sea.mammal.hunting-AT.PASSERBY-PASS=DEM well</td>
<td></td>
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<tr>
<td>e. and the Orion.</td>
<td>Well</td>
<td></td>
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<tr>
<td>f. and of the one who joins in sea hunting.</td>
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<tr>
<td>g. and Orion. Well,</td>
<td></td>
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</tbody>
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84 Boas (1948:11).
75.

<table>
<thead>
<tr>
<th>a. hé·mís</th>
<th>g·ág·ELE·lates</th>
<th>la</th>
<th>lé·g.adeda</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. he·mis</td>
<td>gēgəolvable</td>
<td>la</td>
<td>wiGadida</td>
</tr>
<tr>
<td>c. he·wis</td>
<td>gəy₆₆·gəwala-as=s</td>
<td>la</td>
<td>wiq-ad=ida</td>
</tr>
<tr>
<td>d. that-ON-CONN</td>
<td>come.from⁷⁷-MOTION⁷⁸-PLACE=GEN</td>
<td>then</td>
<td>name-HAVE=SBJ</td>
</tr>
<tr>
<td>e. and so that is</td>
<td>the origin of</td>
<td>then</td>
<td>had names the</td>
</tr>
<tr>
<td>f. And so, from this</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>g. and so that is the origin of [the fact that] then the stars had as names</td>
<td></td>
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</tr>
</tbody>
</table>

76.

| a. t!ót!áses | lē·g.EM | qaxs | lāe |
| b. ūtouósis | l[iə]Gəm | qaxs | la?i |
| c. ūtou=as=is | l[i]-liq-əm | qə?=չs | la=ə?i |
| d. star=OBJ=3.POSS RED-name-PASS CAUSE=SUBORD then=SUBORD.DEM |
| e. stars, their | names | because | then |
| f. these stars have their names, for |
| g. their [current] names, because then |

77.

| a. ts!ek·!âtïdida | ęśfâlêwinoxwaxa | g· álə |
| b. ćōkalïdida | ʔisʔəliwınuxʷ=ą xa | galɛ |
| c. ćōkal-xʔid=ida | ʔisʔəliuxʷ-inuxʷ=ą xa | gal-a=i |
| d. tell.news⁸⁹-MOM=SBJ RED-sea.mammal.hunting-PROF=OBJ=1 first=?=DEM |
| e. told the news the | sea-mammal hunters the | first |
| f. the sea hunters told the first |
| g. the sea-mammal hunters told as news to the first |

⁸⁶ Although Boas (1947:351) analyzes gəgəwala as a derivative of the root gəy-, “to be somewhere” (Boas 1948:246), I believe that the root gəy-, “to move from a certain place, to come from” (Boas 1948:252) better fits the meaning of the word (which Boas [1947:351] translates as, “to come from”).


⁸⁸ Cf. Boas’s (1947:242) gloss for this suffix: “country lying in a certain direction.”

78.

| a. g.睄g-imuxwa | yes | g.ведущ़idāasax | ｙāqela |
| b. Gusgimuxʷa | ysi | Gwiʔidọʔasay | yaqila |
| c. Gus-gimaxʷ=a | yə=s | Gwi-xʔid-as=ay | ʔ |
| d. ?-?=DEM | PRONOM=OBJ | thus-MOM-WAY.OF | 90=OBJ1 | PN |
| e. Gusgimuxʷ | regarding that | matter | Yaqila |
| f. Koskimo all that happened to Yaqela |
| g. Gusgimuxʷ regarding the matter of Yaqila |

79.

| a. ṇóʔ | ｙāyag.exts!a | ｌेwɨs | mőkwe | lēlota. |
| b. Ṽuʔ | yayaG으χča | ｌɤwɨs | mukwɨ | liʔəluta.91 |
| c. Ṽuʔ | ʔ | ɿuʔ=is | mu-ukʷ=i | lilut=a |
| d. with | PN | with=3.POSS | four-HUMAN=DEM | fellow.riding=a | DEM |
| e. with | YayaG으χča | with their | four | fellow passengers. |
| f. and Yāyag.exts!a | and the four men of their crew. |
| g. and YayaG으χča | and their four fellow passengers. |

80.

| a. wä, | laɭem | lāba. |
| b. we | laʔem | laba. |
| c. we | la-rɨn | la-ba |
| d. well | then-OI | go-HORIZ.END |
| e. Well | and then | it has gone to the end.93 |
| f. and that is the end. |
| g. Well, and then it has gone to the end. |

3 List of abbreviated suffixes


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91 This word is a plural form exhibiting stem modification (see Boas 1947:248–249).
92 Here, I follow Boas (1948:402) in glossing this form as “fellow riding.” The word lilut, which is the singular form of liʔəluta (Boas 1948:402), may be derived via reduplication from la-, “go” (following, roughly, the reduplication pattern described by Boas [1947:248–249] for words beginning with the sounds m, n, l, ɭ, and ƛ) combined with the suffix -ut, “fellow.” The resulting word undergoes further reduplication to yield liʔəluta, the plural form that appears in “Star Story.”
93 I have borrowed this translation (which I also use in my sentence-level translation tier) directly from Berman (1991:337).


FLAT: This gloss labels the suffix -zu, which denotes flat surfaces (such as, in “Star Story,” the sky (Boas 1947:212)). See Boas (1947:345).

HORIZ.END: This gloss labels the suffix -ba, denoting the “end of a long horizontal object” (Boas 1947:336).

INCL.POSS: Inclusive possessive (both parts of this composite gloss are borrowed from Rosenblum 2013). This gloss labels forms indicating joint possession by both the speaker and addressee (Boas 1947:251).

GEN: Genitive (borrowed from Rosenblum 2013; see also Boas 1947:259).

GN: Geographic name.

LOC1, LOC2, LOC3: See Section 1 Introduction above.

LONG: This gloss is used to label the suffix -čaw, which normally functions as a classifier that attaches to numerals used to count “long” objects (Boas 1947:240, 346). Regarding Kwak’wala “numeral classifiers,” see Berman (1990:2–11).


NMLZ: “Nominalizer” (borrowed from Rosenblum 2013). I have used this gloss to label the suffix -iʔ, which can turn a verbal form into a noun that means, roughly, “the act of [verb]ing” (Katie Sardinha and Patrick Littell, personal communications; see Boas (1947:274) with regard to the use of the nominalizing suffix -iʔ in verbs following the purposive qaʔ-).

NOM: Nominal. I have used this gloss to label the suffix -nəm, which appears at the end of some nouns and which Boas (1947:347) describes as a “nominal formative suffix.” I do not know whether this suffix carries specific meaning beyond its function of turning roots into nouns.

OBJ1: “Primary object” (borrowed from Rosenblum 2013). OBJ1 is equivalent to what Boas describes as the “objective” case. See Boas (1947:284–286) and Rosenblum (2013:231–233).


PAST: I have used this gloss to label the past-tense suffix -xdi, which denotes the “transition from present to past, from existence to non-existence,” or pluperfect tense (Boas 1947:367; see also Boas 1947:288, 290).

PN: Personal name.


PROF: Professional. I have used this gloss to label the suffix -inuχʷ, which can mean, “a person who does an act habitually, professionally” (Boas 1947:326).

PRON: Pronoun. I add this gloss to OBJ1 and OBJ2 when the morpheme that is being identified is a pronoun, rather than a prenominal form. A prenominal form indicates the case and deictic proximity of the noun that follows; a pronoun stands in place of a noun, indicating case as well as, sometimes, deictic proximity and visibility (see the tables in Boas 1947:252–253; deictic/visibility-marking third-person pronouns are listed in Table IIa (1947:252), as well as in Boas’s introduction to the section entitled “Paradigms” (1947:260)). Regarding the distinction between prenominal forms and pronouns, see Boas (1947:281). See, also, Rosenblum (2013:231–232).

PRONOM: Pronominal. In contrast with PRON, which labels pronominal clitics, I use PRONOM to gloss word-initial elements that Boas (1947:257–258) terms “nominal or adjectival forms” of the “independent personal pronoun.”


RED: Reduplication (borrowed from Rosenblum 2013). “Plurality, repetition, [and] distribution are expressed,” in many cases, via reduplication, but “Many suffixes require some form of reduplication or of stem expansion, not only those [suffixes] implying some kind of repetition” (Boas 1947:219). Regarding patterns of reduplication and other forms of stem modification, see Boas (1947:220–223,
Regarding the expression of plurality in Kwak’wala, see Boas (1932, 1947:206, 291–294).

SEQ: Sequential (borrowed from Rosenblum 2013). I have used this gloss to label the auxiliaries \textit{la}- and \textit{gax}-. See Berman (1991:324–336).

SBJ: Subject (borrowed from Rosenblum 2013).

SUBORD: Subordination. I use this gloss to label the subordinating clitic \textit{=χs} and associated demonstrative clitics (the latter are glossed as ‘SUBORD.DEM’). See Boas (1947:274–275).

TRANS: Transitivizer. I have used this gloss to label the transitive suffix that takes the forms \textit{-d}, \textit{-nd}, and \textit{-ud} depending on its phonetic environment (Boas 1947:273, 365).

References


P.S.: more Lower Chehalis loans in Chinook Jargon, and ɬəw̓ ál̓ məš revitalization

David Douglas Robertson, PhD
Lower Chehalis Language Project (Shoalwater Bay Indian Tribe)

Abstract: M. Dale Kinkade’s unfinished work on Lower Chehalis/ɬəw̓ ál̓ məš provides the starting point for study of just how words of this language came to be integrated into the nascent pidgin, Chinook Jargon/CJ (cf. Kinkade et al. 2010). Here I review a large number of potential ɬəw̓ ál̓ məš-to-CJ loans to add to the Kinkade et al. corpus. I show that a handful actually originated in other Coast Salish languages, while candidate Chinookan etymologies for several cannot be ruled out, and a few were published as Chinook Jargon only by mistake. The remainder expand by about 150% the number of reliable ɬəw̓ ál̓ məš > CJ loans. Of these, quite a few represent the sole evidence of lexemes otherwise unknown to us in the rather limited documentation of ɬəw̓ ál̓ məš, creating the singular situation where a pidgin language is important for revitalizing its lexifier.

Keywords: ɬəw̓ ál̓ məš, Lower Chehalis, Tsamosan, Shoalwater Bay, Chinook Jargon, pidginization, revitalization

1 Introduction: P.S. – there are other ɬəw̓ ál̓ məš loans into CJ

Since early in the recorded history of Chinook Jargon (CJ), scholars have noted the presence of a thick stratum of loans from Lower Chehalis Salish (ɬəw̓ ál̓ məš). This is a language of the Maritime division within the Tsamosan branch of the Salish family (Kroeber 1999:4). For a few decades, ɬəw̓ ál̓ məš material was frequently mistaken for the unrelated Chinookan – since many villages were bilingual (Scouler 1841, Tolmie 1884) – or for the pidgin CJ (for example by Gill 1909, as we will discuss), when not outright unidentified (Meares 1791:266, Hale 1846 according to Gibbs 1863a:v). But it did not take long for a consensus to emerge that the language known simply as ‘Chehalis’ in various spellings was among the four or so main contributors to the word stock of this quintessentially multi-lexifier pidgin (Gibbs 1863a, Eells 1894, Shaw 1909).

As is expected in an apparently new language such as the pidgin/creole CJ, the composition of the lexicon varies geographically and chronologically (compare Drechsel 2014:83 on Maritime Polynesian Pidgin and Jahr 1996 on Russenorsk). Observations of this fact abound in the CJ literature, for example Gibbs':

1For the kind support they have extended to me, this paper is dedicated with thanks to ICSNL founders M. Dale Kinkade and Terry and Larry Thompson. Many thanks also to the ɬəw̓ ál̓ məš elders and to Earl Davis, Tony A. Johnson and the SBIT, whose intellectual property rights are hereby acknowledged. I am grateful as well for useful discussions with Jay Powell, Jedd Schrock, Sam Sullivan and Henry Zenk.

Many [words] formerly employed have become in great measure obsolete, while others have been locally introduced. Thus, at the Dalles of the Columbia, various terms are common which would not be intelligible at Astoria or on Puget Sound (1863a:vii).

This is seconded by Le Jeune’s specification in interior British Columbia of a large number of lexemes “used only in other districts” (1924), and Eells’ testimony of having often witnessed the introduction of new vocabulary in CJ (1894:307).

All sources agree on a significant number of ɬəw̓ ál̓ məš > CJ loans. By my count Kinkade et al. (2010) identify 39 by surveying various sources. Examination of additional documents reveals a more nuanced picture of variation: Gibbs tallied 32 such words (1863a:viit), Shaw counts 36 (1909:xii), and Eells 64 of them (1894:308). In the community of the Grand Ronde Indian Reservation in Oregon, quite a number of Jargon words that have not necessarily been so identified in the past appear to be not just Salish, but most likely ɬəw̓ ál̓ məš, in origin (Chinuk Wawa Dictionary Project 2012).

The Łəw̓ ál̓ məš component of the Jargon has not been accepted without criticism. Shaw, quoting from a manuscript CJ compendium of Eells’, captures the controversy in a few lines:

In the appendix [of Swan 1857] is quite a full vocabulary, – 327 words. Judge Swan lived on Shoalwater Bay, Wash., near the [Lower] Chehalis and Chinook Indians, and he gives quite a number of words which are given by no other writer, which he says are of Chehalis origin. Gibbs rejects many of these, because he thinks that Swan imperceptibly used them as Chinook Jargon, but that they did not properly belong to the language, but to the Chehalis. I [Eells] have inserted them as being a part of the Jargon of that region at that time, as certainly many English words now in use on Puget Sound are a part of the Jargon of this time and place. The environment always affects the language (1909:xvi).

The facts bear out this judgment by Eells, whose knowledge of ɬəw̓ ál̓ məš came from firsthand experience. (Boas’ 1890 notes in the American Philosophical Society archives, S2b.1, include recollections of Eells’ work on the language.) At Bay Center, Washington, where it was aboriginally spoken, a still greater number of items demonstrably originating in this language is consistently found in local CJ, cf. Boas (1892). Native speakers took pains to characterize such loans as non-ɬəw̓ ál̓ məš (cf. Harrington 1942).

The net outcome is that there are many more loans from ɬəw̓ ál̓ məš in CJ than even Kinkade et al. (2010) enumerated. No study to date, however, has both explicitly presented the entire set of such loans and evaluated the claims to their status as ɬəw̓ ál̓ məš. This is the primary goal of the present study.

I have sought here to evaluate all CJ words that both resemble known Salish forms and, due to being used in or adjacent to ɬəw̓ ál̓ məš territory, had a likelihood of originating in this language. This geographic limitation was premised on the need to filter out the considerable stock of later loans from other Salish languages in regions to the north, such as lahanjut ‘to confess’ and putah ‘goodbye’ from Shuswap/Secwepemctsin (Robertson 2011:20). For the same reason, I have
omitted any words of Gibbs’s lower-Columbia region dictionary (1863CJ) to which he assigns a ‘Nisqually’ or ‘Puget Sound’ Central Coast Salish source. Those etymologies seem accurate, for example his māhlie ‘to forget’ exactly corresponds with the modern Lushootseed simplex √bāli (Bates et al. 1994), versus the Tsamosan complex √mōl(‘)q-ni-x(‘) (Kinkade 1991, 2004).

My main sources of ɬəw̓ ál̓ məš data beyond the Kinkade et al. paper of 2010 were several further works of scholarship which more or less explicitly suggest numerous ɬəw̓ ál̓ məš items as CJ vocabulary: Swan (1857), Gibbs (1863a), Gill (1909), Harrington (1942), Chinuk Wawa Dictionary Project (2012), and Kinkade (n.d.).

The mode of this study is descriptive, with the intention of introducing even more ɬəw̓ ál̓ məš data to the Salish linguistics community, but I will end on the secondary theme that the information collected here can be applied to language revitalization. In this way I hope to pay an appropriate homage to Salish conference founders Dale Kinkade and Larry and Terry Thompson for their invaluable gift of a sustained interchange between scholars and Native communities.

2 Beware of false positives

A number of the items collected in the database for this study are certainly or most likely not instances of ɬəw̓ ál̓ məš borrowings into the pidgin. The several reasons for therefore excluding them are touched on in the following notes, which include a good deal of comparative data from other languages for obvious reasons.

2.1 Sorry, wrong language

A small number of the CJ literature’s items that closely resemble known Salish forms, but whose source language was not definitively indicated in the original literature, have clear origins in other languages than ɬəw̓ ál̓ məš. Some are simply from other Coast Salish languages: one has its likeliest etymology in Tillamook, as Chinuk Wawa Dictionary Project (2012) suggests and as shown in Table 1.²

²CJ forms are bolded and italicized in the tables, to facilitate comparisons. I present the most relevant possible documented forms from the Chinooken and Tsamosan local speech of southwest Washington – CJ’s earliest region of use – as well as any other languages relevant to the discussion. (PS=Proto-Salish; PIS=Proto-Interior Salish.) Lack of a known equivalent in the literature is signaled in the tables by ‘?’. Citations from primary data are coded by the speaker’s initials in capitals, the researcher’s initials in lowercase, the date, the microfilm reel number (for Harrington), the page (or text name ‘Qoneqone’), and entry number in our database’s transcription. Morphemic breaks are not generally indicated; depending on the source, hyphens reflect 19ᵗʰ-century anglophone practices in rendering Native languages in writing, or bound stems. Example words are generally transcribed into Americanist phonetics wherever possible; the exceptions preserving pre-modern spellings are enclosed <in angled brackets>. 223
Table 1 CJ < Tillamook

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>&lt;kwad’-dis&gt;</td>
<td>‘whale’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;é-ko-li&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Tillamook</td>
<td>qʰunis</td>
<td>idem</td>
<td>Harrington (1942)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>skʷúyxʷ</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Quinault</td>
<td>qážən</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>łəwałmaš</td>
<td>syəłáxʷ</td>
<td>idem</td>
<td>ELjh1942.17.423</td>
</tr>
</tbody>
</table>

Lushootseed – presumably the dialect of southern Lushootseed spoken in the vicinity of the Hudson Bay Company’s Fort Nisqually, established in 1833 as the first sustained White presence on the head of Puget Sound (Suttles and Lane 1990:499) – supplied names for certain fur-bearing animals. These are shown in Table 2:

Table 2 CJ < Lushootseed

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>&lt;quit-chad ’dy&gt;</td>
<td>‘rabbit’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;kun’ne-mun ’ne&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Lushootseed</td>
<td>kʷəčdíʔ</td>
<td>idem</td>
<td>Bates et al. (1994)</td>
</tr>
<tr>
<td></td>
<td>kʷəčidíʔ</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>xʷáycs</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>łəwałmaš</td>
<td>skʷpxʷaʔ</td>
<td>idem</td>
<td>ISmk19780913.62</td>
</tr>
</tbody>
</table>

Chinook Jargon | <skud’zo> | ‘squirrel’ | Swan (1857) |
| Chinookan     | <e-kau-tau> | ‘pine squirrel’ | Gibbs (1863b) |
| Lushootseed   | sqədíʔ | ‘squirrel’ | Bates et al. (1994) |
| łəwałmaš      | skʷəyúxʷ | idem    | ISmk19781130.41 |

The łəwałmaš cognate for ‘squirrel’ is a very close match for the CJ, and better yet, northern łəwałmaš dialects in fact affricate /y/ to /ǰ/ (that is [dʒ]; thus jəl-áʔ ‘come and help!’ versus southern yəl-áʔ idem, NBmk19670426.65–66). Even so, the Lushootseed form corresponds even more closely in phonology.

Lushootseed is less definitely a potential source of two more words in the same fur-trade semantic domain, shown in Table 3:
Table 3 CJ < probable Lushootseed

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>&lt;skad&gt;</td>
<td>‘mole’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lushootseed</td>
<td>pəɬqʷáčiʔ</td>
<td>‘mole’</td>
<td>Bates et al. (1994),</td>
</tr>
<tr>
<td></td>
<td>qad</td>
<td>‘back up’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>sqən̓</td>
<td>‘gopher’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>łəwálməš</td>
<td>pəkʷálmaš</td>
<td>‘mole’</td>
<td></td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;skub’by-you&gt;</td>
<td>‘skunk’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;o-pún-pun&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Lushootseed</td>
<td>sqəbyáʔ</td>
<td>idem</td>
<td>Bates et al. (1994)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>sq̓əmyúʔ</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>łəwálməš</td>
<td>həyíʔ</td>
<td>idem</td>
<td>ELjh1942.420</td>
</tr>
</tbody>
</table>

Both CJ words in Table 3 appear Lushootseed- (or Twana-) like, in that they contain oral stops where Salish cognates show nasals. But they possess closer known cognates in Tsamosan. With regard to <skad>, we know that 19th-century anglophone recorders of łəwálməš and neighboring languages frequently wrote glottalized n̓ as an oral stop, with or without nasal segments preceding it. (Compare tsŭntn ‘yaka’ [CJ for ‘he, she’] for łəwálməš cən̓ in Cooper 1854, and taqualant ‘ear’ for łəwálməš t=(ʔə-)qʷəlán̓ ‘DEF.NONF=(2.S.POSV)-ear’ in Lee and Frost 1846:342.) As for <skub’by-you>, <m> often interchanged with <b> (for example, just about every occurrence of a ‘b’ in Gibbs’ 1863b Chinookan is phonologically an m). That fact bolsters the case for non-Lushootseed etymologies here. But in any case, łəwálməš is known to use completely different forms in both instances, so we can leave this question open and move on.

One word now integrated into łəwálməš is nonetheless a loan from CJ, which most likely inherited it from the earlier Haida pidgin, via the intervening ‘Nootka Jargon’. (See CWDP 2012, s.v. hilu, for details on these convolutions). Table 4 compares these forms with Chinookan and Tsamosan negators.
Table 4 CJ < Nootka Jargon < Haida

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>&lt;halo&gt;</td>
<td>‘NEG’</td>
<td>(Palmer 1838)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>nikšt</td>
<td>idem</td>
<td>Boas (1910:668)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ maš</td>
<td>hílu</td>
<td>idem</td>
<td>ISmk19781015.10</td>
</tr>
<tr>
<td></td>
<td>milt</td>
<td>idem</td>
<td>LHcs19670817.1503³</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>mîta</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Haida</td>
<td>hi·lu·</td>
<td>idem</td>
<td>CWDP (2012)</td>
</tr>
</tbody>
</table>

A couple of other Nootka Jargon words are Nuuchahnulth in origin (again see CWDP 2012 for details), though they have resemblances to Salish. Table 5 illustrates:

Table 5 CJ < Nootka Jargon < Nuuchahnulth

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>húyhuy</td>
<td>‘trade’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-x̂muta</td>
<td>‘barter’</td>
<td>Boas (1910:615)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ maš</td>
<td>lóq</td>
<td>‘buy’</td>
<td>NBcs19670524.516</td>
</tr>
<tr>
<td></td>
<td>táxʷ</td>
<td>idem</td>
<td>LHcs0817.1499</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>táxʷiwi</td>
<td>‘sell’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>xʷíy̓ xʷiy̓</td>
<td>‘greedy, stingy’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Nuuchahnulth</td>
<td>ḥaʔuyi</td>
<td>‘trade, barter, swap’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>mók'ₘök</td>
<td>‘eat’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-wulʔ (?)</td>
<td>idem</td>
<td>Boas (1910:590)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ maš</td>
<td>?ił</td>
<td>idem</td>
<td>ISmk19780911.97</td>
</tr>
<tr>
<td></td>
<td>mîxʷm</td>
<td>‘go + try to get s.t. to eat from s.o.’</td>
<td>ISmk19781128.13</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>mágʷmágʷtn</td>
<td>‘swallow repeatedly’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>magmaq</td>
<td>‘gulping down’</td>
<td>CWDP (2012)</td>
</tr>
</tbody>
</table>

One word has a reasonable ɬəw̓ ál̓ maš etymology, but a better one in Kalapuyan.

³ɬəw̓ ál̓ maš still routinely used its inherited Salish negator mît in the 1890s, as seen in Charles Cultee’s usage (Boas 1890), but by the time further documentation was performed in the 20th century, speakers almost exclusively negated with the borrowed hílu.

⁴This is an unusual authority to cite here, but no corresponding form could be located in Powell and Callicum (1991).
### Table 6 CJ < Kalapuyan

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>t̓úχ</td>
<td>‘saliva’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-mxti</td>
<td>idem</td>
<td>Boas (1910:608)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>t̓uxʷsč</td>
<td>‘to spit out’</td>
<td>ISmk19781128.46</td>
</tr>
<tr>
<td>Kalapuyan</td>
<td>t̓aq</td>
<td>‘spit, saliva’</td>
<td>CWDP (2012)</td>
</tr>
</tbody>
</table>

And a few items match forms in languages widely enough dispersed in the Pacific Northwest to be considered areally shared.

### Table 7 CJ < > areally shared

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>ə́x̣</td>
<td>‘excrement’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>áx̣</td>
<td>‘cough up’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Sahaptin</td>
<td>áx̣</td>
<td>‘yucky, icky’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>ʔəxʷimustn</td>
<td>‘he defecated’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>nə́ʔ̣</td>
<td>‘dear; honey’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td>‘dear (term of affection for anyone)’</td>
<td>Beaumont (2011)</td>
</tr>
<tr>
<td>Sechelt</td>
<td>náq</td>
<td>idem</td>
<td>Jacobs (1945:247)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>?u</td>
<td>idem</td>
<td>CCFb1890Qoneqone3.1</td>
</tr>
<tr>
<td>Kalapuyan</td>
<td>úʔ</td>
<td>idem</td>
<td>Jacobs (1945:247)</td>
</tr>
<tr>
<td>Sahaptin</td>
<td>au</td>
<td>idem</td>
<td>Jacobs (1929:219)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;kah’-kah&gt;</td>
<td>‘crow’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;ská-ha&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>sk̓o</td>
<td>idem</td>
<td>ISmk19780911.21</td>
</tr>
<tr>
<td>Quileute</td>
<td>káʔyoʔ</td>
<td>idem</td>
<td>Powell and Woodruff (1976)</td>
</tr>
</tbody>
</table>

Finally, a word for European-style dishware has no clear etymology or language of origin, as Table 8 shows. (The trail ends where the unrelated Quinault and Quileute display the same form; Quileute b < *m.)

---

This word is first documented by Hale (1846), then by Gibbs (1863a), both in the lower Columbia River region. Checking dictionaries of Coast Salish (Lushootseed: Bates et al. 1994, Klallam: Montler 2012, Sechelt: Beaumont 2011), Southern Wakashan (Nuuchahnulth: Powell and Callicum 1991), and Northern Wakashan (Heiltsuk: Rath 1981), I found no occurrences of this as a loan word. Its present distribution in Native languages – restricted to the northerly Pacific Coast of Washington state – suggests both (A) its rapid obsolescence in CJ and (B) its persistence only in ‘backwater’ areas where the
Table 8 CJ < indeterminate source

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>mələx</td>
<td>‘pan, dishpan’</td>
<td>ELjh1942.18.448</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;á-bo-wa&gt;</td>
<td>‘dishes’</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>smátáʔ</td>
<td>idem</td>
<td>NBmk19670519.18</td>
</tr>
<tr>
<td></td>
<td>ciilhnm</td>
<td>‘pans, dishes, plates for eating’</td>
<td>CCfb1890.24</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>cakʷólxʷ</td>
<td>‘pan, bowl, dish’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Quinault</td>
<td>maláx</td>
<td>‘basin, dish pan’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Quileute</td>
<td>bá-lax</td>
<td>‘tin metal, pie tin’</td>
<td>Powell and Woodruff (1976)</td>
</tr>
</tbody>
</table>

2.2 Long-term Chinookan-ɬəwálmaš sharing

Quite a number of CJ words beyond this can be ascribed to ɬəwálmaš with varying degrees of confidence. However, the complication here is that sustained joint settlement and linguistic contact has led to the lexicon of Chinookan possessing many forms that are practically indistinguishable from those in its Salish neighbor. In some cases a corresponding ɬəwálmaš form is not known, but Tsamosan relatives have one, suggesting possible cognacy (Table 9).6

Table 9 CJ < indeterminate Chinookan / ɬəwálmaš

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>&lt;chis&gt;; &lt;tsish&gt;</td>
<td>‘cold’</td>
<td>(Gill 1909)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;ts′his’&gt;; &lt;tsus&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>pamás</td>
<td>idem</td>
<td>NBmk19670405.130</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>šíš</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>čxi; &lt;chee&gt;</td>
<td>‘immediately; new’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>čxi</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>či</td>
<td>‘and’</td>
<td>ISmk19781014.23</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>icx̣ut</td>
<td>‘bear’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>iičx̣ut</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>čótxʷn̓</td>
<td>idem</td>
<td>Kinkade et al. (2010)</td>
</tr>
</tbody>
</table>

pidgin had both (i) early taken hold and (ii) remained in use longer than in the sections of the state such as Shoalwater Bay and the corridor from Fort Vancouver to Puget Sound that were first settled by Whites.

6Starting with this section, some examples will be accompanied by background discussion, at times fairly extensive but confined to footnotes to keep the exposition simple.

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<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>kúyʔ</td>
<td>‘hopefully; wishing that...’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;qui&gt;</td>
<td>‘will; let us; shall’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>kʷiʔ</td>
<td>‘give’</td>
<td>ISmk19781015.166⁷</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>lili</td>
<td>‘long time’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>lili</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>nácyʔaq</td>
<td>‘after a long time’</td>
<td>ISmk19781014.49</td>
</tr>
<tr>
<td></td>
<td>táʔxʷ</td>
<td>‘far’</td>
<td>NBcs19670405.145</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>lil-</td>
<td>‘far away’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>lílip</td>
<td>‘boil’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>laplap</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>púp-</td>
<td>‘boil’</td>
<td>ISmk19781014.207</td>
</tr>
<tr>
<td></td>
<td>?úqʷs-</td>
<td>‘boil (cook)’</td>
<td>LHcs19670619.414</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>na</td>
<td>‘Q'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>na</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>na</td>
<td>idem</td>
<td>ISmk19781014.179</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>qáľás</td>
<td>‘raccoon’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>iqʷalás</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>qʷáls</td>
<td>idem</td>
<td>EL1942.17.407</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>spúʔuq</td>
<td>‘grey’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>šbuq</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>p̓áqʷ</td>
<td>idem</td>
<td>EL1942.17.484</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>čiʔʷaʔ</td>
<td>‘piss-ant’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ačiʔʷa</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>čʷsqįʔeq</td>
<td>‘ant’</td>
<td>ISmk19780911.84</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>čiʔʷa-</td>
<td>‘step on’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>úmaʔ</td>
<td>‘feed’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-ʔim</td>
<td>idem</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>?úm-</td>
<td>idem</td>
<td>ISmk19781014.74</td>
</tr>
</tbody>
</table>

³Compare the grammaticalization of a verb ‘give’ into permissive/imperative markers in Mandarin Chinese (Sun 2003) and Russian (Aikhenvald 2010:350).
⁴I.e. polar-question marker. This is an enclitic in both Chinookan and Salish.

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<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>káwtin</td>
<td>‘squirrel’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ikáutan</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>skʷoyúxʷ, skʷašš</td>
<td>idem</td>
<td>ISmk19781130.41</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ISmk19780911.66</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>kʷiš</td>
<td>‘exclamation of refusal’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>kš</td>
<td>‘oh!’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>kʷóš</td>
<td>idem</td>
<td>ELjh1942.18.418</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>pláx</td>
<td>‘aphrodisiac’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ipláx</td>
<td>‘medicine’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td></td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>pláx</td>
<td>‘aphrodisiac’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>tɬáxʷtɬáxʷ, &lt;chet'-lo&gt;</td>
<td>‘oyster’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>tɬáxʷtɬáxʷ, idem</td>
<td></td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td>čółəwxʷ</td>
<td>idem</td>
<td>ISmk19780911.53</td>
</tr>
<tr>
<td>Lushootseed</td>
<td>ġuxʷɬuxʷ</td>
<td>idem</td>
<td>Bates et al. (1994)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;a-yah’-whul&gt;</td>
<td>‘borrow’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td></td>
<td>yáxʷəl</td>
<td>‘borrow’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;hul-ge ‘-bish-ta&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>PS</td>
<td>*kʷul</td>
<td>idem</td>
<td>(Kuipers 2002)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;youtl&gt;</td>
<td>‘glad’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>yułl, yuł</td>
<td>idem</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Lushootseed</td>
<td>jułil</td>
<td>idem</td>
<td>Bates et al. (1994)</td>
</tr>
<tr>
<td>ləwálmaš</td>
<td></td>
<td>idem</td>
<td>(Kuipers 2002)</td>
</tr>
</tbody>
</table>

Both variants (<a-yah’-whul>, yáxʷəl) appear to carry Chinookan argument-marking prefixes (cf. Swanton 1900:214) and a root <hul>/<whul>/xʷəl, but because the CJ word is traced by Gibbs to ləwálmaš (1863a), I examine a possible native Salish etymology. 10In Tsamosan, Cowlitz inherits this Proto-Salish root as kʷústm- (Kinkade 2004) plausibly from PS *kʷú(l)-st(ə)w-m, borrow-CAUS-AD [agent demotion] (for these two grammatical morphemes, cf. Krober 1999:26–27, 95). (For loss of coda *l in this branch, compare Upper Chehalis lēʔ ‘far’ < √líl-, Kinkade 1991.) Upper Chehalis has it also (with its regular *k>c shift, and *l>y) in čó:yaʔ ‘borrow’ (Kinkade 1991). Could the root be an old loan between Chinookan and ləwálmaš? A posttonic alternation k>(k)x is known in Chinookan (Boas 1910:568).

In the Lushootseed form, f is a historical development from PS *y. The final sequence -il is a “stem-forming suffix, common on experiencer stems” (Bates et al. 1994:116); such a suffix has not been identified in Tsamosan, cf. Kinkade (1991, 2004). The important claim here is that there exists a Salish root *yuʔ, which conceivably developed as ləwálmaš.
<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chinook Jargon</strong></td>
<td>&lt;ka-wak’&gt;</td>
<td>‘to fly’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-ka/-ku</td>
<td>idem</td>
<td>(Boas 1911:662)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>qa’waq</td>
<td>idem</td>
<td>ELjh1942.18.398</td>
</tr>
<tr>
<td><strong>Chinook Jargon</strong></td>
<td>&lt;haht-haht&gt;</td>
<td>‘duck’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>xátxat</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>xátxat</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Quinault</td>
<td>xatxát</td>
<td>‘swan’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td><strong>Chinook Jargon</strong></td>
<td>&lt;paht’l&gt;</td>
<td>‘full’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>pæl</td>
<td>idem</td>
<td>Boas (1910:620)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>pə́ ɬ</td>
<td>‘thick’</td>
<td>ISmk19781014.128</td>
</tr>
<tr>
<td><strong>Chinook Jargon</strong></td>
<td>&lt;tagh’-um&gt;</td>
<td>‘six’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>txəm</td>
<td>idem</td>
<td>Boas (1910:637)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>sítəč</td>
<td>idem</td>
<td>LHcs19670817.1453</td>
</tr>
<tr>
<td></td>
<td>txəám</td>
<td>‘eight’ [six]</td>
<td>LHcs19670817.1455</td>
</tr>
<tr>
<td><strong>Chinook Jargon</strong></td>
<td>&lt;tot&gt;</td>
<td>‘uncle’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>tata</td>
<td>idem</td>
<td>Boas (1910:607)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>tátə-</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>táʔt’</td>
<td>idem</td>
<td>(Kinkade et al 2010)</td>
</tr>
</tbody>
</table>

(unattested!) yúʔ-əɬ ‘glad-INTENSIFIER’ (about that suffix cf. Robertson 2014:122). Such a form could have been loaned into neighboring Chinookan in a pronunciation ending in a nonejective, yúɬ, because there exists l-ɬ variation in ɬəwálmaš words, e.g. [čáʔƛ] for /čáʔɬ/ ‘three’ (NBcs19670615.10) and [ƛ̓ə́ɬ] for /ƛ̓ə́ɬ/ ‘tough, hard’ (EOcs19670619.997). 12sítəč is the only word for ‘six’ that most latter-day speakers gave, but txəám is clearly ancestral in Salish and is used elsewhere in Tsamosan such as in Upper Chehalis (Kinkade 1991). Its antecedents are PS txə ‘to open up, branch out’ or *tləq ‘to cross over’, both used in words for ‘six’ (Kuipers 2002), and PS *-m ‘AD’ (agent demotion; Kroeker 1999:26–27, 95). That txəám is only vaguely remembered is evident from one speaker giving it only as an alternative for ‘six’, and from another’s gloss as ‘eight’ (sic). We can only speculate over the replacement of such a core lexical item. One explanation fitting the Olympic Peninsula milieu is lexical tabooing, the replacement of a lexical item when a person of similar-sounding name had recently died. This custom was practiced by the Lower Chinookan population who were long intermingled with the ɬəwálmaš around Shoalwater Bay (cf. Boas 1892, 1910:666), as well as by fellow Coast Salish groups such as the Twana (Elmendorf 1951). Elmendorf notes that names that became tabooed sometimes originated in other language (p. 206), an observation highly pertinent to txəám with its multiple potential etymologies.

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<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>&lt;so-le’-mie&gt;</td>
<td>‘cranberry’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td></td>
<td>súlmix</td>
<td>idem</td>
<td>ELjh1942.18.466</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;sú-la-mikh&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>łówálmaš</td>
<td>ḡasálmš</td>
<td>idem</td>
<td>ELjh1942.18.466</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>sx̣iláqmi</td>
<td>‘looking glass’</td>
<td>ELjh1942.18.459</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;e-shal-la’-kabť&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td></td>
<td>-okuman</td>
<td>‘to look at’</td>
<td>Boas (1910:662)</td>
</tr>
<tr>
<td></td>
<td>-aqamt</td>
<td>‘to look’</td>
<td>Boas (1910:663)</td>
</tr>
<tr>
<td>łówálmaš</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>ḡáʔxcšń</td>
<td>‘mirror’</td>
<td>Kinkade (1991)¹⁴</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;smock-smock&gt;</td>
<td>‘grouse’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;un-whust’wust&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>łówálmaš</td>
<td>ḡómsalč</td>
<td>idem</td>
<td>ELjh1942.18.387</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>&lt;.smukwā’.m.k&gt;</td>
<td>idem</td>
<td>Kinkade (1991)¹⁵</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;setlokum&gt;</td>
<td>‘the game of “hand”’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;it-hlo-kum&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>łówálmaš</td>
<td>ḡiʔłakum</td>
<td>idem</td>
<td>ELjh1942.18.325</td>
</tr>
</tbody>
</table>

¹³ The forms in -x/-<kh> suggest a loan from łówálmaš – whether to Chinookan or CJ – that antedates the sound shift from *x>š and suggests the lexical suffix *mix/mixʷ ‘person(s), land, river’ etc., which traces back to Proto-Salish (Kuipers 2002), though I have found no correspondent of a root sul in Salish. On the other hand, the prefixed ḡə- evokes a direction of loaning back into łówálmaš from Chinookan, where this looks like an unstressed noun gender prefix a- or i- reduced to schwa (Boas 1910:580–581).

¹⁴ This word is included for two formal reasons, aside from its presumable post-contact origin. The beginning, particularly, of it suggests native łówálmaš material such as [an unattested word] s-\'xil=á=q=mi(n) (NOM-\'STEMX=hair=INSTR, cf UCH =min), thus ‘instrument to do one’s hair with’. The end, especially, of this same form is of course a decent match for the Chinookan roots shown. At this point we can only speculate about the sorts of mutual influence among Shoalwater Bay tribal languages that this implies.

¹⁵ The triconsonantal reduplication in the CJ form fits the frequent Chinookan pattern for forming birds’ names, though ‘grouse’ was not found in the sources I consulted (Boas 1910:655). The phonotactics of the reduplicated sequence, with an s-initial followed by CVC, are however typical of Salish words and very similar to the Upper Chehalis form, whose etymology is not clear.

¹⁶ The łówálmaš form is an obvious Salish nominalization of a Chinookan loan.
2.3 “Mistaken CJ”, as Sam Johnson said

A good many of the ləwálməš forms in one published Chinook Jargon source (Gill 1909) can be proven beyond a reasonable doubt to not belong there. These are among the numerous idiosyncratic additions that Samuel V. Johnson has shown Portland publisher John Kaye Gill to have made in republishing F.N. Blanchet’s 1853 CJ dictionary (Johnson 1978:69ff). Usually Gill notates these words as “O.C.” for “Original Chinook”, that is Chinookan, but several are recognizable as ləwálməš even without Gill’s sporadic label “Che.” for “Chehalis”. (This was the usual label for the ləwálməš tribe and language at the time.)

Of these, roughly half are identifiable as being lifted uncredited from Swan (1857), albeit with some changes to the spellings (Johnson 1978:77ff). The relevant observation to make is that Swan never claimed these to be Chinook Jargon lexemes, presenting them instead in a separate ləwálməš word list. As Johnson observed of certain other CJ dictionaries, this is “mistaken CJ” (1978:21ff). Table 10 illustrates these and one misprint found in Kinkade et al. (2010):

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinookan</td>
<td>moolak</td>
<td>‘elk’</td>
<td>Cox (1832)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>mulak</td>
<td>idem</td>
<td>Boas (1910:598)</td>
</tr>
<tr>
<td>ləwálməš</td>
<td>q̓ilt</td>
<td>idem</td>
<td>ELjh1942.17.684</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>“CJ”</td>
<td>&lt;cuk’-ko&gt;</td>
<td>‘porgy’ [a fish]</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ləwálməš</td>
<td>swən̓ n̓ lč</td>
<td>idem</td>
<td>ELjh1942.17.310</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;e-kap’-pa&gt;</td>
<td>‘hail’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-kápa</td>
<td>‘ice’</td>
<td>Boas (1910:601)</td>
</tr>
<tr>
<td>ləwálməš</td>
<td>s̓əl̓txʷ</td>
<td>idem</td>
<td>ISmk19781015.132</td>
</tr>
<tr>
<td>Quinault</td>
<td>q̓ə́p̓uxʷəxʷ s̓əl̓txʷ</td>
<td>‘little hailstone’</td>
<td>Modrow ([1971])</td>
</tr>
</tbody>
</table>

17The CJ word is of uncertain origin; I have not found a term for the fish ‘porgy’ in Gibbs (1863b), Boas (1910), and Swanton (1900). The ləwálməš form’s etymology is uncertain but apparently Salish, cf. Upper Chehalis s- ‘NOM’, wən ‘fold’ and =ił=či ‘water’ (Kinkade 1991).

18Latter-day ləwálməš informants volunteered only (s)əl̓txʷ. Chinook Jargon <E-kap’-pa> may have been a loan at the time when Swan documented ləwálməš.
<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>“CJ”</td>
<td>&lt;has’-litch&gt;</td>
<td>‘liver’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ip’ánaqš</td>
<td>idem</td>
<td>CWDP (2012 s.v. liver)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>sxásəlčəc</td>
<td>idem (?)</td>
<td>Kinkade (1991:164)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>sáʔš</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>&lt;Süsssúltca&gt;</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;kaer-hutch&gt;</td>
<td>‘crab’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;kal-he’-la&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>qítx̣əč</td>
<td>idem</td>
<td>ISmk19780911.54</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;met’-chip&gt;</td>
<td>‘fire’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;o-ól-pits-kí&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>m̓əčp</td>
<td>idem</td>
<td>ELjh1942.18.317</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;se’-cartl&gt;</td>
<td>‘spruce tree’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;e-pé-natl’h&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>cqáł</td>
<td>idem</td>
<td>ELjh1942.17.168</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;she-sinch&gt;</td>
<td>‘shrimp’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>šayíšnəč</td>
<td>idem</td>
<td>NBcs19670615.1100</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;squintum&gt;</td>
<td>‘white man’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>sxʷóntm</td>
<td>idem</td>
<td>ISmk19781014.275</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;ta-las’&gt;</td>
<td>‘foot’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-ps/-p̓s̓</td>
<td>idem</td>
<td>Boas (1910:602, 639)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>cáltəʔ</td>
<td>‘shoes’</td>
<td>ISmk19781129.60</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;taerk&gt;</td>
<td>‘bone’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ikamúkuk</td>
<td>idem</td>
<td>Boas (1910:611)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>t̓íq</td>
<td>idem</td>
<td>ISmk19781014.256</td>
</tr>
<tr>
<td>“CJ”</td>
<td>tam</td>
<td>‘what?’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>tan</td>
<td>idem</td>
<td>Boas (1910:609)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>t̓ám</td>
<td>idem</td>
<td>ISmk19781014.216</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;teh’-a-ner&gt;</td>
<td>‘jay’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-qišqiš</td>
<td>‘blue jay’</td>
<td>Boas (1910:598)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>t̓íxnaʔ</td>
<td>idem</td>
<td>ELjh1942.18.257</td>
</tr>
</tbody>
</table>

19Comparison of the forms in CJ, ɬəwálmaš (which Kinkade 1991 mysteriously tags with a parenthetical ‘(?)’) and Upper Chehalis suggests a root of the approximate form h/xáʔs/š and a lexical suffix, both with meanings not yet known to us. For the loss of h following the nominalizing prefix s-, a mutation not uncommon in Salish, compare PS *s-(h)ayas ‘to play’ > Songish siyásŋ ‘play games’ ~ Lillooet saysəz’, Thompson séysitʔ, Shuswap sëyse.
<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>“CJ”</td>
<td>&lt;ten-arts-lets&gt;</td>
<td>‘veins’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;te-bek-het-hlau&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>?</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>was̓l</td>
<td>(s-)ʔac(‘) = il(‘)als ‘inside’</td>
<td>(ibíd.)^{20}</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;ten-sah-wit&gt;</td>
<td>‘bladder’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td>idem</td>
<td></td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>?</td>
<td>idem</td>
<td></td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>sxʷ/saxʷ</td>
<td>‘wet’</td>
<td>Kinkade (1991)^{21}</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;ten-squails&gt;</td>
<td>‘blood’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>lʔałwilqt</td>
<td>idem</td>
<td>Boas (1910:568)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>sqʷ’il</td>
<td>idem</td>
<td>ISmk19780911.111</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;tens-ho-mish&gt;</td>
<td>‘arm’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-puti</td>
<td>idem</td>
<td>Boas (1910:601)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>sxʷúməč</td>
<td>‘hand’</td>
<td>LHcs19670619.132</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;tah-ness&gt;</td>
<td>‘knee’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>úq̓ux̌</td>
<td>idem</td>
<td>Boas (1910:609)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>tán̓s</td>
<td>idem</td>
<td>ISmk19781129.58</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;ten-tome&gt;</td>
<td>‘navel’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td>idem</td>
<td>ISmk19781015.50</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>tús</td>
<td>idem</td>
<td></td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;tsole&gt;</td>
<td>‘round’</td>
<td>Kinkade et al. (2010)^{22}</td>
</tr>
</tbody>
</table>

The remainder of Gill’s (1909) ɬəwálmaš-origin mistaken CJ items come from a data source that is unidentified as of this writing.

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^{20}The ten at the start of this and other CJ forms in this table is transparently ɬəwálmaš t= n- ‘DET.NONF= 1.SG.POV’-, cf. Robertson (2014). The Upper Chehalis word for ‘inside’ is based on the ‘stative’ prefix, exceptionally used as a root in several Upper Chehalis and ɬəwálmaš words, and the lexical suffix meaning ‘side, insides’ (Kinkade 1991).

^{21}If this word for ‘bladder’ involves a cognate of the Upper Chehalis root for ‘wet’, the final t of the CJ word can plausibly be interpreted as ɬəwálmaš =t ‘INSTR’ (cf. Robertson 2014).

^{22}The supposed CJ form <tsole> in Kinkade et al. (2010) is a misprint for <tsole-pat> ‘shotpouch’ (Gibbs 1863a; discussed in Table 13 below), and is not found in CJ sources.
Table 11 ɬəw̓ ál̓ məš mistakenly called CJ; data sources unknown

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>“CJ”</td>
<td>&lt;pa-ma’s&gt;</td>
<td>‘cold’</td>
<td>?</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-caca</td>
<td>idem</td>
<td>Boas (1910:599)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>pamás</td>
<td>idem</td>
<td>ISmk19781130.83</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;oke&gt;</td>
<td>‘cry’</td>
<td>?</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-q̓ ocax</td>
<td>idem (sg.)</td>
<td>Boas (1910:612)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>?úk̓ w</td>
<td>idem</td>
<td>ISmk19781014.225</td>
</tr>
<tr>
<td>“Chinook Jargon”</td>
<td>&lt;law’-suk&gt;</td>
<td>‘dance’</td>
<td>?</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-wəčk</td>
<td>idem (sg.)</td>
<td>Boas (1910:612)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>láq̓ ’səq</td>
<td>idem</td>
<td>ISmk19780912.74</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;tah-oo&gt;</td>
<td>‘far’</td>
<td>?</td>
</tr>
<tr>
<td>Chinookan</td>
<td>kolá-(?)</td>
<td>idem</td>
<td>Boas (1910:672)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>táʔx̣w</td>
<td>idem</td>
<td>ISmk19781014.4</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;ny-ee’-na&gt;,</td>
<td>‘sing/song’</td>
<td>?</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;ny-ee’-na&gt;</td>
<td>idem</td>
<td>Boas (1910:588)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>čx̣am</td>
<td>‘sing shaman’s song’</td>
<td>ISmk19781014.59</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;skatl&gt;</td>
<td>‘sky’</td>
<td>?</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-gušax</td>
<td>idem</td>
<td>Boas (1910:601)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>sq̓ áƛ̓ w</td>
<td>idem</td>
<td>ISmk19781130.64</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;hook&gt;</td>
<td>‘small’</td>
<td>?</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-kaic</td>
<td>‘smallness’</td>
<td>Boas (1910:641)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>xʷúʔk̓ w</td>
<td>‘small’</td>
<td>ISmk19781014.85</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;clak-oo’&gt;</td>
<td>‘snow’</td>
<td>?</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-utk</td>
<td>‘to snow’</td>
<td>Boas (1910:661)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>sƛ̓ áq̓ w</td>
<td>‘snow (on the ground)’</td>
<td>ISmk19781130.65</td>
</tr>
<tr>
<td>“CJ”</td>
<td>&lt;kais&gt;</td>
<td>‘stone’</td>
<td>?</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-qanakš</td>
<td>idem</td>
<td>Boas (1910:604)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>qáys</td>
<td>idem</td>
<td>ISmk19780913.92</td>
</tr>
</tbody>
</table>

3 But there is still much more ɬəw̓ ál̓ məš in CJ than thought

The remainder of the data increases the number of known reliable ɬəw̓ ál̓ məš > CJ loans to 80 from the 39, and one mistaken form shown at the end of Table 10, listed by Kinkade et al. (2010). (I do not repeat the items in that 2010 word list here.) Upper Chehalis, Cowlitz and Quinault forms are presented for comparison here, when known.

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23 This is among the adjectival concepts that receive expression as abstract nouns in Chinookan (Boas 1910:657).
Quite a number of these newly identified loans are given by speakers in the community as ɬəw̓ ál̓ mə'sh, in addition to being identified in the literature as being used in CJ. (CWDP 2012 is the first to suggest ɬəw̓ ál̓ mə'sh etymologies as a possibility for several of these; my label ‘newly identified’ is intended as confirming those speculations.) Table 12 illustrates these items:

<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>ál̓əkš</td>
<td>‘beg’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>natáw-</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ mə'sh</td>
<td>ʔál̓əqš</td>
<td>‘bumming for food; stand watching s.o. eat + wanting food’</td>
<td>ISmk19781128.12</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;tsi-ā`-list&gt;</td>
<td>‘branch’</td>
<td>(Lionnet 1853)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cowlitz</td>
<td>kálx</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ mə'sh</td>
<td>čáš</td>
<td>idem</td>
<td>ISmk19781130.56</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>čičča</td>
<td>‘grandmother’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;kl-kuk-ké-ke&gt;</td>
<td>idem on father’s side</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td></td>
<td>&lt;kl-kush-kash ‘ka&gt;</td>
<td>idem on mother’s side</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ mə'sh</td>
<td>čóča</td>
<td>idem</td>
<td>EOcs19670720.742</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>il̓ap</td>
<td>‘first; before’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ḡaqšón</td>
<td>‘for the first time’</td>
<td>Boas (1910:634)</td>
</tr>
<tr>
<td></td>
<td>-áníwa</td>
<td>‘first’</td>
<td>Boas (1910:659)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ mə'sh</td>
<td>ʔílp</td>
<td>idem</td>
<td>ELjh1942.18.229</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>kʷmí?ílm</td>
<td>‘grandchild’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>qaš</td>
<td>idem said by a man</td>
<td>Boas (1910:612)</td>
</tr>
<tr>
<td></td>
<td>kai</td>
<td>idem said by a woman</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ mə'sh</td>
<td>kʷá̱ílm</td>
<td>idem</td>
<td>ISmk19781129.36</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>lá̱kʷon</td>
<td>‘wipe’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-naʃ</td>
<td>idem</td>
<td>Boas (1910:662)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>-xʷíkʷi</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ mə'sh</td>
<td>lá̱kʷon</td>
<td>‘wipe it away/off!’</td>
<td>ELjh1942.17.284</td>
</tr>
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<td>language</td>
<td>word</td>
<td>gloss</td>
<td>source</td>
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<td>-------------</td>
<td>----------</td>
<td>---------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ʔúʔan</td>
<td>'have'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td>ʔúʔn</td>
<td>ISmk19781015.10925</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>ʔúʔn</td>
<td>'put it away'</td>
<td>ISmk19781015.10925</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td>ʔúʔn</td>
<td>ISmk19781015.10925</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>ʔúʔn</td>
<td>'put it away'</td>
<td>ISmk19781015.10925</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>xʷúqʷn</td>
<td>'pick it up (e.g. from the floor)'</td>
<td>ELjh1942.18.1481</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-piáłx</td>
<td>idem</td>
<td>Boas (1910:660)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>xʷúqʷn</td>
<td>'pick it up (e.g. from the floor)'</td>
<td>ELjh1942.18.1481</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>čúmt̓</td>
<td>'chair'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-lait</td>
<td>'sit'</td>
<td>Boas (1910:665)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>čómt̓</td>
<td>idem</td>
<td>ISmk19780911.43</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ləkʷən̓u?</td>
<td>'earring'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;iš-ká-lal&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>ləkʷən̓u?</td>
<td>'small earring'</td>
<td>NBmk19781129.48</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>q̓áyax̣</td>
<td>'entrails'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-am̓</td>
<td>'guts'</td>
<td>Boas (1910:607)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>q̓áyax̣</td>
<td>idem</td>
<td>ISmk19781130.44</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ʔúʔan</td>
<td>'have'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ʔúʔn</td>
<td>ʔúʔn</td>
<td>ISmk19781015.10925</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>ʔúʔn</td>
<td>'put it away'</td>
<td>ISmk19781015.10925</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ʔúʔn</td>
<td>ʔúʔn</td>
<td>ISmk19781015.10925</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>ʔúʔn</td>
<td>'put it away'</td>
<td>ISmk19781015.10925</td>
</tr>
</tbody>
</table>

EL says that l̓əh̓áł is the real ɬəwálmaš word, and that sləh̓áł is CJ. Note the glottalized resonant in the latter, a phoneme type not documented in other CJ varieties including the phonologically rather conservative Grand Ronde creole (CWDP 2012:25–29).

The pronunciation in CWDP (2012), if reflective of etymology, also implies ɬəwálmaš ʔúʔn 'put [it] away!' (On the morphological formation of the imperative, see Robertson 2014:107–108.)
<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>ʔ̓pis</td>
<td>‘soul’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-kanati</td>
<td>idem</td>
<td>Boas (1910:622)</td>
</tr>
<tr>
<td>ɬəwálməş</td>
<td>spis</td>
<td>idem</td>
<td>ISNBmk19781129.25</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ʔ̓áyt</td>
<td>‘fishhook’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-kik</td>
<td>‘hook’</td>
<td>Boas (1910:601)</td>
</tr>
<tr>
<td>ɬəwálməş</td>
<td>ʔ̓it-</td>
<td>‘fishing with hook &amp; line’</td>
<td>LHcs19670619.121</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>kʷ̓ík̓‘iyans</td>
<td>‘straight pin’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;kwé-kwi-ens&gt;</td>
<td>‘pin’</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>&lt;kle-бá-kwo-te&gt;</td>
<td>idem</td>
<td></td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>kʷ̓ík̓‘i-</td>
<td>‘sticking in’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>ɬəwálməş</td>
<td>kʷ̓ík̓‘iyanšt</td>
<td>idem</td>
<td>NBcs19670731.1213</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>tə́lpšn</td>
<td>‘patch’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;an-ék-h-po&gt;</td>
<td>‘sew’</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>təlpšn</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowiltz</td>
<td>idem</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>təpn</td>
<td>‘patching it’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>ɬəwálməş</td>
<td>təpn</td>
<td>‘to patch (a canoe or clothes)’</td>
<td>ELjh1942.18.361</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>x̣íl̓məɬ</td>
<td>‘work’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-xučx</td>
<td>idem</td>
<td>Boas (1910:600)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>yūs</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowiltz</td>
<td>yayús</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>ɬəwálməş</td>
<td>x̣íl̓məɬ</td>
<td>idem</td>
<td>ELjh1942.18.386</td>
</tr>
<tr>
<td>Quinault</td>
<td>idem</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>y̓̓ns</td>
<td>‘tooth’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-ačx</td>
<td>idem</td>
<td>Boas (1910:601)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>y̓̓ns</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowiltz</td>
<td>idem</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>j̓̓ns</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
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<td>y̓̓ns</td>
<td>idem</td>
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<td>Gloss</td>
<td>Source</td>
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<td>-------------------</td>
<td>------------</td>
<td>------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>čícʷt</td>
<td>'light, lamp’</td>
<td>ELjh1942.18.370</td>
</tr>
<tr>
<td>Chinookan</td>
<td>wax</td>
<td>'light, set afire’</td>
<td>Boas (1910:631)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>sqalóx</td>
<td>'light’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>skʷál</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td></td>
<td>qʷalíltń</td>
<td>'lamp’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Quinault</td>
<td>jóxul</td>
<td>'light, daylight’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>łówálmaš</td>
<td>čícʷt</td>
<td>'light’</td>
<td>NBcs19670512.293</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>?ápct</td>
<td>'stem of a canoe, front Kinkade (1991)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>seat of a car”</td>
<td></td>
</tr>
<tr>
<td>Quinault</td>
<td>łáxʷx̣c</td>
<td>'stem, the hind part of Modrow ([1971]) a canoe’</td>
<td></td>
</tr>
<tr>
<td>łówálmaš</td>
<td>?ácə̱n (?)</td>
<td>‘canoe stern’</td>
<td>CCFb1890.6</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>púqʷəs</td>
<td>‘housefly’</td>
<td>ELjh1942.18.398</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;e-bóts-kun&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>xʷʔayúxʷʔa?</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>púwś</td>
<td>‘a fly in mountains’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>câwlkaxa</td>
<td>'fly (n.)’</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>p̓áhk̓əs</td>
<td>'fly’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>łówálmaš</td>
<td>p̓əqʷls</td>
<td>idem</td>
<td>ELjh1942.18.294</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ʔóql</td>
<td>‘sugar’</td>
<td>ELjh1942.18.445</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;tsee&gt;</td>
<td>‘sweet’</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td></td>
<td>&lt;yat-se-bub&gt;</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>łówálmaš</td>
<td>ʔóql</td>
<td>‘sweet’</td>
<td>LHcs19670619.841</td>
</tr>
<tr>
<td>Quinault</td>
<td>idem</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>idem</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>idem</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;smeť'-ocks&gt;</td>
<td>‘large clam’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-iʔi</td>
<td>‘mud clam’</td>
<td>Boas (1910:598)</td>
</tr>
<tr>
<td></td>
<td>&lt;kláb-o-wa&gt;</td>
<td>‘clam (lutraria)’</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>qʷʔálq̓n</td>
<td>‘horseclam’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>sqʷáltn</td>
<td>‘large clam sp.’</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>m̓áʔqs</td>
<td>‘horse clams’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>łówálmaš</td>
<td>sm̓áʔqs</td>
<td>‘clam sp.’</td>
<td>ELjh1942.18.465</td>
</tr>
<tr>
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<td>word</td>
<td>gloss</td>
<td>source</td>
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<td>------------</td>
<td>---------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;essa&gt;</td>
<td>'to come'</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;a-mit-e&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td></td>
<td>&lt;bat’te&gt;</td>
<td>'come, (imp.) to one person'</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>čís-</td>
<td>'come'</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>nēʔšaʔ?</td>
<td>'come near!'</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Quinault</td>
<td>idem</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>?ísəʔ?</td>
<td>'come here!'</td>
<td>ISmk19780911.108</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;hachr&gt;</td>
<td>'house'</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>tqúli</td>
<td>idem</td>
<td>Boas (1910:568)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>x̣áx</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>x̣áltə</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>x̣áš</td>
<td>idem</td>
<td>ISmk19780914.5</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>idem</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;scal’la-been&gt;</td>
<td>'rifle’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;shuk-wa-lál-la&gt;</td>
<td>'gun or musket’</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>&lt;Súlla ’ip’&gt;</td>
<td>'rifle’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Quinault</td>
<td>ciččin</td>
<td>'gun’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>skalopin</td>
<td>'rifle’</td>
<td>ELjh1942.18.49026</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;swaa’wa&gt;</td>
<td>'panther’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;e-kwái-ye-wa&gt;</td>
<td>'cougar’</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td></td>
<td>-iqačíłak</td>
<td>'panther’</td>
<td>Boas (1910:614)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>swáwa-</td>
<td>'cougar’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>swáʔwaʔ?</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Quinault</td>
<td>gʷáʔa</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>swáw̓aʔ?</td>
<td>idem</td>
<td>ELjh1942.17.441</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>&lt;arts ’poe&gt;</td>
<td>'flea’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;i-na-pu&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>máčíłi</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Quinault</td>
<td>kʷəsʔús</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>?ácpuʔ?</td>
<td>idem</td>
<td>ISmk19780913.85</td>
</tr>
</tbody>
</table>

26This is a unique nativization of an existing CJ noun into ɬəwálmaš by the addition of the ɬəwálmaš nominalizing prefix s- (cf. Robertson 2014:123–124, CWDP 2012, s.v. karapin).
The remainder are certainly at least Tsamosan and, for multiple reasons, more plausibly from ləwálməš than from Upper Chehalis, Quinault, or Cowlitz. Of these, typically it is ləwálməš that provides the closest phonological and semantic match. It is also the language geographically closest to where each word was first documented – Grand Ronde, Oregon, in most cases. As shown in Table 13, minor differences of form from known ləwálməš words characterize several of these. (Phonological differences observed between the source and pidgin languages – such as q̓ ~ k̓ variability, attrition of labiality in stop codas, and addition or removal of glottality – are typical for the pidgin, as a glance through the etymologies in CWDP 2012 proves.)

27A variant of the usual CJ form <klip>/<klep> already etymologized by Kinkade et al. (2010).
<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>kwíshən</td>
<td>'toast'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-kčkt</td>
<td>'roast'</td>
<td>Boas (1910:569)</td>
</tr>
<tr>
<td></td>
<td>-łəkč</td>
<td>idem</td>
<td>Boas (1910:650)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>caqáʔn</td>
<td>'stick for roasting'</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>&lt;k'lk·l&gt;</td>
<td>'when putting salmon on a roasting stick'</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>&lt;tawa'shweyə&gt;</td>
<td>'roasting stick'</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>x̣əsətəm</td>
<td>'burning hair (of a seal) or roast'</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td></td>
<td>ʔə̱lə̱stəq</td>
<td>'roast by fire'</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>ləʍálməshake</td>
<td>ʔə̱x̣ə̱ʔə̱ps</td>
<td>idem</td>
<td>LHcs19670619.574</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>páłaks</td>
<td>'penis'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cowlitz</td>
<td>səx̣ə̱ʔə́ỵmini</td>
<td>'his penis'</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>ləʍálməshake</td>
<td>sp̣ə́lq</td>
<td>idem</td>
<td>BCmk19670511.17</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>idem</td>
<td></td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ʔə̱kə̱</td>
<td>'choke'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-č̓ ikč̓ ik</td>
<td>'almost choked'</td>
<td>Boas (1910:632)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>ʔə̱q̣ə̱-</td>
<td>'choke'</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>mič̓ nə̱li-</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>ʔə̱q̣ə̱n</td>
<td>'choke, hang'</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td></td>
<td>k̓ʷu̱k̓ ʔə̱psm</td>
<td>'choke, stick in the throat'</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Quinault</td>
<td>ʔə̱q̣ə̱</td>
<td>'to choke'</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>ləʍálməshake</td>
<td>ʔə̱q̣ə̱</td>
<td>'choke (on s.t.)'</td>
<td>ISmk19781015.46</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>iláxən[-]hæn</td>
<td>'deadbeat'</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ʔə̱m</td>
<td>'lazy'</td>
<td>Boas (1910:632)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>ʔə̱x̣ə̱-</td>
<td>'hunt'</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>ʔə̱x̣ə̱xn̓</td>
<td>'hunt (game), go hunting'</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>ʔə̱xcə̱ym</td>
<td>'to hunt'</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>ləʍálməshake</td>
<td>sə̱lə̱ʔhnm</td>
<td>'they went out hunting'</td>
<td>ELjh1942.17.46²⁸</td>
</tr>
</tbody>
</table>

²⁸CWDP (2012) suggests that the element -hæn here may be from English ‘hand’, as if the CW word connoted ‘hunting for a handout’; compare the semantics of the first group of
words in Table 11. For the simplification of coda clusters of nasal + obstruent, compare CW win ‘wind; breath’ (CWDP 2012).

29The alternation w>xʷ is not frequent in łəwálməš, but the semantics here exactly correspond with CJ’s widely documented klis-pʰəya ‘candle’, literally ‘fat-fire/light’ (cf. CWDP 2012 s.v. klis).

30 Emma Luscier, in her 1942 elicitation of Chinook Jargon with J.P. Harrington, did not recognize CJ tsole-pat, but volunteered łəwálməš ɬən̓ ál̓ st̓ ‘bullet bag’. This word turns out to be an approximate synonym of the first, cf. Upper Chehalis ɬən ‘receptacle’ (used as the first member in compounds), = ál(=)s ‘round things’, and =tn ‘INSTR’, thus ‘container for holding shot/bullets’. Supporting my interpretation of the first lexical suffix, Upper Chehalis has <Nauwals>, i.e. ɬən̓ w=ál(=)st̓ ‘bullet’, where the root – unglossed by Kinkade – is cognate with łəwálməš náw ‘big’ (NBcs19670405.207). (Though its Upper Chehalis uses suggest a meaning ‘real; main part’, compare s-ɬən̓ w=ucn ‘mouth of a man’, ɬən̓ w=ár’s ‘top of a tree; end of a road’ and ɬən̓ w=áps ‘front of a door’, Kinkade 1991.) Employing the same main concepts as in łəwálməš but in the reverse order, CJ tsole-pat is almost surely the łəwálməš morphs ɬəl̓ p ‘round’ in a metaphorical meaning (otherwise
4 And now, the best part – these pidgin data help us revitalize ɬəw̓ ál̓ məš

Having opted in Section 2 to exclude quite a lot of the potential ɬəw̓ ál̓ məš > CJ loans from consideration, and ignoring the 39 already established by Kinkade et al. (2010), we have still found the 41 additional items in Section 3 either definitely tracing to ɬəw̓ ál̓ məš or more likely to it than to any Tsamosan congener. This is already an increase of a little more than 100% in the corpus. (It is probable that more will be discovered, like several in the present data set, unlabeled by the numerous CJ lexicographers as to a source language.) An interesting fact is that many of these represent the sole evidence for lexemes otherwise unknown to us in the somewhat limited documentation of ɬəw̓ ál̓ məš.

To continue that theme, 21 more words have their closest known correspondents elsewhere in Tsamosan. But the trend of evidence so far shows that Salish loans in CJ whose sources are clear overwhelmingly trace to ɬəw̓ ál̓ məš, and these 21 items are documented within the lower Columbia and Shoalwater region. On such grounds, we might infer that these data too (Table 14) represent likely ɬəw̓ ál̓ məš material – meaning that we have potentially expanded the corpus of such loans into CJ by as much as 150%.

unattested) ‘round thing; shot, bullet, lead ball’ and =t̓ ‘INSTRUMENT’. This structure in turn parallels its Upper Chehalis synonym √sil-in ‘bullet bag, hunter’s pouch’ (Upper Chehalis and Cowlitz √sil ‘bullet, arrow’, Kinkade 1991 and 2004).
### Table 14 CJ < ɬəw̓ ál̓ məš (likely, but indirect evidence)

<table>
<thead>
<tr>
<th>Language</th>
<th>Word</th>
<th>Gloss</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>ʔáʔwa</td>
<td>‘crooked’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-łk̓</td>
<td>idem</td>
<td>Boas (1910:665)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>ʔəł̓ yuł</td>
<td>‘crooked’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>ʔəł̓ txʷ-</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td></td>
<td>ʔəł̓ yuł-</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>ʔəł̓ yuł-</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>júq</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>ʔəł̓ múˈɬn̓</td>
<td>‘trout (crooked-mouth)’</td>
<td>ISmk19781130.54</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>máq̓</td>
<td>‘gulp’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td></td>
<td>máq̓ʷm̓ok̓</td>
<td>‘eat’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-wulʔ</td>
<td>‘to swallow’</td>
<td>Boas (1910:660)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>máq̓ʷ-</td>
<td>‘swallow’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>máq̓ʷm̓</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>núqʷ</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ʔəł̓ n̓s</td>
<td>‘bake’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-ši</td>
<td>‘to roast in ashes’</td>
<td>Boas (1910:662)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>ʔəł̓ nstq</td>
<td>‘by the fire’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>ʔəł̓ n̓c̓-</td>
<td>~ ‘prepare (cook)’</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>ʔəł̓ n̓stq</td>
<td>~ ‘prepare (cook)’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td></td>
<td>kl̓ is</td>
<td>‘to bake (in ashes)’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ʔəł̓ p̓úʔ</td>
<td>‘fart’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>póʔ</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>póʔ</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
</tbody>
</table>

31 Camas is precisely the usual object of ʔəł̓ n̓s, baking in ashes, in Victoria Howard’s narrations (cf. text 13.4 in Jacobs 1936). The root seems to descend from PS * póʔ ‘besides, parallel, straight’ (Kuipers 2002), in a distinctly Tsamosan sense ‘beside the fire’.
<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>snás</td>
<td>‘rain’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;slél-hutst&gt;</td>
<td>idem</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td></td>
<td>məƛ’</td>
<td>‘wet’</td>
<td>Boas (1910:633)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>snás</td>
<td>‘moist, moisture’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>̓xasîl’s</td>
<td>‘rain’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td></td>
<td>̓sökʷ</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>sóxʷ’a-</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td></td>
<td>̓xasîl?</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Quinault</td>
<td>̓čájəkʷ</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>ɬəwálmaš</td>
<td>túls</td>
<td>‘to rain’</td>
<td>LHcs19670619.196</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>t̓sikʷən</td>
<td>‘to pinch’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-ƛk̓úp</td>
<td>‘being squeezed out (one-eyed)’</td>
<td>Boas (1910:599)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>̓čikʷn</td>
<td>‘pinch’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>̓cay̓p̓n</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>mici</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>qʰə́stkʷ</td>
<td>‘balm’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>q̓ə́stkʷ</td>
<td>‘sacred’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>̓xaxáʔ</td>
<td>‘shaman’s guardian spirit’</td>
<td>Boas (1910:601)</td>
</tr>
<tr>
<td>Quinault</td>
<td>̓xasîʔt</td>
<td>‘holy’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>yáx̣an</td>
<td>‘judge’</td>
<td>CWDP (2012)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>?</td>
<td>‘make a choice, pick out, sort’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>yax̣n</td>
<td>‘make a choice; sort’</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>yáxn</td>
<td>‘to judge’</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Quinault</td>
<td>̓cácisxʷu</td>
<td>‘choose’</td>
<td>(ibid.)</td>
</tr>
</tbody>
</table>

The Salish languages north of Upper Chehalis give this root a different sense ‘greasy’, but match CJ in having the vowel /a/ or /ə/ in it (compare PS *nu./a.s ~ ‘greasy; wet’ (Kuipers 2002). One can wonder whether this implies a source for this old CJ word in (a) a Tsamosan variety bordering right on the nas ‘greasy’ / nus ‘wet’ isogloss or (b) Tillamook, little data on which was available to me as I wrote this study. (No Ti cognate was found in searches of Anderson and Harrison 2012.)
<table>
<thead>
<tr>
<th>language</th>
<th>word</th>
<th>gloss</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinook Jargon</td>
<td>ʔʷiʔč</td>
<td>‘hook’</td>
<td>ELjh1942.18.394</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-kik</td>
<td>idem</td>
<td>Boas (1910:601)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>ʔé̓l</td>
<td>‘fishhook’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td></td>
<td>xé̓ns</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td></td>
<td>likʷn</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td></td>
<td>ʔé̓lam̓tn</td>
<td>‘a hook, bait’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td></td>
<td>x̣̓ns</td>
<td>‘fishhook’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td></td>
<td>&lt;ai’kaméltn&gt;</td>
<td>idem</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Quinault</td>
<td>ʔʷiʔč</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ʔúʔč̓x̣</td>
<td>‘bracelet’</td>
<td>ELjh1942.18.408</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;klik’-wal-li&gt;</td>
<td>idem of brass wire</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>ʔóčača</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>sáwč</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td></td>
<td>ʔamákmn</td>
<td>‘bracelet, ring’</td>
<td>(ibid.)</td>
</tr>
<tr>
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<td>ʔúʔč̓x̣</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>ʔóč̓ič̓x̣</td>
<td>‘saw’ (n.)</td>
<td>ELjh1942.18.422</td>
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<td>Chinookan</td>
<td>?</td>
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<td>ʔóč̓ič̓x̣</td>
<td>idem</td>
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<td>idem</td>
<td>Modrow ([1971])</td>
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<td></td>
<td>kʷáyaʔi</td>
<td>idem</td>
<td>(ibid.)</td>
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<td>qʷátš</td>
<td>‘trap’</td>
<td>ELjh1942.18.425</td>
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<td>Chinookan</td>
<td>-qšil</td>
<td>‘fish-trap’</td>
<td>Boas (1910:601)</td>
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<td>qʷátš</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Quinault</td>
<td>idem</td>
<td>idem</td>
<td>Modrow [1971])</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>qʷátxʷ</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Chinook Jargon</td>
<td>sáčsəčl(ʔ)</td>
<td>‘fork’</td>
<td>ELjh1942.18.426</td>
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<td>Chinookan</td>
<td>?</td>
<td></td>
<td></td>
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<td>sáčmln</td>
<td>idem</td>
<td>Kinkade (1991)</td>
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<tr>
<td>Cowlitz</td>
<td>sač̓mn</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>sáčsəčl̓n</td>
<td>idem</td>
<td>Modrow ([1971])</td>
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<tr>
<td>Chinook Jargon</td>
<td>t̓ əʔqíʔ</td>
<td>‘belt’</td>
<td>ELjh1942.18.428</td>
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<tr>
<td>Chinookan</td>
<td>-kʷima</td>
<td>idem</td>
<td>Boas (1910:604)</td>
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<td>Upper Chehalis</td>
<td>t̓ əqíxʷ</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>idem</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>įtíʔ</td>
<td>idem</td>
<td>Modrow ([1971])</td>
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<tr>
<td>Chinook Jargon</td>
<td>q̓ oyáq̓ oyax̣</td>
<td>‘chain’</td>
<td>ELjh1942.18.432</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>q̓ áyc̓ l̓ s</td>
<td>‘roof’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>stokʷiʔ</td>
<td>‘braid (n.)’</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>čanáqa</td>
<td>‘to braid (hair)’</td>
<td>Modrow ([1971])</td>
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<th>Language</th>
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<th>Gloss</th>
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<tbody>
<tr>
<td>Chinook Jargon</td>
<td>caʔstxʷ</td>
<td>‘roof (with shingles)’</td>
<td>ELjh1942.18.435</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;é-puxt&gt;</td>
<td>‘roof tree’</td>
<td>Gibbs (1863b)</td>
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<tr>
<td>Upper Chehalis</td>
<td>sƛ̓ úk̓ ʷaʔxʷ</td>
<td>‘roof’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>x̣átłxʷ</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>cáʔattxʷ</td>
<td>‘shingles’</td>
<td>Modrow ([1971])</td>
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<tr>
<td>Chinook Jargon</td>
<td>&lt;kush’-is&gt;</td>
<td>‘stockings’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>&lt;ta-kétl-pa&gt;</td>
<td>‘shoes’</td>
<td>Gibbs (1863b)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>qʷúpsn</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>idem</td>
<td>idem</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>Quinault</td>
<td>sáʔšn</td>
<td>‘shoe’</td>
<td>Modrow ([1971])</td>
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<th>Language</th>
<th>Word</th>
<th>Gloss</th>
<th>Source</th>
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<tbody>
<tr>
<td>Chinook Jargon</td>
<td>&lt;kwetlh&gt;</td>
<td>‘proud’</td>
<td>Gibbs (1863a)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>yułl</td>
<td>idem</td>
<td>Boas (1910:616)</td>
</tr>
<tr>
<td>łówalmaš</td>
<td>múʔlɔl</td>
<td>idem</td>
<td>ISmk19781128.41</td>
</tr>
<tr>
<td>Quinault</td>
<td>idem</td>
<td>idem</td>
<td>Modrow [1971]</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>cépl</td>
<td>‘proud, feel happy’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>idem</td>
<td>‘proud, stuck-up’</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>PS</td>
<td>*q̓ axw</td>
<td>‘stiffen, harden, freeze’</td>
<td>(Kuipers 2002)</td>
</tr>
<tr>
<td>PS</td>
<td>*q̓ oξw</td>
<td>‘proud’</td>
<td>(ibid.)33</td>
</tr>
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<th>Language</th>
<th>Word</th>
<th>Gloss</th>
<th>Source</th>
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<tbody>
<tr>
<td>Chinook Jargon</td>
<td>&lt;qui’cer&gt;</td>
<td>‘porpoise’</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>-kučkuč</td>
<td>idem</td>
<td>Boas (1910:599)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>qʷsiyuʔ</td>
<td>idem</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Quinault</td>
<td>qáʔluʔnuʔ</td>
<td>idem</td>
<td>Modrow ([1971])</td>
</tr>
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33In the łówalmaš, Quinault, Upper Chehalis and Cowlitz forms, (ə)l is a suffix (analyzed as ‘intensifier’ for łówalmaš by Robertson 2014). The PS root is found in Upper Chehalis meaning ‘freeze’ (Kinkade 1991). The PIS root – perhaps its descendant – is of course not known in the literature on Coast Salish, but its form and semantics support a hypothetical łówalmaš *q̓ (ə)xʷ-(ə)l ‘proud’. See also the footnote at youl in Section 2.2.
The data in this table set up the unusual situation of a pidgin language playing an instrumental role in revitalizing its lexifier. This involves a novel sense of the well-established concept of “pidgins (and creoles) in education”; in creolistics, that label implies conducting formal education in the contact-generated language (cf. Migge et al. 2010, Nero 2012).

The idea at hand should be distinguished as well from the novel proposal to remedy loss of agglutinative/polysynthetic Aboriginal languages by, in effect, teaching only lexical items of the ancestral language and using them in a new, analytical, “pidgin” syntax. That is not an outrageous proposal – Powell has suggested such an approach for Quileute (1973), as have Goodfellow and Alfred for Kwak’wala (2002), and the Aboriginal community of Tasmania, Australia has put this strategy into effect with ‘Palawa Kani’, cf. Crowley (2007:3–5). But our revitalization program operates from the quite different assumption that we will be able to reconstruct ɬəw̓ ál̓ məš morphosyntax. (Robertson 2014 is a first progress report.)

Instead, what Chinook Jargon enables us to do is to start filling gaps in the documentary record of ɬəw̓ ál̓ məš, which is reasonably good but finite since this Salish language has had no native speakers in decades. As we move into the next step of morphologically analyzing the ɬəw̓ ál̓ məš words now collected from CJ, we will have quite a useful resource at hand when it comes to decisions about strengthening the vocabulary of ɬəw̓ ál̓ məš for talking about daily life and the local environment. When there is no known ɬəw̓ ál̓ məš expression for a concept, there will be cases where we can still consider CJ words that are obviously from this language, or those that we feel have a probability of representing the old speech, before being forced into raw coinages, calques on other Tsamosan, or loans. (Given the frequency of mutual borrowing, we can expect that both ɬəw̓ ál̓ məš and Chinook Jargon will in turn provide the same service in any restoration of Shoalwater Lower Chinook.)

The field work done by Dale Kinkade and his student Charles Snow provide

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<tr>
<th>language</th>
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<th>source</th>
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<tbody>
<tr>
<td>Chinook Jargon</td>
<td>&lt;ska-kairk&gt;</td>
<td>'hawk'</td>
<td>Swan (1857)</td>
</tr>
<tr>
<td>Chinookan</td>
<td>ʃniq̓ iq̓ it</td>
<td>idem</td>
<td>Boas (1910:602)</td>
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<td></td>
<td>ɬiti</td>
<td>idem</td>
<td>Boas (1910:598)</td>
</tr>
<tr>
<td></td>
<td>-'lcəp</td>
<td>‘fish-hawk’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td></td>
<td>-'nip̓ ḋ</td>
<td>‘chicken-hawk’</td>
<td>(ibid.)</td>
</tr>
<tr>
<td>Upper Chehalis</td>
<td>sxʷəy̓ á́ʔ</td>
<td>‘hawk’</td>
<td>Kinkade (1991)</td>
</tr>
<tr>
<td>Cowlitz</td>
<td>&lt;&gt;swai'atok&gt;</td>
<td>‘chicken hawk’</td>
<td>Kinkade (2004)</td>
</tr>
<tr>
<td>ɬəw̓ ál̓ məš</td>
<td>sxʷəy̓ ʃá́ʔ</td>
<td>idem</td>
<td>ELjh1942.17.381⁴⁴</td>
</tr>
</tbody>
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³⁴ɬəw̓ ál̓ məš speakers agree that this is the only word for ‘hawk’ that they have. No Salish or Chinookan comparanda have been found, but the CJ word’s form better matches Salish than other languages: it looks like a typical noun with s-NOM and a root in the form either CVCVC or CVC with commonplace reduplication.
a great deal of the crucial data that these discoveries are based on. Their research is an irreplaceable foundation for our present efforts under the Lower Chehalis Language Project to ‘repatriate’ and revitalize ɬəw̓ ál̓ məɬ. Borrowing one of the tribal elders’ fine words in the language, we raise our hands in appreciation and say “χósqəʔ” – thanks!

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New light on pidgin Chinookan:  
with due credit to Horatio Hale’s “esteemed friend” J. K. Townsend

Henry Zenk  
Confederated Tribes of Grand Ronde, Oregon

Abstract: A draft version of the first systematic description of Chinuk Wawa (Chinook Jargon, CW), Horatio Hale’s The “Jargon,” or trade-language of Oregon, shows many credits to the American naturalist John K. Townsend, all however dropped in publication. Townsend is also the source of independent CW and Chinookan word-lists. In contrast to Hale’s and later records, the Townsend word-lists show few CW words of ultimate Nootkan, English, or French origin, instead consisting mostly of locally contributed (primarily Chinookan) words and phrases. A number of the CW and Chinookan phrases provide interesting case-studies in Chinookan morphological simplification: the word-forms are Chinookan, but they are missing supposedly obligatory Chinookan inflections. Townsend’s lists may point to a CW variety much closer to Chinookan than the CW described by Hale, a finding which has implications for assessing the role of Chinookan speakers in co-creating the hybrid CW of Hale and later authorities.

1 Introduction

A draft version of Horatio Hale’s The “Jargon,” or trade-language of Oregon (Hale 1846:635–50, Hale ca. 1841) reveals that this source, the very first comprehensive description of Chinuk Wawa (CW) as a linguistic variety in its own right, drew significantly on contributions from the American naturalist John Kirk Townsend (1809–1851). While those contributions were left wholly unacknowledged in publication, Townsend himself left an independent manuscript word-list identified as follows: “Vocabulary of the language spoken by the Indians in the Columbia & used as the means of communication between them & the Whites. The language as used is much mixed; being composed of Chenook [sic], English, French &c.” This word-list is among a group of word-lists collected by Townsend, including another identified as a “vocabulary of the Chenook [sic] tribe— inhabiting the Columbia River near the sea” (Townsend 1835). Both Hale and Townsend collected their materials in and around Fort Vancouver on the lower Columbia River. Hale’s “Jargon” and Townsend’s “mixed” language are identifiable with the CW of later record; both also collected vocabularies in CW’s principal lexifier language, Chinookan (in Townsend’s terminology: the language of the “Chenook tribe”). While Hale was far and away the more accomplished

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1 This contribution grew out of a presentation by George Lang and myself to a session of the Society for Pidgin and Creole Linguistics, held at the 86th Linguistic Society of America Annual Meeting (Zenk and Lang 2012). The present paper revisits my own take on Townsend’s contribution to the historical record of lower Columbia Chinuk Wawa.
linguist of the two, Townsend’s record is of special interest because it suggests that a more strongly Chinookan-influenced variety of CW co-existed with the more English-friendly variety recorded by Hale. Indeed, Townsend’s record may shed important light on the role of Chinookan speakers in the pidginization of Chinookan—or in other words, on their key role as co-creators of the hybrid medium that is the CW of later nineteenth-century and twentieth-century record.

2 Hale and Townsend

I am not aware of any independent notice of Hale and Townsend’s collaboration, beyond the following passage in Hale’s draft (omitted, along with all other references to Townsend, from the published version):

As a evidence that this Jargon is in reality a regular & permanent language, I may mention that, after my return, I requested of my esteemed friend Mr. J. K. Townsend whose travels in the Oregon Territory have made his character & attainments well known to the public a list of such words as he retained in his memory & the translation of some phrases to compare with those which I had taken down on the spot. The words & phrases with which he furnished me (the former comprising nearly the whole stock of the idiom) were found to agree very closely with those in my vocabulary. The differences of orthography were only such as must necessarily occur in the attempt to reduce foreign language to writing; the words & constructions were precisely the same (Hale ca. 1841:n.p.).

In Hale’s draft version, almost half of his “Jargon” vocabulary items are accompanied by the letter “T” (some letters placed before the item so marked, some placed following in parentheses); and 27 full sentences are explicitly identified as being “from Mr. Townsend.” These “T”-marked and “Townsend”-identified entries moreover include many tokens that Hale did not publish. Of the 27 sentences attributed to Townsend in draft, three appear in identical form in the published sketch, two exhibit near identity to published examples, while two more represent common everyday expressions that could easily have been obtained independently; the remainder are missing. Also left out were many words of Chinookan origin, most of which in turn find matches in Townsend’s 1835 “mixed” language list. The Appendix to this paper lists all the “T”-tagged “Jargon” items in Hale’s ca. 1841 draft, cross-tabulated with matches (where available) from Townsend’s 1835 “mixed” language list.

Most items on Townsend’s latter list appear to be from local languages, especially Chinookan. Although Townsend’s preface points out that the language is “mixed” with English and French, those languages are conspicuous by their near absence in the list itself. And only five items there (Appendix: come, far, many/much, see, understand) can be attributed to Nootka Jargon—items of ultimate Nootkan origin, but known to have been introduced to the lower Columbia by predominantly English-speaking seafaring traders beginning in 1792 (five additional such items marked “T” appear in Hale’s draft: Appendix: bad, fight [also kill], slave, trade, woman). Not only do Chinookan-identifiable items appear alongside of or in place of English, French, and Nootka-Jargon origin
items known from later sources (see Appendix: arm, bone, child, father, fire, God, good, gun, head, house, lake, man, moon, morning, name, nose, salmon, sheep, shoes, star, stone, sun, to-day, wind, wolf, woman, wood); but a number of meanings not met with in later sources show Chinookan terms as well (Appendix: back, breast, cheek, creek, fingers, fox, heaven, knee, many/much, (finger-)nail; plus some meanings showing evidently redundant Chinookan synonyms: bad, bird, dog, like/love, sea).

A plausible explanation for the observed differences between Hale’s and Townsend’s versions of CW is that Hale’s record reflects a variety of the language more associated with the foreign presence at Fort Vancouver; while Townsend’s record reflects a variety of the language more associated with indigenous (primarily Chinookan-speaking) people of the lower Columbia. There is actually some supporting internal evidence for this surmise in the two versions of Hale’s sketch.

Sentences (1) and (2) are from the draft list of sentences labeled “from Mr. Townsend.” Like most of the 27 examples listed, Hale did not publish them. I supply interlinear glosses based on my own familiarity with later sources.  

(1) Kanséct t’kwahli mihtlait kwāpa maika ilēhi extent? house be-there PREP thy place  
source translation: How many houses are in your town?

(2) naika mamuk kikwili naika kēnawi ikata I CAUS-down my every-thing kwāpa naika tīlkommama; PREP my father iāhka mimalust ēnakati klōn ētlā he die ago three day  
source translation: I have buried all my property with my father who died three days ago.

Both of these examples appear to presuppose a Native context. Example (1) would probably only be queried of a Native. And the words given for ‘house’ and for ‘day’ are from Chinookan, where Hale’s published list shows “haus” for the first and “sūn” for the second (Appendix: house, day; also, note that while Hale’s draft glosses both ‘day’ and ‘sun’ as “son, (T otlah)”, his published sketch drops “otlah” for ‘day’ but keeps it as a synonym for ‘sun’). Example (2) appears to show Native cultural content, albeit it may have been supplied by Townsend himself, not directly by a lower Columbia Native.

2 Where source transcriptions are sufficiently accurate, I provide italicized simplified respellings of Chinuk Wawa and Chinookan forms, following (for Chinuk Wawa) Chinuk Wawa Dictionary Project (2012) and (for Chinookan) the Chinookan phonemic alphabet in volume 7 of the Handbook of North American Indians (The Northwest), except that I use χ instead of χ̣ for the uvular fricative.
The following two examples show the same sentence from Hale: (3) as published; (4) as appearing in draft. Conventions as for (1) and (2) above.

(3) nūsaika sāleks masātsi-tilikūm / Klon nūsaika kākshatl
we fight bad-people three we destroy
source translation: We fought the enemy (bad people). We killed three.

(4) nsaika sāleks Masātsi tilīkam, klon nsaika kakcat
we fight bad-people three we destroy
source translation: We fought the Blackfeet & killed three.

Note Hale’s normalized respellings and edited translation in (3). Note also that at the time of Hale’s visit to Fort Vancouver, the Hudson Bay Company was engaged in protracted conflict with the Blackfeet in Montana and Alberta, very far removed from Fort Vancouver on the lower Columbia River. This conflict is far more likely to have involved company employees than local Indians. Hence, the sentence (which may very well represent a local source, since Hale says his examples were written down “as heard from the natives and others”) is much more likely to have been from a fur-company employee than from a local Native.

The following further two examples juxtapose one of the sentences attributed to Townsend in Hale’s draft (5); against a near-match in his published sketch (6):

(5) ìkata pos wēk maika klátawa kākcutl mauitc
what? for not thou go destroy deer
pi mákuk sókwalal.
and buy gun
source translation: Why don’t you go & kill deer & buy a gun?

(6) Ikāta maika wek klátawa kākshatl ina,
*qata thou not go destroy beaver
*how?
alke maika makok múskit?
later thou buy gun
source translation: Why dost thou not go and kill beaver, and buy a gun?
(Hale 1846:645)

It seems unlikely that (5) and (6) were obtained wholly independently; however, they both appear in the draft (in different sections), leaving it uncertain how they are related. The word for ‘gun’ in sentence (5) is from Chinookan, that in sentence (6) is from English (Appendix: gun). Although ‘deer’ in (5) is from Nootka Jargon (vs Chinookan-derived ‘beaver’ in (6)), Townsend (1835) shows the same word not only as “mixed” language, but as “Chenook” language as well. The placement of the negative adverb wek in between subject pronoun and verb in (6) is more characteristic of English-speaking users of the language, versus the more typical indigenous word-order in (5). But what is really telling about these two examples is Hale’s evident misconstrual of “Ikāta” as qata ‘how?, why?’
in (6). It is clear elsewhere from his grammar sketch that Hale confuses ikta ‘what?’ and qata ‘how?, why?’, which are clearly different words in local Native varieties, conflating them to create a single word “Ikāta” translated ‘what?, why?’ (see Appendix: what). It is very unlikely that any local indigenous-language speaker would conflate two such obviously different-sounding words (section 3 below); but an English speaker easily could. Townsend’s “Ikata pus” is a much more plausible interrogative in this context: cf. Grand Ronde CW ikta-pus ‘whatever for?’ (variant of pus-ikta ‘for what?, why?’; Chinuk Wawa Dictionary Project 2012).

Lacking an account of Townsend’s Native sources, and most crucially, how he managed the potentially difficult task of communicating his intentions and working with them, it is by no means clear to what extent his “mixed”-language word-list can be taken as an accurate reflection of register and dialect variation in 1830s-period lower Columbia CW. That there indeed was a contemporaneous “Jargon” variety showing a stronger Chinookan impress than the one described by Hale, is hinted at by Hale himself—in another passage left out of the published sketch.

It should also be noted that the Methodist missionaries established among the Chinooks,—finding the language of that people very difficult of acquisition are accustomed to preach in the Jargon, & have composed hymns in this dialect, which are sung to our common church melodies. As these compositions, however, contain many Chinook words which do not properly belong to the trade-language, they would not be good specimens of its powers (Hale ca. 1841:n. p.).

And is it not unlikely that upon examining his examples from Townsend in detail, Hale revised his initial impression that “the words & phrases with which he furnished me (the former comprising nearly the whole stock of the idiom) were found to agree very closely with those in my vocabulary”? From his point of view, much of Townsend’s “mixed” language would appear, rather, to consist of “Chinook words which do not properly belong to the trade-language.” There may remain yet more to be learned about Townsend’s “mixed” language and Hale’s evident dismissal of it. According to Ives Goddard (personal communication 2011), there are papers from both men at the Library of Congress; while Townsend also has papers at the American Philosophical Society. These all remain to be thoroughly sorted out and evaluated.

3 Chinuk Wawa versus Chinookan

One of the striking features of the CW in historical use between speakers of English and French, on the one hand, and speakers of lower Columbia indigenous languages, on the other, is the prevalence of phonetic distortions in original source-language word-forms, induced by each side’s tendency to bend the opposite side’s phonologies closer to norms more familiar to itself. Hale was the first linguist to comment on this phenomenon. According to him, the phonology of “Jargon” is really a compromise:
As the Jargon is to be spoken by Chinooks, Englishmen, and Frenchmen, so as to be alike easy and intelligible to all, it must admit no sound which cannot be readily pronounced by all three. The gutturals of the Tshinuk (χ and q) are softened to h and k; tχl becomes kl at the beginning of a word, and tl at the end; thus we have tükéh for tʊqέχ, klosh for tylōosh ... (Hale 1846:640).

Hale (ca. 1841) and Townsend (1835) reveal a more nuanced picture of Fort Vancouver-era CW. Not only does Townsend (1835) show more Chinookan content than Hale; he also alludes to (“guttural”, “squeaking” etc.) Chinookan phonetic features. Hale’s “guttural” χ and q both occasionally appear in his ca. 1841 spellings of CW words, where he uses the same phonetic alphabet for CW that he uses for indigenous languages. For example, the phrase spelled “wēkt ikt sîn” (glossed ‘one more day, again one day’) in Hale (1846:642) appears in the draft as “wéxt ixt sôn”. Hale evidently normalized his 1846 spellings to reflect the rule stated above. In lower Columbia Indian CW, words of local indigenous origin retain original “χ” (corresponding to modern Americanist x, χ), “q” (k', q'), and “tχl” (ɬ, ł̣, ł̣'), as the comparisons collated in the Appendix show.

Very odd indeed is Hale’s choice of the item “klōsh ~ tylōosh” (Appendix: good) to illustrate his rule. This could not be a case of Chinooks, Englishmen, and Frenchmen compromising to eliminate Chinookan “gutterals”: the item is from the Nootkan-contributed part of the CW lexicon, known to have been introduced by predominantly English-speaking seafarers. Hale has inadvertently provided evidence that “Chinooks” assimilated an originally indigenous word (cf. Nootka Nootkan Łuł ‘pretty, handsome’), introduced to the lower Columbia in distorted form by English-speaking seafarers (cf. Nootka Jargon kļush ‘good, pretty’), thereby yielding the “nativized” lower Columbia pronunciation recorded by Hale and preserved (in the usual form łuś ‘good’) down to the present day (Chinuk Wawa Dictionary Project 2012:148).

One of the most interesting features of Townsend’s two 1835 lists (including the “Chenook tribe” vocabulary along with the “mixed”-language list: the two are not neatly divisible into distinct linguistic varieties) is its paucity of vocabulary items assignable to Nootka Jargon, English, and French, all well represented in later records of CW. That paucity is also apparent in phrasal constructions appearing in the two lists, because these show no verbal compounds formed using the Nootka-derived auxiliary elements mamuk- ‘cause to be’ and chaku- ‘get to be’ (although the sentences attributed to Townsend by Hale do show some such sentences: e.g. example (2) above). These happen to be two of the most frequently occurring grammatical elements in later records of the language. In a number of the examples discussed in section 5 below, Townsend appears rather to depend on Chinookan models, either attempted complete or reproduced in simplified form—as expanded upon in the next section.

4 Morphologically simplified Chinookan

According to the grammars, there are two basic sentence types in Chinookan:

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• The verbal sentence, consisting minimally of a verbal stem inflected for tense/aspect and person. This minimum core may be expanded through the addition of apposed nouns, particles, and independent pronouns.

• The nominal sentence, consisting minimally of a nominal stem inflected for gender and number. An inflected noun may also be used to explicate a subject or object appearing in a verbal sentence. The number-gender (N/G) and/or possessive (POSS) markers of a noun so used agree with any relevant person markers appearing in the verb.

While a Chinookan verbal sentence is supposed to have an inflected verb, and while Chinookan nouns are supposed to appear invariably inflected, occasional exceptions can be spotted in the Chinookan text corpus, e.g. (pcl: particle; n: noun; v: verb):

(7)  máníx  t-ʔágil  tq’iχ  ṭá-kikal
     (pcl)   (n)     (pcl)   (n)
when a woman loves her husband
     qʷap  a-Ɨ-ú-maqt-χ
     (pcl)   (v)  
     nearly she dies

‘When a woman loves her husband and she is near death’ (respelled from Boas 1894:253.17).

The nouns t-ʔágil and ṭá-kikal show the neuter/collective n/g and poss prefixes t-, ṭa-, used here to refer to an indefinite subject; these agree with the person prefix t- (third person neuter/collective) on the main-clause verb -maqt. The clause segregated on the first line contains a verbal particle (tq’iχ ‘love’), but not an inflected verb. Compare:

(8)  tq’iχ  a-gó-Ɨ-a-χ  ṭ-gá-xiwisx
     (pcl)   (v)     (n)
     like she does (to) it her dog

‘She likes her dog’ (respelled from Boas 1894:43.19).

Here, the auxiliary verb -χ ‘to do, make, be, act, become’ (the usual accompaniment of a verbal particle in all Chinookan dialects) shows the person markers g- (feminine singular subject) and Ɨ- (neuter object), the former agreeing with POSS ga- and the latter with N/G ṭ- on the noun -kiwisx (the remaining prefix positions are occupied by a tense-aspect marker in the first position, and a directive prefix immediately preceding the verb stem). For all I know (not being a Chinookan expert), the fact that tq’iχ occurs in a subordinate clause in (7) may constitute an exception to the rule that a verbal particle must be paired with an inflected verb. But this is beside the point: the subject-object and tense/aspect relations of the clause must still be gathered from the context and the clause’s four content words.
Example (9) shows a noun missing its proper N/G prefix: -kúsait ‘mink’ should have a masculine singular N/G prefix, agreeing with the third-person masculine singular person prefix i- on the verb; χ- is a reflexive prefix.

(9) ig-i-χ-gúti-čk kúsait
he said Mink
‘Mink said, . . .’ (respelled from Boas 1901:23.13).

Compare:

(10) š-χ-i-láit-ix i-kúsait k’a i-ia-lxt
they-two be with him Mink and his older brother
‘There was Mink and his older brother’ (respelled from Boas 1901:103.1).

Here, the person marker š- (dual) is followed by a relational prefix (χ-) and the person marker i- (third person masculine singular, indirect object). i- in turn agrees with the N/G prefix i- on the noun -kusait, and the POSS prefix ia- on the noun -lxt. -lxt is also a masculine noun, hence shows the i- N/G prefix.

The two kinds of simplification illustrated by examples (7) and (9) are both characteristic of the Chinookan-derived portion of the CW lexicon:

- The basic CW lexicon as known from the mid-nineteenth century on includes many Chinookan verbal particles (including the particle tq’ix, tq’ix ‘like, love, want’; frequently heard as tiki). In CW, these function either as full verbs; or as constituents of verbal compounds formed with the Nootka-Jargon derived auxiliaries mamuk- ‘cause to be’ and čaku- ‘get to be’ (some can function as both).
- Chinookan N/G and POSS prefixes are usually dropped in CW when the prefixes occur unstressed in Chinookan; but are usually retained when the prefixes occur stressed in Chinookan.

Examples (11) and (12) show two CW sentences from the Catholic missionary corpus, both with CW words derived from Chinookan particles. Example (13) illustrates the rule for retaining or dropping Chinookan N/G and POSS prefixes in CW.

(11) Tlush nsáïka tıkɛl- iaka
should we love him
‘We should love Him’ (Demers et al. 1871:45; cf. tq’ix/tq’ix above).

(12) Sesu Kli iaka mamuk Maliash pus mamuk kao
Jesus Ch he make marriage to make-tied
il-t man pi il-t tluchmen
one man and one woman
‘Jesus Christ instituted Marriage to join one man and one woman’ (Demers et al. 1871:65; k’au ‘tied’ is from a Chinookan verbal particle).
(13) Chinuk Wawa  Chinookan

\[
\begin{align*}
k'\acute{a}in\acute{u}\tilde{t} & \quad i-k'\acute{a}in\acute{u}\tilde{t} \quad \text{tobacco} \\
\acute{\i}\chi\acute{\u}t & \quad i-\acute{\i}\chi\acute{\u}t \quad \text{black bear} \\
c\acute{u}q & \quad \acute{\i}c\acute{u}q \quad \text{water} \\
ti\acute{\i}xam & \quad ti\acute{x}am \quad \text{people} \\
si\acute{y}\acute{\u}\acute{x}us(t) & \quad \acute{s}-\acute{i}\acute{\u}-\chi\acute{u}\acute{\u}st \text{ (his...)} \quad \text{eyes}
\end{align*}
\]

5 Evidence of simplified Chinookan in Townsend’s “mixed” language and “Chenook tribe” word-lists

I was able to make varying degrees of sense of about half of the phrases appearing in Townsend’s two lists (the mixed language list and the Chenook list). No doubt, more could be done with the remainder, although it is difficult to imagine all of these examples yielding up their secrets—Townsend’s handwriting is not easy to make out; and as a glance at his spellings reproduced below will show, he was no systematic linguist.

Examples (14)–(17) show word forms and sentence patterns identical to those of the CW of later record, as shown by the accompanying CW comparisons (spellings and glosses adapted from Chinuk Wawa Dictionary Project 2012). All of these are from the “mixed” language list. In addition, the 27 phrases and sentences attributed to Townsend in Hale (ca. 1841) fall into this category: see examples (1), (2), (5) above.

(14) nika cumatax mica  
I understand you.

(cf. CW:)

nayka  komtaks  mayka
I understand thee

(15) Icita mica nonnaneech  
what do you see?

(cf. CW:)

ikt\acute{a}  maika  (na)nani\acute{c}
what? thou see

(16) nika hiass tekay  
I desire it very much

(cf. CW:)

naika  haya\acute{s}  tiki (var. of tq’i\chi)
I greatly want

(17) nika tekay nonnaneech yaka  
I want to see it

(cf. CW:)

naika  tiki  (na)nani\acute{c}  yaka
I want see him/her/it
Examples (18)–(20), although they too are from the “mixed”-language list, suggest models with Chinookan inflected verbs, albeit less than clearly reproduced. The surmise that Chinookan inflected verbs are present is supported with reference to accompanying examples from the Chinookan text corpus, parsed following Boas (1911), Dyk (1933), Hymes (1955). I make no claim to being a Chinookan expert, hence, refrain from trying to provide correct Chinookan glosses corresponding to Townsend’s spellings.

(18) Kagh egh tenneagho love

(cf. Chinookan:)
tq’ix n-t-u-χ
love I do them
‘I love them’ (respelled from Boas 1901:33.14-14)

(literally, ‘love I-them-DIR-do’; “Kagh egh”, which Townsend notes is “very guttural,” is apparently from another Chinookan verbal particle: cf. Wishram k’axš ‘to desire’).

(19) ’anacooskaiwal to walk

(cf. Chinookan:)
n-g-u-žgíwa-l
‘I am walking about’ (respelled from Sapir 1909:18.13-14).

(20) anācatte you’bukti he is killed

(cf. Chinookan:)
anqadi(x) ‘long ago’
i-u-(w)áq-ux
‘He is killed’ (Dyk 1933:14).

The “Chenook” list shows more such examples. Of about 20 such examples that probably represent attempted Chinookan (or Townsend’s attempt to transcribe Chinookan), I find two suggesting ready comparison with examples from the Chinookan corpus. Again, a more thorough examination should yield better results.

(21) anyouqualle I know / takanyouqualle I know that

(cf. Chinookan:)
i-n-t-qəl-kəl
‘I saw (became aware of) it’ (stem -kəl) (respelled from Boas 1901:13.9).
š-gə-n-u-kəl
‘They know me’ (respelled from Boas 1901:117.6).
(22) unchala[m]ach to eat

(cf. Chinookan:)
i-m-χałm-ú-χ
‘You eat (this)!’ (respelled from Boas 1901:249.4).
a-n-a-n-χałm-ú-χu-m-a
‘I will eat it’ (respelled from Boas 1901:99.5).

And of particular interest (as suggesting a simplified or “pidgin” Chinookan), both lists show phrases with Chinookan word-forms, but minus inflections supposed to be obligatory in Chinookan. Examples (23)–(26) are from the “mixed”-language list; examples (27)–(30) are from the “Chenook”-language list. In order not to prejudge these either as incorrect Chinookan or as correct CW, I refrain from citing phrasal comparisons from either language; rather, I simply list matching or near matching word-forms from each.

(23) anācatte naicatlcup I have killed him

(cf. Chinookan:)
anqadi(x) ‘long ago’
aika ‘1 SG’ (indep prn)
ƛq’up ‘cut’ (verbal pcl)
ƛk’up ‘burst’ (verbal pcl)
λgup ‘shoot’ (verbal pcl)

(cf. CW:)
anqati ‘long ago; past’
aika ‘1 SG’
ƛq’ up ‘cut’
ƛk’ up ‘burst’

(24) maica Kagh egh You love

(cf. Chinookan:)
maika ‘2 SG’ (indep prn)
k’axš ‘desire’ (verbal pcl)

(cf. CW:)
maika ‘2 SG’

(25) anācatta Kagh egh I have loved

(cf. Chinookan:)
anqadi(x) ‘long ago’
k’axš ‘desire’ (verbal pcl)

(cf. CW:)
anqati ‘long ago; past’

(26) alta nika kipallaolal I now talk

(cf. Chinookan:)
alta ‘now’ (adverbial pcl)
aika ‘1 SG’ (indep prn)
i-xá-l-p’alawola ‘he is talking’

(cf. CW:)
alta ‘now, then’
aika ‘1 SG’
Going by the criteria set forth in the Chinookan grammars: (23)–(25) (and probably, (27)) should have inflected verbs; what may be a Chinookan gerund in (26) (-ki- is an intransitivizing prefix used to form gerunds) appears to lack a subject prefix, and what appears to be an inflected noun in (28) does not agree with the subject pronoun to which it is paired; ‘good’ in (29–30) could be a noun, in which case it should be inflected, or a verb, in which case it needs an accompanying inflected verb (doubtfully, it may have one in (30)).

6 Concluding note

Some of Townsend’s “mixed”-language sentences are clearly identifiable as CW, while some of his “Chenook” sentences at least suggest (without necessarily exemplifying) “good” Chinookan. At the same time, the “Chenook” list also shows examples of CW-looking constructions lacking obligatory Chinookan

\[3\] Appearing only in some early word-lists; not part of CW as spoken from the mid-nineteenth century on.
inflections; while the “mixed”-language list shows examples of Chinookan-looking inflections not later met with in CW. In any case, Chinookan inflections are either badly garbled by Townsend, who appears not to have had a clue to their grammatical functions; or they are dropped altogether. Assuming that Townsend was a reasonably apt transcriber, the dropping of Chinookan inflections in most if not all of his examples is most likely to be attributed to his Native source or sources. Presumably, their motivation in doing so was to produce a simplified Chinookan, one that they thought could be more easily understood by a foreigner than “straight” Chinookan would be. What is especially interesting is that their strategies for doing so, insofar as revealed by these examples (which, notwithstanding their fragmentary nature, do add significantly to the very slight previous historical record of early cross-language communication on the lower Columbia) result in word-orders suggestive of the CW of late-nineteenth and twentieth-century record—pronoun-subject preceding an active verb: (23), (24), (26); pronoun subject following a predicate-adjective (or predicate-noun): (28) and (29), and probably, (30); adverbial elements usually coming clause-first: (23), (26), (27), (29) (CW Dictionary Project 2012:30–51).

No doubt, the CW word-orders evident in Townsend’s examples could also reflect, at least to some extent, his Native source(s)’ familiarity with the CW of the period. But as I have noted, expected Chinookan inflections are occasionally dropped even in Chinookan, judging by examples in the Chinookan text corpus. While CW and Chinookan are clearly very different orders of language, the “line” between them is not necessarily always sharply etched. This is especially so in the earliest sources documenting both varieties—among which Townsend’s vocabulary receives attention for the first time here.

It is this fuzzy line between Chinookan and CW revealed by this and other early sources, taken in conjunction with the largely intact Chinookan word-forms characterizing the CW of later record, that has led me to my own perspective on the much disputed genesis of CW (see Thomason 1983, Samar in 1986, 1996, Grant 1996, Lang 2008:55–121 for other perspectives). This perspective is summed up in the following passage from a contribution by Tony Johnson and myself to a recent collection of essays on Chinookan culture and history.

One striking feature of Chinuk Wawa is that the part of its basic lexicon derived from lower Columbia languages, comprising at least half of the 500–700 simple (that is, noncompounded) words in most frequent use on the lower river, includes many words derived from Chinookan pronouns, nouns, and particles, but comparatively speaking hardly any derived from Chinookan inflected verbs . . . . Any hypothesis concerning Chinuk Wawa’s origin and early development must account for these facts of linguistic form, which taken together point to a systematic avoidance of Chinookan morphological complexity. Note that while the Chinookan morphology of Chinuk Wawa’s large Chinookan contribution is unmistakably simplified, it is by no means mangled—as we might expect had it originated with foreigners’ reproductions of Chinookan words whose internal constituencies they did not comprehend. . . . [At the same time,] lower Columbia Chinuk Wawa in its fully crystallized historical form . . . owes much to the early American and British seafarers. It was they who contributed the Nootkan-
derived auxiliaries mamuk- (‘make, do, cause to be’) and chagu- (‘become, get to be’), which Chinookans learned to use in place of the Chinookan inflected auxiliary verb -x̣ [-χ] (‘make, do, become’ . . .). Substituting Nootka Jargon mamuk- and chagu- for Chinookan -x̣ would have removed much of the necessity for using Chinookan verbs and associated nominal prefixes, setting the stage for a Chinookan-derived lexicon in which verbs and nominal agreement prefixes were simply avoided. Chinookans could have drawn upon a pre-existing lower Columbia pidgin, or upon Chinookan foreigner-talk, or upon both, to constitute such a lexicon.

For all their reputed difficulty, Chinookan languages also feature a lexicon distinguished by an exceptionally large number of words of simple morphological form—in particular, its plethora of uninflected (or minimally inflected . . .) particles, many of which in turn convey onomatopoeic or semi-onomatopoeic sound-associations . . . . While Chinookan clearly deserves its historical reputation for difficulty, it also comes with a considerable repertoire of built-in means for its own simplification. It is indeed not impossible that both of these aspects of Chinookan are rooted in the historical position of Chinookans as regional trade middlemen. Further linguistic, socio-historical, and even archeological investigation (insofar as it helps to document the extent and intensity of aboriginal trade) may yet further clarify the disputed genesis and early development of Chinuk Wawa (Zenk and Johnson 2013:279–82).

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### Appendix

“Jargon” items in Hale (ca. 1841) attributed to “T” (Townsend); with matches (where available) from Townsend’s (1835) “mixed” language list

<table>
<thead>
<tr>
<th>Gloss/Spelling in Hale 1846</th>
<th>Hale ca. 1841 “mixed” language</th>
<th>Townsend’s (1835) “mixed” language</th>
<th>CW (&lt;English, Eng) (&lt;French, Fr) (&lt;Nookta Jarg, NJ) (&lt;Salish, S))</th>
<th>&lt;Chinookan (Chn): LC: Lower Ch KC: Kathlamet Ch UC: Upper Ch</th>
</tr>
</thead>
<tbody>
<tr>
<td>about, concerning / kwapa</td>
<td>kuapá, kopá (T kwāpa)</td>
<td>kąpą, kapą; kupa, kupá</td>
<td>KC, UC kupá, kʷábá (there)</td>
<td></td>
</tr>
<tr>
<td>arm / limán</td>
<td>T itcalikt</td>
<td>itch a licht</td>
<td>KC i-čá-χu (my ...); LC i-čá-putik (her) forearms</td>
<td></td>
</tr>
<tr>
<td>back / *</td>
<td>T ítčakúst</td>
<td>itch a coosh, Kiácow</td>
<td>KC i-id-kučx (his ...; i-ča-... my ...); i-čí-gal (my backbone)</td>
<td></td>
</tr>
<tr>
<td>bad / masátsi, mashátshi; píshak, pěshak</td>
<td>msatsi, masátcì; (T masátsi, pí’čak)</td>
<td>maʃatsee, etármalee</td>
<td>maśáčí (bad, mean); pišák (bad, rough) (&lt;NJ)</td>
<td></td>
</tr>
<tr>
<td>beads / kamósük</td>
<td>kamósük (T kamúšak)</td>
<td>kámúšak</td>
<td>LC t-kamúšak</td>
<td></td>
</tr>
<tr>
<td>big-belly / *</td>
<td>iákwatin</td>
<td>qua’ttin (belly)</td>
<td>k’wətín</td>
<td></td>
</tr>
<tr>
<td>bird / kalákala</td>
<td>kalákala (T)</td>
<td>Cal lakala; Skillalocose (pl)</td>
<td>cf Chn -ga (to fly), -galal (flying); LC ɬ-lála-x uk (birds)</td>
<td></td>
</tr>
<tr>
<td>black / kláí</td>
<td>T kláil</td>
<td>’Klai-ail</td>
<td>LC ɬ’il, KC, UC ɬ’il</td>
<td></td>
</tr>
<tr>
<td>blue / *</td>
<td>kli’il (T spok)</td>
<td>spok (blue)</td>
<td>LC ɬ’il; Chn špuk, špok</td>
<td></td>
</tr>
<tr>
<td>gloss/spelling in Hale 1846 (*only in Hale ca. 1841)</td>
<td>Hale ca. 1841</td>
<td>Townsend’s (1835) “mixed” language</td>
<td>CW (&lt;English, Eng) (&lt;French, Fr) (&lt;Nootka Jarg, NJ) (&lt;Salish, S)</td>
<td>&lt;Chinookan (Chn): LC:Lower Ch) KC:Kathlamet Ch UC:Upper Ch</td>
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<td>-----------------------------------------------------</td>
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<td>---------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>bone / stōn</td>
<td>stōne-sic (T iōtso)</td>
<td>Eotso</td>
<td>sōn (&lt;Eng)</td>
<td>KC i-č-q’uču (his ...) LC ú-uču (shell)</td>
</tr>
<tr>
<td>both / kanamäkst</td>
<td>kanimäkst</td>
<td>kanumäkwst</td>
<td>Chn kanamäkwst</td>
<td></td>
</tr>
<tr>
<td>bow / ūpítlki, ōpilki</td>
<td>ūpítlki (T ūpítlki)</td>
<td>ūpλ’iki</td>
<td>LC ú-č-λ’iki</td>
<td></td>
</tr>
<tr>
<td>brandy / ōlapitski-tsōk</td>
<td>ūlapitski tsok</td>
<td>(see fire, water)</td>
<td>(see fire, water)</td>
<td></td>
</tr>
<tr>
<td>bread / sāpelil</td>
<td>sāpelil (T sāpelil)</td>
<td>Shappleel</td>
<td>UC a-sábbal</td>
<td></td>
</tr>
<tr>
<td>breast / *</td>
<td>s̄k̄l̄om</td>
<td>quin’n̄m</td>
<td>cf? KC č-č’u-č’-un-pa (on his clavicles)</td>
<td></td>
</tr>
<tr>
<td>broken, thrown down / *</td>
<td>mac</td>
<td>Maush (to cast away)</td>
<td>maš</td>
<td></td>
</tr>
<tr>
<td>brother (older) / kāpo, kāpųhu</td>
<td>kāpo, kāpxu, (T kaffo)</td>
<td>Capho (brother)</td>
<td>kāpxu (o. sibling) LC kāpxu (o. sibling!)</td>
<td></td>
</tr>
<tr>
<td>brother (younger) / au</td>
<td>au (T)</td>
<td>Aw</td>
<td>LC au (y bro!)</td>
<td></td>
</tr>
<tr>
<td>canoe / kānēm</td>
<td>kānēm (T kānēm)</td>
<td>K’n̄nm</td>
<td>LC i-kānēm</td>
<td></td>
</tr>
<tr>
<td>cattle / músmus</td>
<td>músmus (T)</td>
<td>Moos-moos</td>
<td>músmus</td>
<td></td>
</tr>
</tbody>
</table>

¹ The KC and LC stems appear to be related: KC -q’uču; LC -(ʔ)uču. LC -(ʔ)uču is ‘shell’ with feminine u-; quite likely, it was ‘bone’ with masculine i-, hence paralleling the KC.
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<tbody>
<tr>
<td>cheek / *</td>
<td>T melóqtan</td>
<td>Mel’logh’tan</td>
<td>UC a-ia-mlqʷtan (his...)</td>
<td></td>
</tr>
<tr>
<td>child / tánas</td>
<td>T atlkáskas</td>
<td>’Atlcaschas (Child), Kas Kas (small boy)</td>
<td>但不限 (&lt;NJ)</td>
<td>UC ḩl-k’ášk’aš (baby), i-k’ášk’aš (boy)</td>
</tr>
<tr>
<td>chin / *</td>
<td>T skánakwást</td>
<td>Scowaqwast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cloth / pasēse</td>
<td>pacíci, pasēse, (T pasísi)</td>
<td>pasísi</td>
<td></td>
<td>LC ḩ-pašíši</td>
</tr>
<tr>
<td>come / tshako</td>
<td>tcako (T)</td>
<td>chako</td>
<td></td>
<td></td>
</tr>
<tr>
<td>creek / *</td>
<td>T éqel</td>
<td>ek’el</td>
<td></td>
<td>LC ḩ-qhit, UC wá-qat</td>
</tr>
<tr>
<td>dark / pōlakli, klāil</td>
<td>klāil (T pūlakli)</td>
<td>(see black, night)</td>
<td>(see black, night)</td>
<td>(see black, night)</td>
</tr>
<tr>
<td>day / sūn</td>
<td>son, (T otlah)</td>
<td>(see sun)</td>
<td></td>
<td>(see sun)</td>
</tr>
<tr>
<td>dog / kāmūks</td>
<td>T kāmoks</td>
<td>Kahmux, ’ehcutcut, ’Kaiwis</td>
<td>kāmukš</td>
<td>LC u-gú-xamukš (my...), ḩ-kwúšx; KC i-k’útk ʊt</td>
</tr>
<tr>
<td>earth / iléhi, ñlahi</td>
<td>ñlahi, iléhi (T)</td>
<td>Ailaigh hè</td>
<td>ñlīʔi, ñlīʔi</td>
<td>LC ḩ-li, i, KC i-lx, i-lix, UC wi-lx</td>
</tr>
<tr>
<td>eat / mākamak</td>
<td>mākamak, (T mókamok)</td>
<td>mākmak</td>
<td></td>
<td>UC májmaq ‘gulping down’</td>
</tr>
<tr>
<td>elk / mōlak</td>
<td>mōlak, (T molak)</td>
<td>mūlak</td>
<td></td>
<td>Chn i-mūlak</td>
</tr>
<tr>
<td>eye / siáhos</td>
<td>siáhust, siáhos, (T? siáhost)</td>
<td>Ceāghhoost</td>
<td>sityáxus(t)</td>
<td>LC, KC s-íá-χust, UC is-íá-xus (his...)</td>
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<td>---------------------------------------------------</td>
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<td>---------------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>far / saiā</td>
<td>saia, saiā (T)</td>
<td>Sia</td>
<td>sayā (&lt;NJ)</td>
<td></td>
</tr>
<tr>
<td>father / pāpa, ōluman, tlilikūm-māma</td>
<td>pāpa, ōluman,  (T tilkom-mama) ti’cummama, stl’bmama</td>
<td>papā (&lt;Fr), úlman (&lt;Eng)</td>
<td>LC ɬə-mi-māma (your ...; tilxam: see people)</td>
<td></td>
</tr>
<tr>
<td>fearful, strong / *</td>
<td>skokóm, (T skukūm)</td>
<td>s̱ákm (strong), s̱̱ukūm (fearful) (? &lt;S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fight / saleks, kākshatl</td>
<td>kākcatl, (T kakcwatl)</td>
<td>s̱̱āiks (angry); ḵ̱āḵ̱at (whip) (&lt;NJ)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fingers / *</td>
<td>T klokcín</td>
<td>Kluksin</td>
<td>LC ɬə-kši (a ...); UC iɬ-łi-mi-kši (your hand)</td>
<td></td>
</tr>
<tr>
<td>fire / paia</td>
<td>paía, (T ɬ̱ḻapitski)</td>
<td>Ool’pitskee</td>
<td>páya (&lt;Eng); úlipki</td>
<td>LC ɬə-ɬ̱p̱čkix</td>
</tr>
<tr>
<td>food / mākamak</td>
<td>mákamak, (T mókamok)</td>
<td>(see eat)</td>
<td>(see eat)</td>
<td></td>
</tr>
<tr>
<td>foolish / pilton</td>
<td>pilton (T)</td>
<td>p̱̱ḻ̱dan (&lt;Eng)²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fox / *</td>
<td>T tiskÁukau</td>
<td>UC (i-)t’isqauqau</td>
<td></td>
<td></td>
</tr>
<tr>
<td>friends / siks</td>
<td>siks, (T ciks)</td>
<td>šıkš</td>
<td>LC i-šıkš, šıkš!</td>
<td></td>
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² Supposed to be derived from the name of one of the American sea captains who traded at the mouth of the Columbia River. Apparently original to Chinuk Wawa.
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<td>God / sákali-taie</td>
<td>tománuas, sakale-sahale-taie, (T kánům)</td>
<td>Kannům</td>
<td>t’ómánwas (spirit-power), sxáli-tají (God), ikánam (myth)</td>
<td>LC i-t’amánwaš, sáxali (high; tayi ‘chief ‘&lt; NJ), ikánam (myth)</td>
</tr>
<tr>
<td>good / klósh</td>
<td>klós, kloc, (T itókta)</td>
<td>Etókteh</td>
<td>tłuš (&lt;NJ); t’ukti</td>
<td>Chn i-t’úkdi</td>
</tr>
<tr>
<td>grand-mother /*</td>
<td>tcits, (T báakáka)</td>
<td></td>
<td>čič (&lt;S)</td>
<td>LC gák’i (grmother!), u-mí-k’i (your...)</td>
</tr>
<tr>
<td>green / pitshish</td>
<td>pitcíx, (T pitcíc)</td>
<td>pitchish</td>
<td>pčíx</td>
<td>Chn pčíx</td>
</tr>
<tr>
<td>gun / můskit</td>
<td>móskit, (T sókwalal)</td>
<td>Sukwallal</td>
<td>móskit (&lt;Eng), sőkwalala</td>
<td>LC šó-qʷalala</td>
</tr>
<tr>
<td>head / latět</td>
<td>latět, (T itsóktok)</td>
<td></td>
<td>latět (&lt;Fr)</td>
<td>LC i-qťq (a ...), í-ch-ąqťq (her..., my...)</td>
</tr>
<tr>
<td>heaven /*</td>
<td>T kúsah</td>
<td>Koosah</td>
<td>űšax (sky)</td>
<td>LC i-giššax (sky)</td>
</tr>
<tr>
<td>here (this)</td>
<td>ókok, (T ųukuk)</td>
<td>Oocook (here)</td>
<td>(see that, this)</td>
<td>(see that, this)</td>
</tr>
<tr>
<td>house / haus</td>
<td>haus, (T tkwá’hli)</td>
<td>T’qaghle</td>
<td>haus</td>
<td>KC t-qůlti, UC it-įʷḤi</td>
</tr>
<tr>
<td>how much, how many / kántshiak, kántseki</td>
<td>kántciak, kántci, (T kěnsec[t])</td>
<td></td>
<td>qónči(č)</td>
<td>LC qánčiχ, UC qánčiχ</td>
</tr>
<tr>
<td>hungry / olo</td>
<td>ólo, (T ųlu)</td>
<td>Olo</td>
<td>ųlu</td>
<td>LC ú-lu</td>
</tr>
<tr>
<td>ice (“heavy water”) / tūl-tsok</td>
<td>T tiltsok</td>
<td></td>
<td>(see tired, water)</td>
<td>(see tired, water)</td>
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</tr>
<tr>
<td>kill / kākshatl, māmuk mēmelust</td>
<td>kākcatl, (T kākcatl), T māmuk mēmelust</td>
<td>kākšat (whip) (NJ), māmuk- mēmelust (make-dead = ‘kill’: see make)</td>
<td>LC t-mēmelust (dead)</td>
<td></td>
</tr>
<tr>
<td>knee / *</td>
<td>T kəqʔol</td>
<td>Kogh’ul</td>
<td>LC u-iá-q’uχ̑l (his...)</td>
<td></td>
</tr>
<tr>
<td>knife / ēpūtsah</td>
<td>ēpitsa</td>
<td>opitsāgh, okewekkah</td>
<td>LC ēpcaχ; u-qiiwíqí</td>
<td></td>
</tr>
<tr>
<td>lake / lēk</td>
<td>lēk, (T ikakōtli)</td>
<td>ekacōtlee</td>
<td>LC i-kak’uχtix</td>
<td></td>
</tr>
<tr>
<td>land / ilēhi</td>
<td>T ilēhi</td>
<td>(see earth)</td>
<td>(see earth)</td>
<td></td>
</tr>
<tr>
<td>lie (deceive) / kliminékwit</td>
<td>kliminékwit, (T kapcuálra)</td>
<td>Klaminihoot (a lie), Capsu-allah (to steal)</td>
<td>LC, KC i-ƛ’ mínxut (a lie)</td>
<td></td>
</tr>
<tr>
<td>lightning (“fire above”) / sāhali-olapitski</td>
<td>T sāhali əlqapitski</td>
<td>(see fire, God)</td>
<td>(see fire, God)</td>
<td></td>
</tr>
<tr>
<td>like, love / tūkēh</td>
<td>tokēh (T kāqaq)</td>
<td>tekay (want), ’Kagh egh (love; “very guttural”)</td>
<td>Chn tq’iχ, tiki</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>UC k’āx̑ (desire); (cf ? S ʔaʔ-á (love [stem])</td>
<td></td>
</tr>
<tr>
<td>long ago / *</td>
<td>ánkati, (T ʔa’nakūti)</td>
<td>áŋqati</td>
<td>LC áŋqati</td>
<td></td>
</tr>
<tr>
<td>make / māmuk, māmok</td>
<td>māmok, (T māmuk)</td>
<td>māmuk (&lt;NJ)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>man / man</td>
<td>man, (T skotlēlekum) ’Scōtlailecum</td>
<td>man (&lt;Eng)</td>
<td>LC t-γułdxəmk (person)</td>
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<td>---</td>
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<tr>
<td>many, much / haiu</td>
<td>haíu, haió (T)</td>
<td>Ogohoway (much), hyo (many)</td>
<td>hayú (&lt;NJ)</td>
<td>LC úxuit (much)</td>
</tr>
<tr>
<td>moon / mūn</td>
<td>mún, (T uktlémn)</td>
<td>Ooktlemin</td>
<td>mun (&lt; Eng)</td>
<td>LC u-kłomín</td>
</tr>
<tr>
<td>morning / tánas-sún</td>
<td>tànas-son (T etcókti)</td>
<td>tánas-sán (little-sun = ‘AM’; &lt; NJ + Eng)</td>
<td>KC i-ga-čúktix (early AM)</td>
<td></td>
</tr>
<tr>
<td>mother / náa</td>
<td>náa, náhka, (T ná)</td>
<td></td>
<td>LC t-gá-naa (her...); t-iá-naa (his...)</td>
<td></td>
</tr>
<tr>
<td>nail (finger) / *</td>
<td>T klaqwärte</td>
<td>’Klgwhartee (nails)</td>
<td>UC a-łhwádi</td>
<td></td>
</tr>
<tr>
<td>name / iáhāle, nēm</td>
<td>iáhale (T)</td>
<td>nim (&lt; Eng); yáxal(i)</td>
<td>LC i-iá-χal, KC, UC i-iá-χliw (his...)</td>
<td></td>
</tr>
<tr>
<td>night / pōlakli, pūlakli</td>
<td>pólakle, (T pūlakli)</td>
<td>Pōlaklee</td>
<td>pūlakli</td>
<td>KC pūlakli (at ...)</td>
</tr>
<tr>
<td>none / hēlo, hīlu</td>
<td>hīlu, helo, (T helu)</td>
<td>haloo</td>
<td>hīlu³</td>
<td></td>
</tr>
<tr>
<td>nose / nōs</td>
<td>nōs, (T itsókotc)</td>
<td>nus (&lt;Eng)</td>
<td>KC i-č-kti (my...), UC i-ia-kč (his...)</td>
<td></td>
</tr>
<tr>
<td>people / tilikūm</td>
<td>T tilikūm</td>
<td>T’hlicum</td>
<td>tlilxam (person, people)</td>
<td>LC t-ilxam, t-iłxam (people)</td>
</tr>
<tr>
<td>perhaps / klunás</td>
<td>klonās, (T klunās)</td>
<td>Klu’nass</td>
<td>λ’únas</td>
<td>LC λúnas</td>
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³ Ross Clark (personal communication 2010) has presented evidence for an NJ origin, ultimately from Hajda hiˑluˑ ‘be finished’.
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<td>potatoes / *</td>
<td>T pasaíuks wápuatu</td>
<td>pasáyuks (French, White); wáptu (potatoes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>powder, gun / pólali, púlali</td>
<td>pólali, (T púlali)</td>
<td>pólali (?&lt;Fr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>property, goods / íkāta, ikta</td>
<td>íkta, (T íkata)</td>
<td>íkda (thing)</td>
<td>LC í-kta (thing)</td>
<td></td>
</tr>
<tr>
<td>quick / *</td>
<td>haíak, (T haiók)</td>
<td>áyaq, ayáq</td>
<td>Chn áyaq, ayáq</td>
<td></td>
</tr>
<tr>
<td>river / ēmatl, aibalt</td>
<td>Tíbalt</td>
<td>aibalt</td>
<td>LC, KC í-mał (river, bay, ocean)</td>
<td></td>
</tr>
<tr>
<td>salmon / sámūn</td>
<td>sámūn, (T kwánaq)</td>
<td>’quanaagh</td>
<td>sámoñ (&lt;Eng)</td>
<td>LC i-gwánat</td>
</tr>
<tr>
<td>sea / wíkōma, haias tsok</td>
<td>T wíkōma</td>
<td>Wecōma</td>
<td>sálcw* (&lt;Eng + Chn caq*: water)</td>
<td>cf LC wíkwa, wígwa (ocean; -ma suffix?)</td>
</tr>
<tr>
<td>see / nánānitsh, nānitsh</td>
<td>nánitc, (T nánanitc)</td>
<td>nonnaneech</td>
<td>(na)nāníč (&lt;NJ)</td>
<td></td>
</tr>
<tr>
<td>sheep / lemutón</td>
<td>mutan, lemutón, (T ásínkwa)</td>
<td>límoʔo (&lt;Fr)</td>
<td>cf ? KC í-šīxq (mt. goat)</td>
<td></td>
</tr>
<tr>
<td>shoes / shūs</td>
<td>cūž, stíkcuz, (T kittélpọ)</td>
<td>’K’tl’ph</td>
<td>šus (&lt;Eng); tqípa</td>
<td>LC dó-ğ̱pa (moccasins), UC id-íá-ğ̱ba (his...)</td>
</tr>
</tbody>
</table>

4 Of uncertain origin; perhaps from Kalapuyan -pdu, -pduʔ ‘Sagittaria latifolia’ (also known as “Indian potato”), with the Upper Chinook nominal prefix wa-. pasaíuks is for CW pasáyuks ‘French’ (also sometimes used for ‘White’).
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<td>sister (older) / likpō, likpūhū⁵</td>
<td>kāpo, (T āts)</td>
<td>K’p’ho (girl)</td>
<td>kāpxu (o. sibling) ac (y. sister; sister)</td>
<td>(see brother—older)</td>
</tr>
<tr>
<td>sister (younger) / ats</td>
<td>ao, (T likpho)</td>
<td>K’p’ho (girl)</td>
<td>ac (y. sister; sister), au (y. bro.; bro.)</td>
<td>(see brother—younger)</td>
</tr>
<tr>
<td>sibling (older) / *</td>
<td>kapo, kapho</td>
<td>Capho (brother)</td>
<td>kāpxu (o. sibling)</td>
<td>LC kāpxu (o. sibling!)</td>
</tr>
<tr>
<td>slave / mítçimimos</td>
<td>mítçimimos &quot;(?)&quot;, ilaéti, (T mítçemis)</td>
<td>misčimis (&lt;NJ); iláťix</td>
<td>Chn i-láťix (male slave)</td>
<td></td>
</tr>
<tr>
<td>sleep / mósúm, músom</td>
<td>mosóm, musóm (T)</td>
<td>moosum</td>
<td>músum (&lt;S)</td>
<td></td>
</tr>
<tr>
<td>so, thus / kákwa</td>
<td>kákwa, kwákwa, (T kěkwa)</td>
<td></td>
<td>kákwa (&lt;NJ)</td>
<td></td>
</tr>
<tr>
<td>star / títlil, tshiltshil</td>
<td>títlil, tcítlčil, (T koqkáqnap)</td>
<td>K’ghkaghnap</td>
<td>čílčil,</td>
<td>KC t-q’ixánap, UC i-k’áxanapx</td>
</tr>
<tr>
<td>stone / stōn</td>
<td>stón, (T k’náks)</td>
<td>K’náaks</td>
<td>stón (&lt;Eng)</td>
<td>LC t-qánakš, UC i-qánakš</td>
</tr>
<tr>
<td>stop! / *</td>
<td>alke! &quot;(?)&quot;, (T kwápot)</td>
<td>álgi (later), kápit (stop)</td>
<td>Chn álgi (later), LC kapít, kupít (enough)</td>
<td></td>
</tr>
<tr>
<td>strong / skókóm, skukúm</td>
<td>skókóm, (T skuküm)</td>
<td>slájkum (strong) (?&lt;S)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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⁵ I was unable to find local indigenous-language matches for the spellings likpō, likpūhū, (and likpho, attributed to T: see sister (older)). Gibbs (1863:15) explains them as “probably a corruption of KUP-HO [CW/Chn kāpxu: see brother (older)].”
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>sun / sūn, ōtlah</td>
<td>son, (T ōtlah)</td>
<td>ōtlagh “(tl very gutteral &amp; squeaking)”</td>
<td>san</td>
<td>LC u-ʔúłəx</td>
</tr>
<tr>
<td>surely / nawítkə</td>
<td>nawítkə, nawitika (T)</td>
<td></td>
<td>nawítka</td>
<td>LC náwitka</td>
</tr>
<tr>
<td>talk / wāwa</td>
<td>T wāwa</td>
<td>Kipallaolal</td>
<td>wāwa</td>
<td>KC, UC wáwa (talking—pcl), a-wáwa (speech—n);&lt;sup&gt;6&lt;/sup&gt; UC uxʷip’aláwəla (talking)</td>
</tr>
<tr>
<td>teeth / litān</td>
<td>lidáŋ, (T yínis)</td>
<td>Yee’nis</td>
<td>lițá (&lt;Fr); yánas (&lt;S)</td>
<td></td>
</tr>
<tr>
<td>terrible / *</td>
<td>skukúm</td>
<td>Skookúm (devil, spirit), Skook’m (hell)</td>
<td>skukúm (something dangerous) (?&lt;S)</td>
<td></td>
</tr>
<tr>
<td>that way / iáwa</td>
<td>iáwa, (T yówa)</td>
<td></td>
<td>yáwa</td>
<td>LC yáwa</td>
</tr>
<tr>
<td>that, this, there, &amp; c. / ōkok, ūkuk</td>
<td>ōkok, (T ūkuk)</td>
<td>Oocook (here)</td>
<td>ūkuk (that, this)</td>
<td>LC ūkuk (there, that)</td>
</tr>
<tr>
<td>they / klaska</td>
<td>klaska (T)</td>
<td>Klaska (it)</td>
<td>ũska</td>
<td>LC ũska (it, they)</td>
</tr>
<tr>
<td>this / ōkok, ūkuk</td>
<td>ōkok, (T ūkuk)</td>
<td>Oocook (here)</td>
<td>(see: that)</td>
<td>(see: that)</td>
</tr>
<tr>
<td>tired / tūl, tīl</td>
<td>tōl, til (T)</td>
<td>tīl</td>
<td>tīl</td>
<td>LC, KC tōl, til</td>
</tr>
</tbody>
</table>

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<sup>6</sup> Cf. also: Nootka Jargon wāwa ‘talk’.
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</thead>
<tbody>
<tr>
<td>to-day / ökuk-sün</td>
<td>öksân, ökok-úkuk son, (Tűukuk ültlah)</td>
<td>uk-sán (uk + san; see: this, day)</td>
<td>(see: this)</td>
<td></td>
</tr>
<tr>
<td>toe / *</td>
<td>T tlпеч</td>
<td>’tлпеч</td>
<td>UC ɬł-pə́š (foot)</td>
<td></td>
</tr>
<tr>
<td>trade / mákuk, mákok</td>
<td>makok, (T makuk)</td>
<td>mákuk (buy; &lt;NJ)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>understand / kůmataks</td>
<td>kómtaks, (T komataks)</td>
<td>Cum a tax</td>
<td>kómtə́ks (&lt;NJ)</td>
<td></td>
</tr>
<tr>
<td>water / wäta, tsok, tsūk, tshōk</td>
<td>wáta, tsuk~tsok, tcok, (T tsok)</td>
<td>Tshuk “(gutteral)”</td>
<td>cuq(w)</td>
<td>LC ɬ-čuq(w)</td>
</tr>
<tr>
<td>what (also ‘why’) / káta, ċkáta</td>
<td>káta, ik’ta, (T ċkáta)</td>
<td>Icita, Aksōhah</td>
<td>ċkada (what?), qáta (how?)</td>
<td>Chn ċ-ktə (what?), qáda (how, what); (cf ? S ʔɑkʷu INTER)</td>
</tr>
<tr>
<td>white / tūkōp</td>
<td>tkōp, (T tkūp)</td>
<td>’Tkoop</td>
<td>tk’up</td>
<td>Chn tk’up</td>
</tr>
<tr>
<td>who / klaksta</td>
<td>tláksta, klaksta (T)</td>
<td>tláksta</td>
<td>ċláksta</td>
<td></td>
</tr>
<tr>
<td>wind / win, itsōt</td>
<td>win, itsōt, (T kómahūts)</td>
<td>K’mmáhat3 (air)</td>
<td>win</td>
<td>cf ? LC ɬ-čχáx, ɬ-kxat (wind), ċ-kd.amtq (SW wind)</td>
</tr>
<tr>
<td>wish / tūkéh, takéh</td>
<td>takéh, toké, tokéh, (T těkéh)</td>
<td>(see like, love)</td>
<td>(see like, love)</td>
<td></td>
</tr>
</tbody>
</table>

Hale confuses two words which from an indigenous point of view are phonetically quite distinct—hence very unlikely to have confused local Indians.
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</tr>
</thead>
<tbody>
<tr>
<td>wolf / lilū, tálapas</td>
<td>lilū, (T klékāho [large], tálapas [small])</td>
<td>līlu (wolf; &lt;Fr), t’álapas (coyote)</td>
<td>Chn i-t’álapas (coyote); KC t-láq’amu (wolf)</td>
<td></td>
</tr>
<tr>
<td>woman / klōtshman, klütshman</td>
<td>klótcman, (T klütcimin)</td>
<td>Agh’keil</td>
<td>łúčmən (&lt;NJ)</td>
<td>LC u-ʔúkw’il</td>
</tr>
<tr>
<td>wood / stik</td>
<td>stik, (T kěmē’něk)</td>
<td>Kom’monok</td>
<td>stik (&lt;Engl)</td>
<td>cf? KC t-o-maqua</td>
</tr>
<tr>
<td>yellow / kaukauwak</td>
<td>T kaukauwok</td>
<td>Kow-kow-wuk</td>
<td>k’auk’áwiq</td>
<td>LC i-k’auk’áwiq (Oregon grape)(^8)</td>
</tr>
</tbody>
</table>

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\(^8\) Oregon grape (*Berberis* spp) is the source of a yellow dye used in local Native basketry.
Part IV
Collaborations, indigenous voices, and stories
Three Okanagan stories about priests

John Lyon
Simon Fraser University

Abstract: This paper consists of three narratives involving priests, from three different fluent speakers of Okanagan (a.k.a. Nsýílxcən, Colville-Okanagan, and Nqílxʷcən), a southern Interior Salish language. After introductory notes, each narrative is presented in the original language, followed by an analyzed, interlinear version including a near-phonemic transcription, parsed forms, glosses, stem/word level translations, and sentence translations. For an explanation of the five-line interlinear format I utilize, see Lyon (2016).

Keywords: Okanagan, Interior Salish, morphology, narrative, documentation

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2.1 Okanagan . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 17
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*Thanks to Sarah McLeod and Lottie Lindley (Upper Nicola Indian Band) for assistance with translation, to Arnie Baptiste (Penticton Indian Band), the son of Larry Pierre, for permission to update his father’s transcription of Conversation with a Priest, to Lynne Jorgesen (Upper Nicola Indian Band) for transcription assistance and permission to reprint her great-grandmother Nellie’s story, Smokey and the Priest. Thanks to the American Philosophical Society and the BC Language Initiative for financial support. Non-Leipzig abbreviations used in this article are as follows: ABS = absolutive, APPL = applicative transitivizer, AUT = autonomous intransitivizer, C₁C₂ = total reduplication, C₁ = initial reduplication, C₂ = final reduplication, CAUS = causative transitivizer, CHAR = characteristic, CISL = cislocative, CONJ = conjunction, CUST = customary/habitual, DEON = deontic modal, DEV = developmental, DIM = diminutive, DIR = directive transitivizer, DRV = derivational morpheme of unclear meaning, DUB = dubitative interrogative, EMPH = emphatic, EPIS = epistemic modal, EVID = evidential, INCEPT = inceptive transitivizer, INCH = inchoative, INDEP = independent pronoun, INTERJ = interjection, INT = internal, LC = limited control, LOC = locative, MID = middle intransitivizer, OCC = occupational, Q = question, RED = reduplication, STAT = stative, UPOSS = unrealized possessor.
Contact info: jmlyon@sfu.ca

The four brothers story (kmúsmos i? snca?is mi?smáy) 30

1. Okanagan 3.1 Okanagan

3.2 Interlinear analysis

Conversation with the priest

This narrative was told by George Lezard, of the Penticton Indian Reserve, in 1966, when he was 85 years old, and recorded by Randy Bouchard. The narrative was originally transcribed by Larry Pierre, also of the Penticton Indian Reserve, in August 1970 using an early orthography developed by Bouchard. What follows is the original narrative given in a NW Americanist orthography, and a grammatical analysis and English translation, not present in the original document.

1.1 Okanagan


wi?xémícunt, ul kw u cus “waý”.

ul cus, “kn k?x?kína?x?”


ul cus, “waý kw qw?aylqs, nák w t kw sáma!”


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ixí? ut táqʷcin iʔ automobil kl tkmkniʔxʷ. nakʷəm ʔaksłáxt. nixʷ qʷfaylqs ilíʔ iʔ kłmt natkʷəm.  
ut cun “nákʷəm kʷ kslaʔt. táliʔ waʔ xʷraʔap asləƛʷ.”  
ixí? ut xʷt̕əpntu̱nt ut ixíʔ kʷixs iʔ stəʔmtíms, ut ixíʔ slu̱xʷpams, lut nixʷ kʷu ƚaʔ ćinsts. ixíʔ waʔ.

1.2 Interlinear analysis

1.  
p  iksn̓ay̱ltí̕m  iʔ?  
  p  in-ks-√may-ʔtí̕m  iʔ?  
  2PL.ABS  1SG.POSS-FUT-tell.story-APPL.POSS-MID DET  
you.all  I.will.tell.you  the  
  naʔl  qʷfaylqs  iʔ?  cáwtət,  iʔ?  
  naʔl  √qʷfay=qlqs  iʔ?  √cáwt-tt  iʔ?  
  CONJ  black=robe  DET  doings-1PL.POSS  DET  
  with  priest  what  we.did  what  
  sqʷlqʷlstwíxʷtət.  
  s-qʷl•√qʷl-st-wíxʷ-tt  
  NMLZ-C1.C2.PL•speak-CAUS-RECP-1.PL.POSS  
  we.argued.about.it  

‘I’m going to tell you about what we did with the priest, what we argued about.’
I was sick and a priest came to me in my house.

He came and told my family “Go outside,” and my family went outside, my sons.
'They went outside and the priest got ready, he must have known what he was getting ready for, he was white, and short, and his neck was hanging down[?].'

I am unsure what $ktq^w\text{ílpsm}$ refers to. It could refer to the priest’s neck hanging down, or to his wearing a cross around his neck. None of the fluent elders I consulted knew the word either.
(7) kwu cus, “kw’a?
kw’u /cun-nt-s kw’a?
1SG.ABS say-DIR-3ERG INTERJ me he.told

ksnmypmísta?x.”
ks-n+/my+p-míst-a?x
FUT-LOC+know+INCH-INTR.REFL-INECPT
will.confess

‘He told me “You have to confess.”’

(8) ut cun, “kw’a? lut i? kl sáma?,
ut /cun-nt-n kw’a? lut i? kl sáma?
CONJ say-DIR-1SG.ERG INTERJ NEG DET LOC white.person
and I.told.him not the to white.person

kn t’ ksnmypmísta?x!”
kn t’ ks-n+/my+p-míst-a?x
1SG.ABS NEG.EMPH FUT-LOC+know+INCH-INTR.REFL-INECPT
I will.confess

‘And I said to him “I won’t confess to a white person.”’

(9) kwu cus, “kw’a? lut kn t’
kw’u /cun-nt-s kw’a? lut kn t’
1SG.ABS say-DIR-3ERG INTERJ NEG 1SG.ABS NEG.EMPH
me he.told not I

sáma?, kn q’wgaylqs.”
sáma? kn √/q’wgay=qls
white.person 1SG.ABS black=robe
white.person I priest

‘He told me “But I’m not just a white person, I’m a priest.”’

(10) ut cun, “way kw q’wgaylqs, náx̱mîl
ut /cun-nt-n way kw √/q’wgay=qls náx̱mîl
CONJ say-DIR-1SG.ERG yes 2SG.ABS black=robe CONJ
and I.told.him yes you priest but

kw sáma?!”
kw sáma?
2SG.ABS white.person
you white.person

‘And I told him “Yes you’re a priest, but you’re still a white person!”’

2What is transcribed as kw’a? in (7) may be concealing a second person singular subject clitic kw”, hence Lottie’s translation of this stanza. It is also possible that the transcription is correct, and that an infinitive-like, subjectless interpretation is available, akin to “To confess”.

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Then he told me "Do you work on Sundays?"

'I told him "Well, the Creator didn’t make Sundays in this land!"'

'I told him "You’re are white person, the Creator must have given you Sundays."

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I told him, “What the creator laid down on this land is one sun, and one moon, and one year, those are the three things he laid down.”

The translation of sxolšált as ‘sun’ rather than its usual translation as ‘day’ is in keeping with the translation of šyátnšw as ‘moon’, rather than ‘sun’. The correct interpretation of the sentence may be “What the creator laid down on this land was one day, and one sun, and one year”, but I’m following my consultant’s translation in this case.
ixí? ut kʷu cus, "uc kʷ cʔíňn
ixí? ut kʷu √cun-nt-s uc kʷ c-√ʔíň
DEM CONJ 1SG.ABS say-DIR-3ERG DUB 2SG.ABS CUST-eat
then and me he.told do you eat
iʔ l scəlkstásqət t sʔiqʷ?"'
iʔ l s+√cə=kst=ásqə t s+√ʔiqʷ
DET LOC NMLZ+five=hand=day OBL NMLZ+meat
the on Friday meat

‘And then he told me “Do you eat meat on Fridays?” ’

(17) cun, "kʷaʔ lut ixíʔ ta nkstan
√cun-nt-n kʷaʔ lut ixíʔ ta n+√ks+tan
say-DIR-1SG.ERG INTERJ NEG DEM NEG.EMPH LOC+bad+INS
I.told.him not that sin
iʔ sʔiqʷ l iksʔínəm, iʔ
iʔ s+√ʔiqʷ l in-ks-√ʔín-m ixíʔ
DET NMLZ+meat COMP 1SG.POSS-FUT-eat-MID DEM[?]
the meat if I.will.eat.it
kn sqiľxʷ.’’
kn s+√qilxʷ
1SG.ABS NMLZ+native.person
I native.person

‘I told him “Well, it wouldn’t be a sin for me to eat meat, I’m an Indian.” ’

(18) cun "iʔ sʔaʔčínəm iʔ
√cun-nt-n iʔ s(+)√ʔaʔ(=)cín(-)m iʔ
say-DIR-1SG.ERG DET deer DET
I.told.him the deer what
sckʷúłs iʔ kʷlnčút’n iʔ
s-c-√kʷúl-s iʔ √kʷl-ncútn iʔ
NMLZ-CUST-make-3POSS DET make-REFL+INS DET
he.made the creator the
sʔiqʷ.’’
s+√ʔiqʷ
NMLZ+meat
meat

‘I told him “The Creator made deer for meat.” ’

Fluent speakers often shorten the demonstrative ixíʔ to iʔ, which makes it phonetically equivalent to a determiner. The syntactic context is such that I think the last occurrence of iʔ in this stanza is actually a demonstrative, and so I give the predicted full form in line 2.
“The creator didn’t say to the Indians ‘On this one day, don’t eat the deer.’ ”’

“As soon as the People were born, they will eat meat, and then when they die will be when they finish eating meat.”’
“Or when they get old, except if they can’t manage to eat it anymore, will be when they finish eating meat.”

I told him, “But you’re white, and the Creator must have given you something, so that you can’t eat meat one day (out of the week).”

The morpheme uy in ks-?a?i+√/?ln+uy’-s may be combination of the applicative -nu- ‘manage to’ (with the initial /n/ coalescing with the final /n/ in √/?ln) followed by -i?- ‘able to’ (Mattina 1987:25), but this is unclear.
Then he told me “Do you steal from women?” (In the Chinook Jargon they say, steal from a woman.)⁶

‘Then he told me “Do you steal from women?”’

This is an interesting case of code-switching between Okanagan and Chinuk Wawa, where one CW lexical item carries an Okanagan affix, and two CW items are linked by an Okanagan preposition.

‘I told him “That’s not stealing, that isn’t a sin.”’

‘I told him “The Creator made the men, and he made the women.”’
“He will keep on making them, and the People will increase.”

“They will fill the land with places to live.”

“That’s what we argued with each other about, like those three things.’

‘And then there was a lot of other things he also wanted to talk to me about.’

Mattina (1987:11) states that \( \sqrt{cw=flx^w} \) only occurs in compounds, and so its occurrence here in isolation is somewhat unexpected.
'He told me “Well, it’s what the Creator wants, for us to look after the land.”'

'I told him “Yes, yes, I know, it’s true what you say, it’s true that what the Creator wants is for you to look after the land.”’

---

8Mattina (1994:207) states that “-tu-ì marks the introduction into the sentence of a new direct object, with the concomitant demotion of the object person marker to indirect object.”

9The protoganist seems to reinterpret the priest’s intended first person plural inclusive pronoun in (30) as exclusive in (31), hence the bitterly ironic interpretation.
‘I told him “But you’re a priest, you’re the first one to make sin on this land, when you came!”’

‘And then an automobile honked outside.’

‘It turned out he had a friend. Another priest was sitting there, it turned out.’
And I told him “Seems that you have a friend. Your friend is really in a hurry.”

And then he jumped up quickly, and pulled off what he was wearing, and he ran out. He never said anything else to me.”

‘And then he jumped up quickly, and pulled off what he was wearing, and he ran out. He never said anything else to me.’

2 Smokey and the priest

This story was told by Nellie Guiterrez, Upper Nicola Indian Band, at an Elder’s Gathering in Quilchena BC sometime in 1978 or 1979. It was recorded by Yvonne Hébert, and deposited as part of a larger collection in the Royal Museum of BC.
Below is my transcription of the narrative. Thanks to Lynne Jorgesen for assistance on English transcriptions and translations, and for place name information.

2.1 Okanagan


ixí? sxʷuys, kʷuκʷ ʔačəntís i? nmółkʷápaʔst i? skʷinpolʔasqáʔsx. sâceyálxs sic xʷuy kł cîtxʷ, kłnuwpáʔs i? sáma?.

cúntəm kʷuκʷ “Come in!” lut ti cənʔułxʷs. nəłkʷ, nuwpáʔəm, cúntəm kʷuκʷ “Come in!”


cus kʷuκʷ “sxʔkinx, qʷwáylqs? nkʷkʷʔac uł kʷ exʷylwis?” cut “kʷ[ə?] mat cíxəxt.” cúntəm kʷuκʷ “o, mat lut ti kʷ ta cʔínən.”

cut kʷuκʷ “lut. inxmínk inkəwáʔ kʷu aksʔamłtím, tanmús incá lut kʷu ḍamłtíxʷ. ı̕skʷicəłaqʷəm áláʔ mi kʷu ḍamłtíxʷ, ḍkʷkʷʔast mi iklíʔ kn xʷuyu. . . kl nGarcia kn ksxʷúyaʔx, kl Johnny García uł l Merritt, late way’.”

cúntəm kʷuκʷ “sure. xʷuyx, xʷuyuskʷ ankwáʔ kł stockyard mi ḍamłtíxʷ.”

iliʔ xʷuysts iʔ kəwáps, ḍamnlís. nʔułxʷ kʷuκʷ uł way’ cíxłtəm iʔ kscʔhlən, iʔ . . . Smokey Tiʔəm iʔ skʷísts iʔ Ɂə̨ʔx̓x̓x̓áʔ iʔ sáma?.

cúntəm kʷuκʷ “way’ kʷ ksʔhlənʔaʔx, way’ cʔix axáʔ iʔ . . . iʔ cíxłtəmən aksʔhlən.”

cus kʷuκʷ “cəkʷ lut aks- bother, way’ nínwíʔs kn ḍhlən, kʷu akskʷúkʷstəm.”

ixíʔ sʔhləs iʔ qʷwáylqs, wiʔcín.

cúntəm kʷuκʷ atáʔ iʔ t settler ilíʔ mat “uc kʷu ksmaʔmsćútaʔx?”
cúntəm kʷukʷ i? t Ɂzwəyəlqs, “wa’y, we’ll pass the… we’ll pass the time.”
cúntəm kʷukʷ “wa’y ʃəast.” ixíʔ smaʔmscúts.
cúntəm kʷukʷ “mat kʷ ksʔítx, wa’y.”
cut kʷukʷ atá? Smokey Tisem “wa’y kn ksʔítx, mat nixʷ anwí kʷ ksʔítx.”
ixíʔ cus, cus kʷukʷ “wa’y ɬíʔ mi kʷ ɬ̓qílx məʔ aláʔ incákn. Not too close apart.” cus kʷukʷ “Alright.”
cúntəm kʷukʷ atáʔ t… iʔ t akłowneʔ iʔ t citxʷs “swit úhiʔ kəm ɬəωntís iʔ ɬ̓c̓kʷ sxəʔn?”
cúntəm kʷukʷ aʔ ɬn̓kʷəsámaʔs “incá kn ʃə́ níʔwíʔs kʷ ɬaʔ nstilsx kəm anwí kʷ ɬaʔ nstilsx, wntixʷ, ɬəωntíxʷ.”
cut kʷukʷ “wa’y mi ɬəωntín, if you are ready, you just say so!”
He said “Yes, I’m ready.” The priest said “Yes, I’m ready.” He took his pistol and he shot the candle, and the light went out!
He got so scared he never hardly moved. He laid there and listened to him, if he snored, finally he heard him snoring and he got up and he sneaked out. He moved from there to Johnny Garcia’s house. And Johnny Garcia told him when he got there “What’s the matter with you, Father? What did you come so late for?”
“Well,” he said “It was still kind of daylight when I come to this next place here and I asked him if I could camp there. And he said to me “alright”, he was good to me, until we was going to bed, and he asked me “Who’s gonna put the light out?” So I told him, I said “You can put it out, I’m ready now.” He said “You sure?” He said “Yes.” Smokey took his pistol and he shot the light and it went out! That’s all!
2.2 Interlinear analysis

(1) ŋi kmax i? sáma? i? cawts, i?
EMPH only DET white.person DET doings-3POSS DET
juwt only the white.person what he.did what
ncəwcawcintom.
nc+cw•√caw=cin-nt-m
LOC+RED•repeat=language-DIR-PASS
repeated.words

‘This is just what a white person did, what was repeated.’

but DEM now DET white.person COMP POSS-doings
but this now the white.person whose doings
i? p iksínaʔtín, i?
i? p in-ks-√may-ʔt-ín i?
DET 2PL.ABS 1SG.POSS-FUT-tell-APPLE.POSS-1SG.ERG DET
that you.all I.will.tell.about the
qʷáylqs.
√qʷáy=lqs
black=robe
priest

‘But now what this white person did is what I’m going to tell you, a priest.’

(3) tl Merritt qsápi kʷaʔ itiʔ mat four or five houses
tl Merritt qsápi kʷaʔ itiʔ mat four or five houses
LOC Merritt long.ago INTERJ DEM EPIS four or five houses
from Merritt long.ago there must.be four or five houses

in Merritt.
in Merritt
in Merritt
in Merritt

‘A long time ago, there must’ve been four or five houses in Merritt.’

10 Compare this to the first sentence of previous story. Both stanzas end with headless relatives which refer to the speaking event.
“And these settlers from here and over to Aspen Grove settled there.”

“A priest came along there, it was a Saturday and he went and prayed for the white people up there.”

“They say he went from Merritt to Courtney Lake.”

“He saw a house, they say there was a light shining in there.”

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11 Courtney Lake is right off the highway, between Aspen Grove and Merritt.
‘He said “Now, it is too late, it is getting dark. I will ask this white person here if I can camp here.”’ 

‘He went, and he tied his stud horse up that he was leading along.’ 

‘He washed before he went to the house, he knocked on the white person’s door.’ 

‘He was told “Come in!”’
The priest didn’t come in.

The priest turned and was knocking, and the settler told him “Come in!”

The settler stood up and went to his door, he opened the door and there was this priest.

He told the priest “What happened, priest? It’s late and you’re travelling around!”

He said “You must be hot.”
(17) cúntəm kʰu\_kʰw "o, mat lut ˈti kʰw
√cún-nt-m kʰu\_kʰw o mat lut ˈti kʰw
say-DIR-PASS EVID oh EPIS NEG EMPH 2SG.ABS
he.was.told they.say oh must.be not just you
ˈtə cʔiʔən."
ˈtə c-√ʔiʔn
NEG.EMPH CUST-eat
eating

‘The settler said “Oh, you must not have had anything to eat yet.”’  

(18) cut kʰu\_kʰw "lut. inx privé inkəwáŋ kʰu
cut kʰu\_kʰw lut in-√x privé in-kwáŋ kʰu
say EVID NEG 1SG.POSS-want 1SG.POSS-horse 1SG.ABS
he.said they.say no I.want my.horse me
aksʔamʔtím, taníŋkus icá lut
an-kṣ-√ʔamn-št-ím taníŋkus icá lut
2SG.POSS-FUT-feed-POSS.APPL-MID no.use 1SG.INDEP NEG
you.will.feed.him.for it’s.no.use me not
kʰu ˈt ʔamʔtíkʷ.”
kʰu ˈt √ʔamn-št-íkʷ
1SG.ABS NEG.EMPH feed-POSS.APPL-2SG.ERG
me you.will.feed

‘The priest said “No, I want for you to feed my horse for me, there’s no point in you feeding me.”’

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12 Here is another case where kʰw aʔ probably conceals a second person subject kʰw.
13 There are several points in this story where the switch-over from active to passive voice does not necessarily correspond to primary vs. secondary discourse participants. At times, it is difficult to know whether it is Smokey or the priest that is talking.
The priest said “I will tie my horse to the post before you feed me, and in the morning I will go there to Garcia, I will go to Johnny Garcia’s in Merritt, it’s already late.”

The settler said “Sure, go, take your horse to the stockyard and feed him.”

Then the priest took his horse, and fed it.

Garcia is a place up above Merritt, going towards Princeton, between Courtney Lake and Merritt.
The priest went inside and he was already warming up what he was going to eat. . . Smokey Tisem was the name of the old white man.

The surname Tisem is unusual, and its correct spelling is unclear to me. I render it as close to its phonetic pronunciation as possible.
The priest said “You shouldn’t bother, but I will eat, thank you.”

Then the priest ate, and he finished eating.

The priest was told by this settler there “Can we play cards?”

The priest told Smokey “Yes, we’ll pass the time.”
‘The priest told him “That’s good.”’

‘And then they played cards.’

‘The priest told him “You must be sleepy, yeah.”’

‘Then Smokey Tisem said “Yes, I’m sleepy, you must be sleepy too.”’

‘Smokey told the priest “You lay down over there and I’ll lay down here.”’

‘“Not too close apart.” Smokey told him “That’s alright.”’
'Then the priest asked the white guy (Smokey) “Who’s going to put the light out?”, because it was a candle that the old timers, you see, they used candles for lights.’

16I am unsure about the etymology and correct transcription of ʔasəsʔawst ‘old timers’. Sarah McLeod pronounces the word closer to ʔasəsʔúst.'
(36) cúntəm  kʷukʷ  aʔ  cnkʷɔsámaʔs
√cún-nt-m  kʷukʷ  aʔ  c-√nkʷ+4+√sámaʔ-s
say-DIR-PASS  EVID  DET  CUST-friend+CONJ+white.person-3POSS
he.was.told  they.say  the  his.white.friend

“incá  kn  ŋiŋwíʔs  kʷ  ūaʔ?
incá  kn  ŋiŋwíʔs  kʷ  ūaʔ?
1SG.INDEP  1SG.ABS  in.a.while  2SG.ABS  COMP
me  I  in.a.while  you  if
nstilsx  kəm  ṣwí  kʷ
n+√st=ils-x  kn  ṣwí  kʷ
LOC+think=thoughts-INTR  CONJ  2SG.INDEP  2SG.ABS
think  or  you  you
ūaʔ  nstilsx,  wtntixʷ,
ūaʔ  n+√st=ils-x  √/wt-nt-ixʷ
COMP  LOC+think=thoughts-INTR  put-DIR-2SG.ERG
if  think  you.put.it

χwntixʷ:“
√/χw-nt-ixʷ
extinguish-DIR-2SG.ERG
you.put.it.out

‘Smokey said to his white friend “I will if you think so, or you can if you
think so, you put it out.”’

(37) cut  kʷukʷ  “wáʔ  mi  χwntín,  if
cut  kʷukʷ  wáʔ  mi  √/χw-nt-ín  if
say  EVID  yes  FUT.COMP  extinguish-DIR-1SG.ERG  if
he.said  they.say  yes  will  I.put.it.out  if

you are ready, you just say so!”
you are ready you just say so
you are ready you just say so
you are ready you just say so

‘The priest said “Yes, I will put it out, if you are ready, just say so!”’ ¹⁷

He said “Yes, I’m ready.” The priest said “Yes, I’m ready.” He took his pistol
and he shot the candle, and the light went out!
He got so scared he never hardly moved. He laid there and listened to him,
if he snored, finally he heard him snoring and he got up and he sneaked out. He
moved from there to Johnny Garcia’s house. And Johnny Garcia told him when he
got there “What’s the matter with you, Father? What did you come so late for?”
“Well,” he said “It was still kind of daylight when I come to this next place
here and I asked him if I could camp there. And he said to me “Alright”, he was

¹⁷Nellie Guitterez switches to English for the rest of the narrative.
good to me, until we was going to bed, and he asked me “Who’s gonna put the light out?” So I told him, I said “You can put it out, I’m ready now.” He said “You sure?” He said “Yes.” Smokey took his pistol and he shot the light and it went out! That’s all!

3 The four brothers story (kmúsmos i’? snc’?iws smi?máy)

This story was told by Kiláwna? (Andrew McGinnis), of the Penticton Indian Reserve in Penticton, BC, on October 9, 2014. It was transcribed and translated by John Lyon and S?ímla?xw (Michele K. Johnson), with Kiláwna?. The story appears in an unanalyzed form in í? xaʔxaxáp i’? sma?máy’s “Our Elders’ Stories”, edited by S?ímla?xw (Johnson 2015). Sarah McLeod and Lottie Lindley helped me with transcribing and translating this version.

Kiláwna? originally heard the story from Nx?ímlakns (Harry Robinson).

3.1 Okanagan

iskwíst kiʔláwna?: ismsáma? skwíst Andrew McGinnis. kiw’ kn ksmáʔmíxa?x ixíʔ qáʔ ’pi t smaʔmáy.

waʔy aláʔ tó tax’sámaʔ, iʔ ylímíxw’om, kmúsmos iʔ tl sqw’síʔs. ?əʔʔíʔənłax iʔ l sklaxw, wiʔwiʔcínłax. cuś iʔ sqw’sqw’asíʔaʔs, “ľaʔ xlap p iksq’wélq’ístəm, ƛkw’kq’ast. xw’uyx, púlxwi!”

waʔy . . . pulx iʔ sqw’sqw’asíʔaʔs. xlap ƛkw’kq’ast, cʔaʔʔíʔənłəx, wiʔwiʔcínłax. cut iʔ ylímíxw’om “waʔy xq’ast p ikskw’okw’úlq’ístəm iʔ t tomx’úləʔxw. iʔ sxʔix, kw’ xw’uy tac k nʔáłłk, lk’w’ụ́ ’t. mypnúntxw stím aʔ? ck’wúłłxw yaʔyáʔ ’t, xw’ʔit akmýpən’ʔcn. nuk’w’spí’ntk m p ’cyʔsp aláʔ. uʔł iʔ knaqs k w’tímtk, ixíʔ ikłłʔ k’w xw’uy, lk’w’ut. mypnúntxw stím aʔ? ck’wúłłxw, nuk’w’spí’ntk. uʔł iʔ knaqs tac k’l skłx’w’tan. t k’w xw’ụ́ ’y lk’w’ut. mypnúntxw yaʔ’ ’t aʔ? ck’wúłłxw.” uʔł iʔ tətwít iʔ stʔíwtaʔx, cut “k’w xw’uy tac k’l sk’w’ək’ptən. lk’w’ut aksx’wuy, yaʔ’ ’t mypnúntxw stím.” cut “waʔy.”

ixíʔ sxw’úy’ßłx. xw’ú’yləx, xw’úyləx lk’w’ák’w’əlx, mypnússəłx.

ixíʔ iʔ sxʔ’ix tac k’l nʔ’áłłk. kic iʔ sk’w’áłłxw’əłłm, nktčaʔsqáʔáʔ. ixíʔ ilíʔ iʔ sk’w’úłłms. yaʔ’ ’t iʔ stím mypnúss, t ks’q’qy’sqáʔáʔs yaʔt. k’w’x’w’ sqáʔáʔ, yaʔt iʔ stím mypnúss iʔ k’l stəm’áłłt, iʔ k’l sənktčaʔsqáʔáʔ. nuk’w’spí’ntk.

uł iʔ knaqs iʔ tətwít xw’uy, tac k w’tímtk. kic aʔ? ck’w’áłłq’am, scəsəmlaʔq. ixíʔ yaʔ’ ’t mypnúss, yaʔt iʔ stím iʔ k’l scəsəmələʔq. t ksk’w’úłłms iʔʔiʔ?, k’w’úłłms iʔʔiʔʔiʔʔiʔʔ. . . . ƛaʔ ksnloq’íw’səłm iʔ sk’w’án’q mi pləl t xq’ast. aks. . . . t siWLk’w, npfússəłm, cʔxíʔ taʔkíʔn iʔ ksnpússəłm mi xq’ast. lut ta myaʔ ksx’w’íts.

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uł i? knaqς tac kl skłx°tan. x"w°u•••y lkw°ut, ya•••t i? st.im
mypnús iklí?.

uł i? tôtwít i? st?iwta?x, x"wuyx i? kl kksx°uys. lkw°u••••••.t
keníwsoš i? kwkâwpoıy, i? cnáq°xœlx. ili? ksnxiyóm. taľt ya•••t
i? stim náq°womsœlx. taľt x?it, x?it i? snaq°w. ixi? ya?yá•••it mypnús
i? tôtwít, snaq°w.

taľt uł nuk°wspištkt øl cx°w°ywyłx. i? tôtwít, taľt ki? cpniyíls,
kikôm ksnísłptm i? spen?kîn mi lx°wylylx. ilî•••?, “ax! wây kn
kłx?uýa?x.” øł lx°wyõlx, ti klq°ti-wa?š i? l kóâwps, sôpsqâxa?.
côlsqâxa?, i? kóâwps tòw°wsècâ?, taľt òâyx°w t? kóâwps. x°wuy kl

wây. ixi? s?øtxïsølx.

šlap lk°w°k°wast, ñøëîñlølx, wi?wi?cînøx. cus i? sx?itx, “k°w
x°wuy, mâyynçûta?x! stîm ascmypnwîłøn anwî?” cut “wây, ah kn
x°w°u•••y lkl°w°ut. keníwsoñ a? ck°wòlstømjôłtøm i? stømjÔltøs, i?
nklkêa?sqâxa?, ya?t ixi?. ili? kn k°wùlom. taľt mypnun ya•••t i? stîm
šast ascmypnwîłøn.”

itli? knaqς. k wtîmtk ki? x°wuy. cut, “kn x°wuy k wtîmtk lkl°w°ut.
keníwsoñ i? scacomâla?qá?x, k°wâñtqâm. ya?t i? stîm
mypnun, i? liplî, patâks, hałyk°w, skûk°wøm.” cut, “mypnun i?
ascmyponwîłøn.”

cus i? tôtwít, “hahûy! anwî ascmyponwîłøn?” mu•••t i?
tôtwít. cut, “wây. wây tòx°w alî? kn ksmyâncûta?x. lut t? šast
iscmyponwîłøn.” cut, “kn x°w°u•••y lkw°ut, keníwsoñ i? kókwâwboy,
x°wïtløx. nák°wms i? cnáq°wœlx. taľt x?ïtløx i? l snaq°w. ti
i? xi?míx stîm uł xmnîksølx uł náq°womsølx. taľt x?ïtløx. ixi? iscmypønøłøn.”

mu•••t i? ylmíx°wøm, taľt uł picx°w. cut “wây. ta?li? k°w
cnáq°w x?ït.” “ax, kiw°”, cut. cut, “wây šast, tòx°w wây, ta?li?
ixi? aksnáq°wøminøm l nk°k°w°ac. lut t náq°wømønxt°w, šlap k°w


na?l tkñmílx\w\w lgílxolx. "ti k\w?a? sex?kínx mi k\wu náq\w?oms axá? inkñywtíca?? ili? kn lgílx, nk\w?k\w?ác." nk\w?k\w?ac ixí? i***?... mat sex?kínx?


lkʷkʷʕast, ixī? i? likók qʷəlqʷílt. “ax, way’ kn kicx!”


ixī? ki? way’ ismáíma'y. iskwíst ki?ləwnaʔa.”
3.2 Interlinear analysis

(1) isk\textsuperscript{w}íst kiʔláwnaʔ.
\(\text{in-s(+)√k\textsuperscript{w}íst} \) kiʔláwnaʔ
1 SG.POSS-name grizzly.bear
my.name grizzly.bear

‘My name is Grizzly Bear.’

(2) ismsámaʔ sk\textsuperscript{w}íst Andrew McGinnis.
\(\text{in-sm•√sáma} \) s(+)/k\textsuperscript{w}íst Andrew McGinnis
1 SG.POSS-C\textsubscript{1}C\textsubscript{2}.PL•white.person name Andrew McGinnis
my.white.person’s name Andrew McGinnis

‘My white person’s name is Andrew McGinnis.’

(3) ki\textsuperscript{w} kn ks\textsuperscript{w}ay\textsuperscript{m}íxaʔx xi\textsuperscript{f}ʔ qa\textsuperscript{w}ápi t
ki\textsuperscript{w} kn ks•√m\textsuperscript{w}ay\textsuperscript{m}-\textsuperscript{m}íxaʔx xi\textsuperscript{f}ʔ qa\textsuperscript{w}ápi t
yes 1 SG.ABS FUT-tell-INEPT DEM long.ag0 OBL
yes I am.going.to.tell.about this long.ag0

sí\textsuperscript{w}amáy.
\(s+\text{ma}•\sqrt{máy} \) NMLZ+C\textsubscript{1}C\textsubscript{2}.PL•tell
story

‘Yes, I’m going to tell you an old time story.’

(4) way\textsuperscript{w} aláʔ t\text{w} tax\textsuperscript{w}sámaʔ, iʔ ylmíx\textsuperscript{w}om, kmúsm\textsuperscript{a}s
way\textsuperscript{w} aláʔ t tax\textsuperscript{w}+/sámaʔ iʔ ylmíx\textsuperscript{w}m, k(+)mús(•)\sqrt{ms}
yes DEM before have+white.person DET chief four[human]
yes here before with.white.people the chief four

iʔ tl sq\textsuperscript{w}sf\textsuperscript{i}s.
iʔ tl s+√q\textsuperscript{w}sf\textsuperscript{i}-s
DET LOC NMLZ+son-3POSS
the from his.sons

‘Here, before the white people came, there was a chief, he had four sons.’

(5) ?aʔ?\textsuperscript{hl}on\textsuperscript{w}x iʔ l sklax\textsuperscript{w}, wi?wi?cín\textsuperscript{w}x.
?h•√?\textsuperscript{hl}n-lx iʔ l s+√klax\textsuperscript{w}, wi?•√wi?=cín-lx.
C\textsubscript{1}C\textsubscript{2}.PL•eat-3PL DET LOC NMLZ+evening C\textsubscript{1}C\textsubscript{2}.PL•finish=food-3PL
they.ate the in evening they.finished.eating

‘They had supper and finished eating.’
‘He told his sons, “Tomorrow I’m going to talk to you all, in the morning.”’

‘Go on, go to bed!’

‘His sons went to bed.’

‘The next morning, they were eating, and they finished eating.’
'The chief said “Yes, it’d be good if I sent you out into the world.”'

‘The oldest one, you go over to the north, a long long way.”'

‘You find out what everyone is working at, you’ll learn a lot of new things.”'

‘In a year’s time, you all come back here again.”'
(14) “uł i? knaqs k’ wtîmtk, xi? kli? kʷ
uł i? k(+)/naqs kł √/wtîm(=)tk ixf? iklí? kʷ
CONJ DET one[HUMAN] LOC south DEM DEM 2SG.ABS
and the one to south then to.there you
xʷuy, lkʷut.”
xʷuy √/lkʷ=ut
go far=place
go far.away

“‘And one will go to the south, you go really far over there.’”

(15) “mypnúntxʷ
√/my+p-nú-nt-xʷ stím aʔ
know+INCH-manage.to-DIR-2SG.ERG what DET
you.find.out what
ckʷúlsəlx,
nukʷspíntk.”
c-√/kʷúl-st-slx nukʷ+s+√/pín(=)tk
CUST-work-CAUS-3PL.ERG one+NMLZ+year
they.are.working.at one.year

“‘You find out what they do there, for one year.’”

(16) “uł i? knaqs tac kł sklxʷtan.”
uł i? k(+)/naqs tac kł s+√/klxʷ+tan
CONJ DET one[HUMAN] over LOC NMLZ+evening+INS
and the one over to west

“‘And one will go over to the west.’”

(17) “tright kʷ xʷu”y y lkwut.”
tright kʷ xʷuy √/lkʷ=ut
EMPH 2SG.ABS go far=place
just you go far.away

“‘Just go really far.’”

(18) “mypnúntxʷ
yat’ t aʔ
√/my+p-nú-nt-xʷ √/yat t aʔ
know+INCH-manage.to-DIR-2SG.ERG gather+STAT DET
you.find.out everything that
ckʷúlsəlx.”
c-√/kʷúl-st-slx
CUST-work-CAUS-3PL.ERG
they.are.working.on

“‘You find out everything they are doing, the way people live there.’”
‘And to the youngest boy the chief said “You go over to the east.” ’

‘You’ll go a long long ways, but you’ll learn from it.’”

‘The youngest said “Okay.” ’

‘So they went.’

‘They were going, going along getting farther away, and they found out how others lived.’
ixí? i? s+/t?it-x  tac kl n+/t?íkl(=)tk
DEM DET NMLZ+first-INTR over LOC LOC+north
that the oldest over to north

‘The oldest one went towards the north.’

(25) kic i? sckwxôltômNyáltôm,
kic i? s-c-vk²+w+s+tm(=)yált-m,
arrive DET NMLZ-CUST-work+NMLZ+cattle-MID
get.there the ones.who.work.with.cattle

nkłća?sqáša?.
√nk(=)łća?(+)s(+)√qáša?
horses
horses

‘He got to a place he could learn about raising cattle and horses.’

ixí? ilí? i? s+/k²wúl-m-s
DEM DEM DET NMLZ+work-MID-3POSS
then there what he.worked.at
‘And he worked there.’

(27) ya‘nìt i? stim mypnús,  t
√ya‘+t i? stim √my+p-nú-nt-s  t
gather+STAT DET what know+INCH-manage.to-DIR-3ERG OBL
every thing he.found.out/about

ksqóysqáša?s  ya‘t,  k²wx²sqáša?.
ks-√qy+s+√qáša?-s  √ya‘+t  √k²w²+s+√qáša?
FUT-write+NMLZ+horse-3POSS gather+STAT untie+NMLZ+horse
branding.a.horse every thing taking.a.saddle.off

‘He learned about everything, how to brand a horse and everything, and
how to take the saddle off the horse.’

(28) ya‘t i? stim mypnús  i?
√ya‘+t i? stim √my+p-nú-nt-s  i?
gather+STAT DET what know+INCH-manage.to-DIR-3ERG DET
every thing he.found.out the

kl stômNyált,  i?  kl sônkłća?sqáša?.
kl s+/tm(=)yált,  i?  kl s+√nk(=)łća?(+)s(+)√qáša?
LOC NMLZ+cattle DET LOC NMLZ+horses
about cattle the about horses

‘He learned everything about cattle, and about horses.’
(29) nuk₇w spístk.
    nuk₇+w+s+√pín(=)tk.
    one+NMLZ+year
    one.year

    ‘For one year.’

(30) uṯ iʔ k-naqs iʔ t-twít xʷuy, tac k
    uṯ iʔ k(+).√naqs iʔ t(•).√twít xʷuy tac kł
    CONJ DET one[HUMAN] DET boy go over LOC
    and the one the boy he.went over to

    wtímtk.
    √wtím(=)tk
    south
    south

    ‘And one of the boys went over to the south.’

(31) kic aʔ ckwán-tqam,
    kic aʔ c-√kwán=tq-am
    arrive DET CUST=plant=crop-MID
    get.there the farming

    scəcəmáʔa?qx.
    s-c-c•√cm=áʔa?q-x
    NMLZ-CUST-C₁.DIM•small=seed-INTR
    small.seeds

    ‘He got to where they were farming, planting small seeds.’

(32) ixíʔ ya“ʔt mypnús,
    yaʔt
    ixíʔ √yaʔ+ t √my+p-nú-nt-s √yaʔ+t
    DEM gather+STAT know+INCH-manage.to-DIR-3ERG gather+STAT
    then everything he.learned.about every

    iʔ stim iʔ kł scəcəmáʔa?q.
    iʔ stim iʔ kł s+c•√cm=áʔa?q
    DET what DET LOC NMLZ+C₁.DIM•small=seed
    thing the about small.seeds

    ‘He learned about everything, everything about small seeds.’

324
<table>
<thead>
<tr>
<th>Sentence</th>
<th>Parse</th>
<th>Meaning</th>
</tr>
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<tbody>
<tr>
<td>‘When he worked there he worked on pulling, weeding the garden so that it’d grow good.’</td>
<td>(33)</td>
<td>When he would work there, he worked on the when ksnloqíwsəm</td>
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<tr>
<td>‘And with water, he’d irrigate with ditches, one has to irrigate it so that it is good.’</td>
<td>(34)</td>
<td>Aks... if siwlk w. nprísusəm. c?xifl ta?kín</td>
</tr>
<tr>
<td>‘Not too much.’</td>
<td>(35)</td>
<td>Lut tə myañ ksx w?íts.</td>
</tr>
<tr>
<td>‘And one of them went towards the west.’</td>
<td>(36)</td>
<td>U t i? knaq̥s tac kl sklx w tan.</td>
</tr>
</tbody>
</table>
‘He went a really long ways, he found out about how everything operates over there.’

‘And the youngest boy, he went to where he was going.’

‘He met up with some cowboys that were stealing things.’

‘He got mixed up with those people.’
(42) taľt ya-’yt i? stim náq’w-omsolx.  
√taľ+t √ya’+t i? stim √náq’w-m-nt-solx  
straight+STAT gather+STAT DET what steal-APPL-DIR-3PL.ERG  
sure every thing they.stole.it  

‘They sure stole everything.’

(43) taľt x?it, x?it i? snaq’w.  
√taľ+t x?it x?it i? s+√naq’w  
straight+STAT best best DET NMLZ+steal  
really best best the stealing  

‘Really the best, they’re the best thieves.’

(44) ixí? ya’yá’yt mypnús i?  
ixí? ya’y•√ya’+t √my+p-nú-nt-s i?  
DEM C1.C2.PL•gather+STAT know+INCH-manage.to-DIR-3ERG DET  
everything he.learned.it the  
tōtwít, snaq’w.  
t(•)twít s+√naq’w  
boy NMLZ+steal  
boy stealing  

‘That’s all this young boy learned about, was stealing.’

(45) taľt uľ nuk’w spíntk əľ cx’yɔx’uyolx.  
√taľ+t uľ nuk’w+s+√pin(=)tk ɪ c+x’y•√x’yuy-lx  
straight+STAT CONJ one+NMLZ+year COMP CISL+C1.C2.PL•go-3PL  
sure and one.year before they.all.come  

‘And one year went by before they all came home.’

(46) i? tōtwít, taľt ki? cnpiyîls,  
i? t(•)twít √taľ+t ki? c-n+√piy=îls  
DET boy straight+STAT COMP.OBL CUST-LOC+happy=thoughts  
the boy sure that he.was.happy  
kíkóm ksníptəm i? spanʔkín  
kí(•)km ks-n+√lp+t-m i? s-pn+√ʔkín  
almost FUT-LOC+forget+STAT-MID DET NMLZ-when+do.what  
almost he.would.forget when  
mi ̓x’yuyolx.  
mi ̓y+√x’yuy-lx  
COMP.FUT return+go-3PL  
will they.returned  

‘The boy was really having a great time, but just about forgot when they were going home.’
(47) ilí...?  “ax!  wa’y kn  kIłx”úya?x.”
        ilí  ax  way  kn  ks-I+√xúy-a?x
DEM  INTERJ yes  lSG.ABS  FUT-return+go-INCEPT
he.was.there  *?#!  yes  I  will.go.back

‘He was there, and said “I’m going to go now.”’

(48) eł  łxúyolx,  ti  kłqútf’wa?s  i?  l
        ł  ł+√xúy-łx  ti  k+√łq(=)t(=)fwa?-s  i?  l
COMP  return+go-3PL  EMPH  RES+bent.over-3POSS  DET  LOC
when  he.was.going.back  just  he.was.bent.over  the  on
        kówáps,  səpsqáxa?.
        √kwáp-s  √sp+s+√qáxá?
horse-3POSS  whip+NMLZ+horse
        horse  he.whipped.his.horse

‘When he went back, oh, he was just bent over his horse, he whipped his horse.’

(49) cəlsqáxa?,  i?  kówáps  tłxúsəscá?,
        √čl+s+√qáxá?  i?  √kwáp-s  t+√łxús=ča?,
stand+NMLZ+horse  DET  horse-3POSS  RES+foam*C2.LC=skin
he.stopped.the.horse  the  his.horse  its.skin.was.foaming
        √tal+t  ?áyłxwit  i?  √kwáp-s
straight+STAT  tired  DET  horse-3POSS
sure  tired  the  his.horse

‘He stopped his horse, its skin was foaming like soap, his horse got really tired.’

(50) xúy  kl  sanówstsqáxa?tɔn,
        xúy  kl  s+n+√twst+s+√qáxá?+tn
go  LOC  NMLZ+LOC+stand.in.line+NMLZ+horse+INS
he.went  to  barn
        tli?  ki?  skúms  i?
        itłí?  ki?  s-√kum-s  i?
DEM  COMP.OBL  NMLZ-store-3POSS  DET
from.there  that  he.stored.it  the
        n+√člqw+i+s+√qáxá?+tn-s
LOC+place.on[?]+DRV+NMLZ+horse+INS-3POSS
his.saddle

‘He went to the barn, from there that he hung up his saddle.’
n?utlxw.
LOC+enter
he.went.inside
‘He went inside.’

wa’y, wa’y yáñtwlx yáñpolx.
yes yes gather+STAT-3PL gather+INCH-3PL
yes already all.of.them they.arrived
‘Yes, they were all already home.’

cut i? ylmíxw?m, “wa’y límlwmt p
cut i? ylmíxw+m way lím•√lm+t p
say DET chief yes C1C2.CHAR•glad+STAT 2PL.ABS
said the chief yes it.is.very.good you.all

‘The chief said “I’m glad you all came home.”’

“hahúy, púlxwi! nus ki? šlap
okay go.to.bed-PL in.a.while COMP.OBL tomorrow
okay go.to.bed in.a.little.while that tomorrow

mi p máyntcut, k”u tl
mi p √máy-ncut k”u tl
COMP.FUT 2PL.ABS tell-REFL 1PL.ABS LOC
will you.all tell.about we

wi?wi?cín.”
wi?•√wi?=cín
C1C2.PL•finish=food
finish.eating
‘“Okay, go to bed! In a little while, tomorrow, you all will tell stories when we get done eating tomorrow.”’

ixi? i? t(•)√twít ta?lí? √kínt+wa way
DEM DET boy very afraid+STAT yes
that the boy very afraid yes
‘That boy was very afraid, yes.’
(56) ixí? sʔtxīlsəlx.  
ixí? s-√ʔtx=ílx-slx  
DEM NMLZ-sleep=AUT-3PL.POSS  
then they.went.to.sleep
‘They all went to sleep.

(57) ḥlap lkʷkʷʔast, ṭʔlʔənəlx,  
ḥlap ḥ(+)+kʷ(•)/kʷʔas(+)+t ṭʔl•√ʔihn-łx  
tomorrow morning C₁C₂.PL•eat-3PL  
next morning they.were.eating  
wiʔwiʔcínəlx.  
wiʔ•√ʔwiʔ=cín-łx  
C₁C₂.PL•finish=food-3PL  
they.finished.eating
‘The next morning, they were eating, and they finished eating.’

(58) cus iʔ sxʔitx,  
√cun-nt-s iʔ s-√xʔit-x  
say-DIR-3ERG DET NMLZ-first-INTR  
they.chief.told.him the oldest  
“kʷ xʷuy, máyńcútaʔx! stɨm  
kʷ xʷuy √máy-ncút-aʔx stɨm  
2SG.ABS go tell-REPL-INTR what  
you go tell.us what  
ascmypnwíʔən anwí?”  
an-s-c-/my+p=nwíʔn anwí  
2SG.POSS-NMLZ-CUST-know+INCH=information 2SG.INDEP  
you.learned.about you
‘The chief said to the oldest, “You go ahead, tell something! What did you learn about?”’

(59) cut “wa’y, ah kn xʷuuy•y ʔkł lkʷʔut.”  
cut wa’y ah kn xʷuy ʔkł √lkʷ=ut  
say yes ah 1SG.ABS go LOC far=place  
he.said yes ah I went to far.away
‘The oldest said “Okay, I went really far away.”’
"I fell in with a cattle ranch, and horses, all of that. There is where I worked."

"I learned everything about how to look after cows and horses."

"There I'd take saddles off horses, and I'd feed them, and that's all I learned about."

"There I'd take saddles off horses, and I'd feed them, and that’s all I learned about."
‘The chief said “Ah, that’s good what you learned.”’

‘And from the other one, that went to the south.’

‘He said “I went a long ways to the south.”’

‘I fell in with ones who were planting seeds, farmers. I learned about everything, peas, potatoes, onions, carrots.”’
“He said ‘I learned about peas there where they were working, everything was really good. And oats.’”

‘There I learned about how they made oats, that’s what they made bread from. I learned all that.’

---

Andrew McGinnis says that he meant to say ‘flour’ rather than ‘oats’ in this stanza, i.e. ‘what they make bread from’.
The chief said, “Oh yes, that’s really good what you learned.”

The chief told the youngest boy “Okay, what did you learn?”

The boy was just sitting there.

He said “Yes. Okay, I guess I’ll tell. But it is not good what I’ve learned.”
The boy said “I went a long ways, I fell in with some cowboys, a lot of them. It turned out they were stealing things.”’

“They’re good thieves. Just whatever they wanted, they’d steal it.”’

“They were really good thieves. That’s what I learned.”’
‘The chief was just sitting there, he was really disgusted.’

‘The chief said, “Okay. Do you really steal good?” ’

‘The chief said “Well good, I kind of feel sorry.” ’

‘“My race horse it is tied up at the barn. You’re going to steal it tonight.” ’
“If you don’t steal it, I will hang you tomorrow,” the chief said.

The boy said “Yes, okay, I will steal it.”

At night, the chief’s workers were there, there’s a lot of them, they went in the barn and they all sat around.”

The form xəlxlákəkəlxl literally means “they were turning around”, but several speakers I have consulted say it can also mean ‘sitting around in a circle’, in cases where a room is full.
‘One got on a horse, another took the lead, and one followed behind, holding his tail.’

‘The chief said “How is he gonna steal this horse?”’

‘“How many are there? There’s one, and there’s one.”’
'The chief said “There’s no way, I’m going to hang my son, that’s what I told him.”'

'The chief went and slept.'

'The boy did not sleep, it was already evening.'

'He ran to the cellar.'

'There was a barrel of wine that the chief made.'
He rolled the barrel until he got near the barn.

He poured some (into two bottles) and stuck them under his shirt.

The boy went, and entered into the barn.

They told him "What are you doing?"

The boy said "I heard that they’re going to steal that horse."
(97) “alá? p ikskənxítəm iʔ?
alá? p in-ks-√kn-xít-m iʔ?
DEM 2PL.ABS 1SG.POSS-FUT-help-BEN-MID DET
here you.all I.will.help

txtəntímf.”
t+√xt-nt-im
RES+take.care.of-DIR-PASS
it.will.be.taken.care.of

‘I’m here to help you take care of him.’”

(98) “ah, waʔ ōxast” cut, “kʷ mutx.”
ah waʔ √oxas+t cut kʷ √mut-x
ah yes good+STAT say 2SG.ABS sit-INTR
ah yes its.good he.said you sit.down

‘Ah, that’s good’ they said, “You can sit down.”’

(99) mut iʔ tɔtwít, aclkapúh.
mut iʔ t(•)√twít ac-√lkapúh
sit DET boy STAT-coat
sat.down the boy with.his.coat

‘The boy sat down with his coat.’

(100) ?ayxáxa?, sí•swst uʔ… ?ayxáxa? uʔ
?ayxáxa? sí•swst uʔ ?ayxáxa? uʔ
in.a.little.while C1.DIM•drink CONJ in.a.little.while CONJ
in.a.little.while he.sipped and in.a.little.while and

síswst.
sí•swst
C1.DIM•drink
he.sipped

‘After a little while, the boy would take a sip, and then after a little while, take another sip.’

(101) cúxɔlx “stim ixiʔ?”
√cún-n­t-slx stim ixiʔ
say-DIR-3PL.ERG what DEM
they.told.him what that

‘They told him “What is that?”’

(102) “ixiʔ wine kʷaʔ.”
ixiʔ wine kʷaʔ
DEM wine INTERJ
that wine see?

‘It’s wine, see?’ the boy said.’
“Let’s start drinking and tell stories here until morning.”

Oh, they passed it around until they finished it.

He said, “But there’s one more here.”

And then they passed that one around too. Oh, they finished that one, and that was it.”

21 LL mentions that $k^w a ?$ is used in these contexts “if they didn’t know what it was”, hence the colloquial meaning in line 4 “see?”.

22 Nearly all of the form $n + \sqrt{x} = iks-nt-islx$ ‘they passed it around’ is truncated in this stanza, and in (106).
They told stories to each other, and they were very happy.

They said “Do you have any more?”

‘He said “No.”’

‘There’s a barrel outside, let’s bring that in, and poke a hole in it. We’ll be at it all night.’

‘They said “Okay.”’
(12) ck’ilk i? kylwiča?,
c-√k’ilk i? k+√ylw=iča?
CUST-roll DET RES+twist.twig=outer.surface
he.rolled.it the barrel

‘He rolled it in and they poked a hole in it.’

(13) k’lx’il i? winesałx. sa?śíwsisalx,
k’l(+)√’x’il i? wine-slx sa?+√śiws-nt-isalx
much DET wine-3PL.POSS DRV+drink-DIR-3PL.ERG
much the their.wine they.drank.it

‘They had a lot of wine. They kept drinking and drinking it.’

(14) ħast i? spu’úsałx. q’wa’q’awałx.
√’has+t i? s+√pu’ús-slx q’wa’q’wa-lx
good+STAT DET NMLZ+heart-3PL.POSS C1C2.PL•drunk-3PL
good the their.hearts they.got.drunk

‘They were really very happy. They all got drunk.’

(15) ixí’…? ł ʔatxįlaxałx.
ixí? ut √ʔtx+įlx-lx
DEM CONJ sleep+AUT-3PL
then they.went.to.sleep

‘Then they went to sleep.’

axá? i? k+√ʔamt=íws √yaxsw+t i? tl √kwáps-s
DEM DET RES+sit=middle fall.off+STAT DET LOC horse-3POSS
this on.the.horse he.fell.off the from his.horse

‘The one who was on the horse fell off his horse.’
(117) a?  ckẉonkẉínpla?st, ilí?  ul
a?  c-kẉn•\sqrt{kẉín}=ps-st-s ilí?  ul
DET  CUST·C2.PL•take=tail-CAUS-3ERG DEM CONJ
the  one.holding.the.tail there and

scəqaqínk.
s-\sqrt{cəq•aq=ink}  
NMLZ•lay·C2.LC=back
he.fell.off.backwards

‘The one following behind, he fell off backwards.’

(118) ul  axá?  tkẉonkẉínplas,  ixí?  nixw
ul  axá?  t+kẉn•\sqrt{kẉín}=plas?-nt-s  ixí?  nixw
CONJ  DEM  RES+C1.C2.PL•take=handle-DIR-3ERG DEM also
and  this.one  he.held.the.reins then also

axá?  yaxw Tah.
axá?  \sqrt{yaxw}+T
DEM  fall.off+STAT
he  fell.down

‘And this one that took the lead also fell down.’

(119) yaft  ?ətxílxəlx.
\sqrt{yaft}+T  \sqrt{?tx+flx-lx}
gather+STAT  sleep+AUT-3PL
everyone  they.fell.asleep

‘Everybody went to sleep.’

(120) ixí?  kẉis  i?  kwáps,  i?
ixí?  \sqrt{kẉin-nt-s}  i?  \sqrt{kwá-p}=s
DEM  take-DIR-3ERG DET  horse-3POSS DET
then  he.took.it  the  his.horse  the

sənkˈlca?sqáxa?.
s(+)=\sqrt{nk(=)lca?(+)}s(+)=qáxa?
horse
horse

‘The boy took his horse.’
‘He went and moved it, it was in the brush that he tied it up.’

‘That’s when he went and laid down.’

‘This one that was on the horse, he was sitting on the barrel.’

‘He did like “whoa…” and he fell off the barrel.’
‘This one who took the lead, him too. . . ‘

‘The chief was really disgusted, he went and got there.’

‘It was a little while before the boy came downstairs.’

‘The boy said “Your horse, I tied it up in the bushes. Look for it if you want to!”’

‘The chief was really disgusted.’
(131) "He looked for his horse, and he was really (disgusted)."

(132) 'He ate, he finished eating, they finished eating.'

(133) "Yes, you’re a very good thief, you’re going to steal good two or three more times."'

(134) 'Tonight, it’s my bottom sheets. You’re going to have to steal my bottom sheets,' the chief said.'
(136) na?́l tḻmilxʷ's 1q̓əḻílxəl̓x.  
na?́l √tḻmilxʷ-s √1q̓-ḻílx-lx  
CONJ woman-3POSS lay.down-C₁.PL•AUT-3PL  
with his.wife they.lay.down  

‘With his wife, they went to bed.’

(137) “t̓i kw̓a? scx̱?kínx  
  t̓i kw̓a? s-c-x+√?kínx  
  EMPH INTERJ NMLZ-CUST-DRV+do.what-INTR  
  just how  
  mi kw̓u náqʷ.oms axáʔ  
  mi kw̓u √náqʷ-m-nnt-s axáʔ  
  COMP.FUT 1SG.ABS steal-APPL-DIR-3ERG DEM  
  will me he.steal.it.from these  
  in-kḻ+√yc̓ʷ+t=íc̓aʔ  
  1SG.POSS-DRV+lower+STAT=covering  
  my.bottom.sheets  

‘The chief said “How is he going to steal my bottom sheets from under me?”’

(138) “íl̓íʔ kn 1q̓ílx, nkw̓kw̓áč.”  
  íl̓íʔ kn √1q̓+ílx n(+)kw̓(•)√kw̓áč  
  DEM 1SG.ABS lay.down+AUT night  
  there I am.laying.down tonight  

‘ “I’ll be laying there, tonight,” he said.

(139) nkw̓kw̓áč ı̱xiʔ i̱itated mat  
  n(+)kw̓(•)√kw̓áč ı̱xiʔ ıʔ mat  
  night DEM DET EPIS  
  it.was.nighttime then supposed  
  scx̱?kínx  
  s-c-x+√?kínx  
  NMLZ-CUST-DRV+do.what-INTR  
  to.do.what  

‘Then it was nighttime, how is he going to do it?’
‘Then the chief went outside. The boy ran inside.’

‘The boy told the chief’s wife “Move over! I’m going to take these sheets!”’

‘“I’m going to wrap the boy up, I killed him already.”’

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24 There is no 3rd person possessive -s pronounced on tk̓l̓milxʷ ‘woman’, which means that the beginning of the stanza could translate to ‘The chief told the woman...’. In this case, the audience would presumably understand that ‘the chief’ in this case refers to the boy, and that the woman mistakenly thinks that the boy is in fact the chief.
‘He pulled away the bottom sheets and went outside.’

‘Then the chief went back inside, and he was going to go to bed.’

‘Well, you said that you were going to wrap my son up, and you killed him already,’ said his wife.”
‘He was disgusted, because the boy stole the bottoms sheets.’

‘Then he went to bed and slept.’

‘The next day, they were eating, the boy was just eating away like nothing happened.’

‘The chief told the boy “Okay, tonight it’s the church, it isn’t far there.”’
“He said "You’re going to steal the priest, body and all."”

‘Not all his robes, you have to take them off, and then take them.”’

‘The boy said “Okay.”’

‘After a little while it was evening, and he went to bed.’
‘That night, it must’ve been two o’clock in the morning, the church wasn’t far.’

‘The boy rushed to the church.’

‘He lit up all the lights, the church was all lit up.’

‘The boy put on the priest’s robe.’
(162) (ixí? q̕ʷʔaylqs x̕ʷuy ?ácqáʔ. 
ixí?  √q̕ʷʔay=lqs x̕ʷuy ?ácqáʔ? 
DEM  black=robe go outside 
then the.priest went outside .

‘The priest went outside.’

(163)  “ax! cn?p’axʷ iʔ sə̓n̓káʔmən! 
ax c-n+√p>ʔ>axʷ iʔ s+n+/káʔ+mn
INTERJ  STAT-LOC+shine<INCH> DET NMLZ+LOC+pray+INS
shining the church

scxʔkínəxʔ?”
s-c-x+√ʔkín-x
NMLZ-CUST-DRV+do.what-INTR
what.is.happening

‘“Oh, the church is all lit up! What’s going on?”’

(164) x̕ʷʔtəŋcǔt  iʔkíʔ, nʔułxʷ.
√x̕ʷʔ+t-p-cǔt  iʔkíʔ  n+√ʔułxʷ
get.up+INCH-REFL DEM  LOC+enter
he.rushed.over to.there he.went.in

‘The priest rushed over there and went inside.’

(165)  ixíʔʔʔʔ  iʔ təʔtwíʔ aʔ  cʔ̕ʔam.  tacʔ̕xíʔ.
ixíʔ  iʔ  t(*)√ʔtwíʔ  aʔ  c-√ʔ̕ʔa-m  ta+c-√ʔ̕xíʔ
DEM  DET  boy  DET  CUST-pray-MID  at+CUST-be.like
that the boy was.praying like.that

‘The boy was praying, just like that.’

(166)  scxʷuy̕ʔs  iʔ  q̕ʷʔaylqs,  iʔ  təʔtwíʔ 
s-c++√x̕ʷuy̕ʔ-s  iʔ  √q̕ʷʔay=lqs  iʔ  t(*)√ʔtwíʔ
NMLZ-CISL+go-3POSS DET  black=robe DET  boy
he.came.to.him the priest the boy

ʔáx̕əl̕mncut,  ḯ̕aymíʔwsntm.
√ʔáx̕l+m-cut  √ʔ̕ay=ʔ̕ws-nt-m
turn.around+APPL-REFL  cross=middle-DIR-PASS
he.turned.around  he.made.the.sign.of.the.cross

‘The priest went up to him, the boy turned around and made the sign of the cross.’

(167)  t̕u  ʔ̕x̕əp  ixíʔ  q̕ʷʔy̕ʷʔyxínʔəms.
t̕u  √ʔ̕x̕l+n p  ixíʔ  q̕ʷʔy̕ʷ√ʔ̕y̕(=)xín=m-s
EMPH  stop+INCH DEM  C1.C2.PL•kneel-MID-3POSS
just  he.stopped then he.got.on.his.knees

‘The priest just stopped and got on his knees.’

355
And the boy just kept on praying.

The boy turned around, and he told the priest “Come here!”

The priest came and got on his knees.

“You truly are a good priest.”

“You’ve done your job on this earth.”
‘I was sent here for you because you are a really good priest.’

‘And then the boy spoke to him.’

‘He said ‘Yes, I’m going to take you to heaven.’’

‘ ‘I will take your body and all, you must be a very good priest.’’
(177) "ya'ya'~~~t  astomítim
   ya'ya'√ya+t  an-stim√tim
   C1C2.PL•gather+STAT  2SG.Poss-NMLZ+C1.C2.PL•thing
all your.things
   √/xw’il-st-x  alá?.
   throw.away-CAUS-2SG.ERG DEM
you.throw.them.away here
   ‘Throw all your things away here.’

(178) √/xw’ilstx  alá?.
   √/xw’il-st-x  alá?.
   throw.away-CAUS-3ERG DRV+thing=person-REFL DET black=robe
he.threw.them.away he.took.off.his.clothes the priest
n?amúts i?  l táqna?.
LOC+sit-3POSS DET the in gunny.sack
he.was.sat.down
   ‘The priest threw them away, took his clothes off and the boy sat him in a gunny-sack.’

(179) qw’ítam  kl  s ank Y k Y áka?tn,  ki?
   √/qw’ít-m  kl  s+n+k Y (•) /k Y (=) áka?+tn  ki?
   pack-MID LOC NMLZ+LOC+bird+INS COMP.OBL
he.packed.him to chicken.house where
kłɔxw’ɔntí•s.
k+√/lx(+)p-nt-í•s
RES+hang-DIR-3ERG
he.hung.him.up
   ‘The boy carried the priest on his back to the chicken house, and he hung him up.’

(180) ixí?  uł  xwuy  Ʉq’lɔx.
   ixí?  uł  xwuy  √/q+flx
   DEM CONJ go lay.down+AUT
then and he.went he.laid.down
   ‘And then the boy went home and went to bed.’

(181) tklkw’ast,  ixí?  i?  likók  qw’ɔlq’w’lt.
   t(+)kw’as(+)t ixí?  i?  likók  qw’l•√/q’fl+t
   morning DEM DET rooster C1C2.PL•speak+STAT
in.the.morning that rooster crowed
   ‘In the morning, the rooster crowed.’
‘The priest said “I got there!”’

‘They were eating breakfast.’

‘The boy told his father “Yes, go to the chickenhouse and take the priest out of there, he must be cold!”’
The chief went there, and the priest was there hung up inside the chickenhouse.

The chief took him off from where he was hanging, and the priest stood up and asked “Have we arrived?”

The chief said “We’ve arrived, yes, my son has done this to you!”

So he went on, and they were eating again.
(190) nstils “i? qʷʔaylq⁸s, way úʔiʔ wayj
n+√st=ils i? √qʷʔay=ɬqs way úʔiʔ wayj
LOC+think=thoughts DET black=robe yes and.then yes
he.thought the priest yes and.then yes

way, kəʔíš.”
way kəʔíš
finish three
he.is.finished that.is.three

‘The chief thought “The priest, okay, and now he’s done, that’s three times.” ’

(191) cut i?… cus i? tətwít “way, way kʷ

cut i? √cun-nt-s i? t(•)√tətwít way way kʷ

say DET say-DIR-3ERG DET boy yes yes 2SG.ABS
said the he.told.him the boy yes yes you

xxʷup, way kʷu xxʷúpropntxʷ.”
√/xxʷu+p way kʷu √/xxʷú+p-nt-xʷ

win+INCH yes 1SG.ABS win+INCH-DIR-2SG.ERG
have.won yes me you.have.beaten

‘The chief told the boy “Yes, you’ve won, you have beaten me.” ’

(192) ixí? ki? way iʔsmáʔmay'.
ixí? ki? way in-s+máʔ√máy

DEM COMP.OBL yes 1SG.POSS-NMLZ+C1C2.PL•tell
that finished my.story

‘That’s the end of my story.’

(193) iskwíst kiʔləwna?.
in-s+/kʷís(+) kiʔləwna?
1SG.POSS-NMLZ+name grizzly.bear
my.name grizzly.bear

‘My name is Grizzly Bear.’

References


A Snohomish telling of “The Seal Hunters”

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Abstract: Oral-based indigenous cultures have stories that persist over time, though some variation may exist in various details and in overall context. Related cultures in particular have similar stories, and assessing the similarities and differences across their tellings of these stories provides valuable historical and cultural background. In the case of endangered languages and cultures, every telling of every story provides important insight. This article presents a recently discovered archived account of a Snohomish version of “The Seal Hunters”, a captivating story that has many variant forms across Salish cultures. The story was written down in the nineteenth century by an intrepid French globetrotting explorer and ethnologist, Alphonse Pinart. This article begins with some background on Pinart, on the Snohomish language and culture, and on the manuscript itself. Then I give a transcription of the Pinart’s French account of the story and a translation into English, followed by a comparative analysis.

Keywords: Snohomish, story, seal hunters

1 Introduction

“The Seal Hunters” is a story that is told by indigenous cultures throughout the Pacific Northwest region of the United States. It is an elaborate and lively story of dwarves (or giants), spirit powers, hunting, captivity, and high adventure. Several versions exist that vary considerably in detail, complexity, and focus.

This article presents another version of the story that is located in an archival repository, as recorded in French by the early Pacific-region explorer and ethnographer Alphonse Pinart (no date). In his hand he summarizes the story as it was told to him by an unnamed Snohomish speaker. Though not as lengthy as some other versions, and though not recorded in the original language nor evidently translated by Pinart, it still provides interesting documentation of the story from an external perspective.

Telling this story here is important for several reasons. Snohomish is a highly endangered language and culture. In such situations, when dealing with language endangerment, documentation—even from archival sources—is critical: every word counts. The same is also true for cultures, especially those based on stories and orality: every story counts. In fact, every telling of every story counts.

Furthermore, apparently no English translation of this telling exists. Since most current speakers of the language do not know French, this article provides them access to Pinart’s account. Finally, since the French version is also not

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available elsewhere, it brings to light a story that until now has only been accessible to those able to access it from its archival repository.

2 Background

Alphonse Louis Pinart was a French ethnographer, explorer, and linguist who lived from 1852–1911. He is famous for his daring adventures in Alaska, Siberia, the Caribbean, the American southwest desert, Easter Island, and Central and South America. His exploits were legendary, and he contributed thousands of artifacts to museums and collections. Some of these were controversial and remain so: he allegedly pilfered historical Spanish documents from archives in New Mexico, and sold a purported Aztec crystal skull to the Trocadéro museum in Paris (Associated Press, 2008). There is even some evidence that the movie “Indiana Jones and the Kingdom of the Crystal Skull” was inspired at least in part by Pinart's adventures. Several of Pinart's manuscripts and artifacts can be found today in the Bancroft Library at the University of California, Berkeley as well as at a museum in his home town in France.

Crucially for this discussion, Pinart also visited the Pacific Northwest, probably sometime during 1875 to 1876. At the time it is likely that he met with Father Eugène Casimir Chirouse, a French Oblate missionary who was famous for his ministry among the tribes of the area, particularly the Snohomish. Chirouse became intimately acquainted with the Snohomish language and culture, compiling a grammar, wordlist, and translations of liturgical material.

During Pinart's visit he became acquainted with at least some Snohomish stories. One story that he recorded is a summary of a Snohomish version of “The Seal Hunters”. As reported in this article, Pinart's version has now been transcribed from the manuscript version and translated into English. I thus discuss here the work involved in rendering the story into English and present the English translation and comparative observations with other versions.

2.1 Snohomish culture and language

The Snohomish tribe had a population of about 350 in 1850, and double that in 1980. They were known as warriors and hunters. They actively participated in the fur trade and interacted closely with Roman Catholic missionaries. Remaining largely neutral in skirmishes during the Indian war (1855–56) and offering some resistance to reservation resettlement policies over the years, the tribe today occupies a somewhat indeterminate status, recognized by the federal government as a political entity but not a tribal one.

Lushootseed (formerly known as Puget Salish) is a Central Coast Salish language whose traditional area ranges from Puget Sound westward to the Cascades. The language has various dialects including:

- Skagit (and Nooksack), Snohomish, Sauk-Suiattle, and Skykomish comprising the northern dialects, and
- Snoqualmie, Suquamish, Duwamish, Muckleshoot comprising the southern dialects
Though Pinart likely came in contact with groups speaking several of these dialects, the story he retells in French is specifically mentioned as coming from the Snohomish, whose language is now grouped with others under the rubric “Lushootseed”.

Lushootseed is a language with few vowels but a complex consonantal system. Its rich morphology is a property it shares with other Coast Salish languages. The orthography involves a (rough) 1-to-1 sound/symbol correspondence, and was standardized by Thom Hess in the 1960’s. It is largely based on the Roman, International Phonetic Alphabet and Americanist alphabets. As regards the lexicon and lexical categories, Lushootseed has few prepositions and adverbs; predicates tend to carry this content. Some function words play several roles: determiners are often used as pronouns, for example.

Many loanwords have entered the language from English, French, Chinook Jargon, and surrounding Native American languages. On the other hand, a rich degree of lexical innovation exists in the language due to the high level of semantic, syntactic, morphological and phonological processes available.

Though the language also has other interesting syntactic, semantic, and pragmatic properties, they will not be addressed in this paper.

2.2 Versions of the story

As mentioned earlier, the story of the seal hunters is commonly told throughout the Pacific Northwest. I next sketch some of the most widely known versions of this ancient story.

An early published account was told in the southern area of Puget Sound (Ballard, 1927). Entitled “The Two Brothers' Journey to the North”, it was documented in English and bears only fragmentary resemblance to the other tellings. It tells about a powerful canoe-maker who fashions a seal out of cedar, places a magic spell on it, and places it in the ocean. Two seal-hunting brothers see it, and one casts a spear into it. The stricken seal swims away with the two men in tow for five days and nights, under the seal's magic charm. Eventually they arrive in a far-away land populated by giants. One of the brothers is attacked and eaten by mosquitoes that were also condors; the other finds an old giant man the size of a tree. The old man goes to a river with a basket and fills it with king salmon, which he calls minnows. He taught the brother how to cook these fish. This was repeated for several days. Then the fifth and last day the giant caught a hundred-foot long whale that he pulled ashore and put under a magic spell. A large slit was opened in the whale, and the brother was put inside of it along with adequate provisions of dried fish. The whale was then healed and sent on its way with instructions to surface often enough to allow the hunter to breathe. After some time they arrived at the hunter's home, at a place that now has become a great gathering place for seals.

Adamson (1934) records two other tellings. The first, by the Upper Chehalis people, is called “The Seal Hunter”. It tells of five brothers, the eldest of whom was a canoe maker and the middle brother a powerful seal hunter. The eldest one makes a seal out of cedar and leaves it floating in the bay where seals were known to congregate. The seal hunter and two of his brothers, on an expedition,
spear the “seal” and with great power it heads westward out to sea with them in tow. Five days and nights later they arrive at a strange land. Two of the brothers went exploring, leaving the youngest of the three behind. They find a giant old man who tells them to return to their brother which they do, only to find him completely devoured by mosquitoes. For five days they watch the giant try to fish rather unsuccessfully due to their interference. The two brothers also become involved in a fishing dispute between this giant and another one. Finally, on the fifth outing the giant succeeds in catching not just a fish but a whale, which they eat. The two brothers are sent to another whale who cut a slit in himself so they could ride inside of him. The whale took them back to their land, and after stopping at several villages they eventually arrived home where the whale died.

The possibly related second version that Adamson (1934) tells is by the Cowlitz and is called “The Wooden Fish”. A widower tries to get salmon for his child but the fisherman refuses. So the widower makes a wooden fish and puts it in the river. The fisherman and his younger brother, while fishing, spear the “fish” and it pulls them down the Cowlitz River day and night until they reached the Columbia where the fish landed. They were attacked by a large flock of bear-sized birds. Hiding his brother under the canoe, the fisherman scouts out the country and comes across a giant old man. Told to return to his brother on the river shore immediately, he finds that mosquitoes (the large birds) have split the canoe and devoured his brother. The old man feeds the fisherman salmon. The two fight a neighbouring, competing giant and kill him, largely due to the bows and arrows that the visitor made. To show his gratitude, the giant decides to send the man back home: he gets a whale, hollows it out and fills it with supplies, puts the fisherman in, and sends it off. After an overnight journey the man arrives upriver at home.

The Jacobs version of the tale (1958) is quite different from the previously documented versions. For example, it is about 26 pages long and recorded in the original language (Clackamas Chinook) with an English translation. About a dozen sealers participate in the adventure, the speared seal is large, and the Indians try unsuccessfully to sever the rope towing them. From this point on the story diverges so much that correspondences are difficult to appreciate and in fact may not exist at all.

Elmendorf (1961) records two Skokomish versions. The first is nine pages long and the second just over two pages. The first tells about two brothers, a canoe maker and a seal hunter. The former makes a seal out of cedar and sets it on a rock. His brother spears it, and it takes off swimming through a fog for four days and nights. The seal changes to a cedar tree, and the hunter and his canoe captain beach the canoe. The next day they see a big canoe with a “little fellow” in it. He dives twice and comes up with a halibut each time. The two stranded hunters decide to steal one of the halibut while the man is diving underwater. Immediately the man gets into his canoe, stretches out his arm, points, and brings his arm around in a circle until he points directly at the shore where the two men are hiding. At this point his arm dips down, he pulls up the anchor, and he canoes directly to the two men. He takes them prisoner and paddles to a large
village full of small people. Several days pass with the two prisoners suffering for want of decent food. A large black cloud arises one day from the south; it turns out to be large swarms of black geese that wage warfare on, and kill, many of the small people. Upon inspection the two prisoners notice pin-feathers sticking in the victims; these were responsible for their deaths. By simply pulling out these deadly pin-feathers the prisoners are able to restore the little people back to perfect health. Everyone cooperated in clubbing the geese, chasing them away and killing and cooking many of them.

The next day an attack of white geese was similarly repelled, as were attacks of swans, mallards, and several kinds of ducks in subsequent days. Since the prisoners were instrumental in saving the people from these birds, they are shown gratitude and released. One summer morning the seal hunter and his captain get into a canoe and head east with their former captors' blessing. Passing several villages of salmon people, they eventually arrive at a steelheads' village. An old man—a whale—takes them aboard and tells them he can take them home to the Skokomish flats. They get inside and travel home inside the whale.

The second, shorter version that Elmendorf records differs slightly from the previous one. There are three brothers: besides the canoe maker and the seal hunter, the youngest is skilled at using the bow and arrow. The eldest brother makes a cedar seal and places it on a rock, his hunter brother spears it and gets towed all day and night until perhaps arriving at Vancouver Island. While hiding all day, they say a small man in a big canoe repeatedly dive for dentalia, some of which they stole. The small man, using the familiar compass-like gesture, found their location and took them to his home village of dwarfs. After a while huge flocks of northbound ducks attacked the village, killing many with their feathers. The two men clubbed several ducks to death. The little people arranged to have them sent home. A big whale swallowed them with their canoe and took them home, ending their eventful year-long adventure.

Martha Lamont's very detailed version of the story as told in the Lushootseed language is transcribed, translated, and extensively analyzed in Bierwert's anthology (1996). Presented line-by-line in the original language with an aligned English translation, it is the longest version, over 40 pages in length. It is, however, embedded in a much larger story. Bierwert prefaces the story with an introduction that situates it in Lushootseed culture and its larger Salishan context; she also presents a schematic analysis of the text including its elaborate discourse and narrative structure.

From this short summary it is obvious that details differ considerably across these various versions of the story. As we will see, though, there is an overall general correspondence with Pinart's telling. Still other versions are told by Chinook, Squamish, Musqueam, and Katzie storytellers, but the ones cited above will suffice for our purposes.
2.3 The manuscript

The manuscript itself is written in French and covers two full pages, comprising 55 lines and 430 words. It has no title, and is found among other assorted papers relating to his interactions with the Snohomish. Figure 1 shows the manuscript.

![Figure 1 Pinart manuscript.](image)

The contents of the manuscript were first discovered by reading and then transcribing the handwritten document. The orthography was interesting in several respects. For example, the script was fairly challenging, with lowercase letters often collapsed in rather than looped. A curious and noteworthy property of this manuscript is that many of the diacritic accents, which are abundant in French, were not used. My translation into French was done keeping as faithful to the original’s grammatical constructions as possible while attempting to preserve and render the narrative style and literary figures.

3 Transcription and translation of the story

In this section I present a transcription of the story as it was recorded in French by Pinart. Then I give my English translation version of the story. A few words from the French manuscript required some degree of interpolation given difficulties in deciphering the handwriting; they (and their translations) are represented in the accounts with a suffixed token “??” to indicate their tentative
status. Punctuation and capitalisation have been normalized, and diacritics have been added to the French.

3.1 Transcription of Pinart's French version

Les Snohomish racontent la légende suivante: Autrefois, disent-ils, plusieurs jeunes gens allèrent à la pêche au phoque dans les Narrows (détroit au sortir de Tacoma dans le Puget's Sound). Bientôt ils aperçurent ce qu'ils crurent être un phoque et lancèrent le harpon qui pénétra dans la peau du phoque. Les Indiens attachèrent la corde à leur canot et trois autres canots s'attachèrent à eux. Mais ils ne pouvaient tirer à eux le phoque qui les entraînait au dehors des Narrows du Puget's Sound et bien loin bien loin vers un pays qui leur était inconnu. Près du rivage le prétendu phoque se transforma en un arbre et la pointe du harpon resta enfoncée dans le corps de l'arbre. Nos Indiens abordèrent et furent fort effrayés. Ils se cachèrent dans les bois avec leurs 5 canots. Peu après ils virent un petit homme s'avancer dans un canot de diminutive proportion. Le petit homme plongeait et chaque fois revenait à la surface avec un saumon. Les Indiens qui le voyaient d'un rivage se disaient qu'ils feraient bien de prendre quelques uns des saumons de notre lilliput. L'un d'eux s'aventura avec son canot et s'empara de l'objet de son aventure et retourna au rivage. Le petit homme revenant de sa plongée après le saumon remarqua le vol et élevant la main il dirigea l'index de sa main vers le rivage en tournant jusqu'à l'endroit où étaient cachés nos Indiens. Il les fit tous prisonniers et les emmena avec lui dans un village où habitent nombre de lilliputs comme lui. Nos Indiens furent réduits à l'état d'esclavage. Peu après les habitants de notre village eurent à se battre contre une armée d'oiseaux. Le combat fut long et cruel mais enfin les lilliputs eurent le dessus, mais ils étaient pour le plus grand nombre couvert de blessures, les tuyaux de plumes leur ayant pénétré les membres de tout côté. Nos Snohomish alors les aident à enlever ces tuyaux de plumes et à dresser leurs blessures. Les lilliputs furent si satisfaits des services des Snohomishs qu'ils résolurent de leur donner la liberté. Le moins petit lilliput les prit dans son canot et les transporta très loin mais devenant fatigué il appela une baleine et lui dit de conduire nos Snohomish à leur demeure. La baleine les conduisit à unison très loin très loin, mais enfin se fatiguant elle-même elle les laissa sombrer. Nos Snohomish se trouvent alors transformés en “grampius” et aux abords?? natifs ils sont toujours en évidence?? pour repousser les phoques dans les Narrows, le “grampius” étant l'ennemi naturel des phoques.

3.2 English translation of Pinart's version

The Snohomish tell the following legend: Long ago, they say, several young men went seal hunting in the Narrows (a strait at the edge of Tacoma in Puget Sound). Soon they noticed what they thought was a seal and threw a harpoon that sank into the seal's skin. The Indians attached the rope to their canoe and three other canoes were attached to them. But they couldn't pull the seal aboard and it towed them beyond the Narrows of Puget Sound and very far, very far away towards a land that was unknown to them. Near the seashore the supposed
seal changed into a tree and the tip of the harpoon stayed stuck inside the body of the tree. These Indians climbed ashore and were very frightened. They hid themselves in the woods with their 5 canoes. Soon afterwards they saw a small man coming towards them in a tiny canoe. The tiny man dived repeatedly into the water and each time he came to the surface he had a salmon. The Indians who saw him from the shore decided among themselves that it would be good if they could take some of the salmon from our dwarf. One of them set forth in his canoe and stole what he was after and returned to the shore. The tiny man, returning from his diving for salmon, noticed the theft. Lifting up his hand he pointed towards the shore and followed it in a circle until he was pointing at the place where our Indians were hiding. He took them all prisoners and brought them with him to a village where many dwarves like him were living. Our Indians were reduced to slavery. Soon after, the inhabitants of our village had to fight against an army of birds. The combat was long and cruel but finally the dwarves prevailed, but most of them were covered with wounds, the quills having penetrated their limbs from every direction. Our Snohomish helped them to remove these quills and to dress their wounds. The dwarves were so satisfied with the services of the Snohomish that they resolved to set them free. The least small dwarf took them in his canoe and transported them very far away but becoming tired, he called a whale and told it to take our Snohomish to their home. The whale took them very far very far but finally becoming tired herself they left her to flounder and sink. Our Snohomish then turned into orcas and in their native coasts?? they are always seen?? driving away seals from the Narrows, since the orcas are the natural enemy of seals.

4 Brief analysis

Clearly this Snohomish recounting shares many elements with the versions mentioned earlier. As can be expected, though, there are noteworthy differences between this telling of the story and other tellings. For example, the motivation for the hunt is different, the pertinent family relationships not playing a role here. The number of canoes and the number of fishermen/hunters is also unique to this version.

The description of the supernatural human in the canoe is likewise different and interesting here. Pinart describes him, and the rest of his tribe, as “Lilliputs”, a term not used in the other versions. This is clearly a literary allusion that is salient for Pinart and that presumably he assumes will also be salient for his intended audience.

Various details conflict across these tellings. For example, consider the species of marine life that the dwarf dives for: here he dives for salmon, whereas in other versions he dives for halibut or dentalia.

Granularity of description varies across these stories. In all of the other accounts the forces attacking the dwarves’ village are specifically named, as mosquitoes and/or specific species of birds. In this story, though Pinart only refers generically to “birds”.

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The return voyage to Snohomish territory is also different in this version. Unique to this telling is the eventual transformation of the hunter protagonists into killer whales; in the other versions they return to their village to resume their daily livelihood.

In terms of lexical selection, Pinart exhibits interesting choices. The word he uses for “orca” or “killer whale” is “grampius”, a slight misspelling of the word “grampus”, also used in French, which has fallen into disuse but which in the nineteenth century meant “orca” and was the Latin genus name for a kind of dolphin.

From a pragmatic perspective Pinart’s narrative involves considerable engagement. Whereas at the beginning of the story he refers to “the Snohomish” several times, by the end they are referred to several times as “our Snohomish” and “our Indians”. Even reference to the dwarves’ village evolves to “our village”. His stance is therefore far from neutral: he views the Snohomish as protagonists.

On the other hand, the story is meant to be construed as describing events taking place long ago. It is told using the simple past and related tenses, which in French indicates remote time and is largely used for written narrative.

An issue that remains unresolved is how exactly Pinart received this story. He almost certainly did not speak Snohomish, so the story was not recounted directly to him by a Snohomish speaker in that language. As mentioned earlier, though, he must have met with Father Chirouse in his travels, and Chirouse was an expert of the language. Did Chirouse recount the story to Pinart? Or did Chirouse interpret into French for Pinart, either simultaneously or consecutively, the recounting of the story by a Snohomish speaker? Was it told to him in English? The lack of strikeouts and other corrections shows that this manuscript was not a real-time transcription, but beyond that the exact means of transmission remains indeterminate.

5 Conclusion

In this article I have presented a new, second-hand account of a Snohomish telling of “The Seal Hunters”. It reunites many aspects of previous versions: seal hunters undertake a dangerous, enchanted journey initiated by a charmed cedar seal; they come into contact with and are made captive by dwarves; alongside their captives they combat aerial forces of nature; finally they return to their home territory thanks to the assistance of a whale.

There has been recent discussion among linguists engaged in language preservation and revitalization about the value of archival work. On the one hand, with speakers of endangered languages in ever shorter supply, and with a paucity of speakers skilled in collecting and analyzing data for these languages, some stakeholders maintain that the allocation of time, effort, energy, and resources should exclusively focus on fieldwork. While this is undoubtedly an important and timely work to undertake, this article presents the results of a modest (and even serendipitous) research effort that likewise brings to light valuable and interesting cultural information from archival sources.
6 Acknowledgements

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References


A Sasquatch story in St’át’ímc

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Abstract: This is a short story I wrote about when I saw a Sásqets (Sasquatch) between Charlie Mack’s and Andrew Wallace’s houses.

1 St’át’ímc

Ats’ xenlhkán ta sásqets áku7 Nséq’a (Charlie Mack’s), lti Lil’wata Tsel’álh c.walh, nzháw’s ta tśitcwsa sCharlie Mack múta7 ta tśitcwsa s7Andrew Wallace. Lhkalálas 10 pm kakwássa, lan ti wa7 xw7utsinásq’et gap. Wá7lhkán nas áku7 Pemberton-a, wá7lhkán pzanwálhen ti nsesqwáoz’a, Lucille. Wa7 ti7 cá7t’lec ta ‘greyhound bus’ áku7 Pemberton-a, 10:15 pm. Lan ts7as ta nukuwa kém’cwyeqs, wá7lhkán uzún ta nts’ák’wa, . . . Ptak ta kém’cwyeqsa knáti7, . . . kent7ú . . . Ptakkán t’it múta7 kagwélena ta nts’ák’wa lti nkém’cwyeqsa. Ptakkálh lti c.wálha Ptakmin’twál i kém’cwyeqskálha. ptakensás ts kém’cwyeqsa, ptakenskán, . . . Kalhéxwa aylh, . . . Ka-7áts’ xenlhkana ti xzúma sqáx7a, wa7 ti7 nt’ágaw’s ta xzúma sqáx7a. Pe-qmin’st múta7 wéq’wéq’em ta máqinsa, ka-táxwa ta máqinsa, zact máqin. Cw7aoz kwas xzumqw, ts’ila ku míxalh. Sq’waxw ti7, stexw t’u7 sq’waxwq’wáxw, . . .! Zact i sqwáoxta múta7 i skwákstsa ta sásqetsa. Ka-p’an’túsema ti7, wa7 ícwa7 szact sp’svsqs, ts’ila ku úcwalmicw ta skwt’úsasa. Zact ta máqinsa lti n7al’kinúsaa múta7 n7alák7a. P’elkúsem ta sásqetsa, nihl ts’axúentsas ta sásqetsa. Wá7lhkán ptinusemskán ta sásqets sapt. Cw7áozkan paqu7mín ta sásqetsa. Lan ti7 wa7 mám’teq ta sásqetsa áku7 tswáw’cwa. Lhkalálas, wá7lhkán q’wázán ta piktsasa ti Sásqetsa! Nihl ti7 t’ú7.

2 Glossary

áku7 there (invisible)
ats’xenlhkan I seen
cát’lec get off
cw7aoz kwas not, none
gap evening
ícwa7 not none, nothing
k’ém’cwyeqs car

Figure 1: Reproduction of a painting by the author

ka-lhéxwa       Suddenly appeared
ka-nk’etalústwal’a we stared at each other
ka-p’an’úsema suddenly turned towards
ka-s7áts’xskana suddenly I saw
kakwássa        dark
kem’cwyeqskálha our cars
kent7ú          around there
knáti7          around here
ku              links words for qualities to words for thing or persons
Líl’wata Tsel’álh c.walh Lillooet Lake road
lan             already
lhkalálas       after awhile, later
lti             on that, in that, at that
mámteqw         going for a walk
máqin, zact     long
míxalh          bear
múta7 and, again, more, plus
megmíga brighten
núkwa7 another
n7ál’kinus forehead
n7aláka shoulder
nas to go
nilh ti7 t’u7 that is it
nseq’ Cracked Rock (across the river from Charlie Mack’s)
nsesqwáoz’a my younger sister, Lucille
nt’áq’eq’sa he/she crossed the road
nts’ákwa my lights
nzhéháw’s between
p’elkúsem turned to look
píktsa picture
papt always
paqu7mín’ afraid
pembertona town of Pemberton
peqmín’st white-ish
ptak to pass by, go past
ptakenskan I past
ptakentwál’ past each other
ptakkan I past
ptinunemskán I think I wonder
pzanwálhen to go and meet somebody
q’wázan paint
sásqets sasquatch
skwakst armshands
skwt’úsa face
sp’vsqes nose
sqáxa7 dog
sq’waxw slim, thin, skinny
sqwaoxt feet, legs
really, very
also, too
singular article
that
same as, like, similar
his house
coming toward, arriving
river
person, native person
lower lights (beams)
I am
shiny
involved
Thursday
big
big body, big butt
A Bella Coola tale

Hank Nater

**Abstract:** Most Bella Coola stories belong in one of two categories: (1) *sma* ‘publicly shared parable (involving animals and/or animated objects)’ and (2) *ʔalac‘i* ‘familiy owned account (with human participants)’. However, in a few tales, we find, beside realistic (*ʔalac‘i*) components (location, human participants and activities), purely imaginary (*sma*) elements as well (e.g. supernatural places, people interacting with animals in an unusual manner, transformations). The text presented in this paper provides a good sample of this intermediate category.

**Keywords:** Salish, Bella Coola, oral traditions, story genres, genre overlap

1 **Introduction**

The text displayed in Section 3 below is a transcription-interpretation of “The Frog Children”, a story told by the late Dr. Margaret Siwallace, and recorded, over forty years ago.

In terms of native genre, this tale is neither entirely realistic nor wholly otherworldly. The narrator initially identifies the story as a *ʔalac‘i* ‘report’, but subsequently uses the verb *smxmayamk* ‘to tell as a parable’ (← *sma* ‘parable’): see the underlined sequences in the text (lines 1–3). This story is a *ʔalac‘i* insofar as it belongs to the narrator, yet it has – like a *sma* – a moral: **DO NOT DISDAIN THOSE THAT MAY APPEAR INFERIOR TO YOU**. Realistic elements are location (Kitlope), the main character (a chief’s daughter, though unnamed), and seasonal activity (Indian rice harvest), but the Frog Clan is certainly of a more fictitious nature, as are frog-human interaction and frog-to-human/human-to-frog transformations.

From a European perspective, this story might be considered a **myth** or **legend**, and is similar to “The Frog King or Iron Henry”, the well-known fairy tale (as recorded by Jacob and Wilhelm Grimm) about a frog to whom there is more than meets the eye.

2 **Symbols and abbreviations, grammatical information**

The symbol ("Combining Inverted Bridge Below") follows proclitics and precedes enclitics, a hyphen follows prefixes and precedes suffixes, a colon precedes a reduplicated consonant; **ACC** accidentally, **APP** applicative, **ART** article, **BEN** benefactive, **CAUS** causative, **CL** enclitic or enclitic cluster, **CONN** connective, **DEF** definite, **DEM** demonstrative, **DIM** diminutive, **DIR** directional, **FEM** feminine, **HYP** hypothetical, **INCH** inchoative, **INDEF** indefinite, **INT** intensive-distributive,
MED medium, NOM nominalizer, OBJ object, PASS passive, PL plural, PREP preposition, PRG progressive-durative, PROX proximate, RECIP reciprocal, REFL reflexive, REM remote, REP repetitive, SEP separated, SG singular, SUB subject.


3 The text

(1) well tell.story-1SG CL PREP ART Kitlope-from CL
   ti.s ?alac‘i t’ayx
   ART story DEM
   ‘Well, I’ll tell you another story now, this story from Kitlope.’

(2) ?al a‘ayk’  ?al t‘c‘ayt‘
   PREP ART old PREP Kitlope
   s-sm:sm:ya-amk-im k‘w(u)
   CONN ‘tell.parable.REP-APP-PASS.3SG CL DEM
   ‘Long ago, such legends were often told in Kitlope.’

(3) ta k‘wuk‘pi-l-c t‘
   be.him-3SG CL ART grandfather-late-1SG ART
   ti:sm:sm:ya-amk-t‘ayx  ?ul’nc
   ART tell.parable.REP-APP DEM PREP me
   ?al a‘paca-l-c k‘  ?al t‘c‘ayt‘
   PREP ART first-1PL CL PREP Kitlope
   ‘It is my grandfather who told me stories that we inherited from our Kitlope ancestors.’

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’A long time ago, a number of women decided to go digging for wild rice, and they went to a place where they dug for wild rice.’

‘And the chief’s daughter went along with these diggers.’

‘And she started digging.’

‘And she unintentionally proceeded to dig up a frog.’

‘She threw away the frog.’

‘She was swearing at the frog as she threw it away.’

‘But she seemed to be followed constantly by the frog, as she kept digging it up.’

‘And she kept talking to it like that, over and over.’
‘She kept throwing it away and swearing at it.’

‘Then the dusk began to set.’

‘The girl saw this handsome young man, a well-built young man.’

‘He said to her that he would take her, that he would walk her home.’

‘Then she was made to lose her way by the young man who was a frog.’
(19) tix\(_k\)mak\(_w\)uc’ ta\(_{-}\)tix-ta:tyamk-i-s ta\(_{-}\)mack’\(_w\)_tya
be.him\(_{CL}\) ART\(_{INT-discard.REP-3SG.OBJ-3SG.SUB}\) ART\(_{frog,}\)ART
\(t_a\)_caacti\(_{t_ya}\) s’\(\lambda\)_mstn-am-timut-s
ART\(_{young,}\)ART CONN-person-become-CAUS.REFL-3SG
\(?u_l\)_?i\(l\)
PREP\(_{DEM}\)
‘It was the frog that she had been casting aside who had become a young man to her.’

(20) \(?a_l\)_k\(_{n}\)-i-s\(_c\)
PRG\(_{take-3SG.OBJ-3SG.SUB_{CL}}\) PREP\(_{ART,}\)village-3sg\(_{ART}\)
\(?u_l\)_ta\(_{-}\)amat-s\(_t_ya\) s-?apsu\(l\)-s ti\(_{-}\)mack’\(_w\)-mx
PREP\(_{ART,}\)location-3SG\(_{ART}\) CONN-dwell-3SG ART\(_{frog-clan}\)
\(\?a_l\)_\(\lambda\’\)_\(\chi\”\)ca\(\gamma\)_\(\chi\”
PREP\(_{Kitlope}\)
‘He now took her to his home, to the place where the Frog Clan resides at Kitlope’.

(21) talaws\(_c\)
marry\(_{CL}\) PREP\(_{DEM}\)
‘Now he married her.’

(22) x\(\lambda\)-mna-lx-s\(_k\)\(_c\)
have-child-\(INCH-3SG\_CL\) ART\(_{young,}\)ART PREP\(_{ART,}\)two
\(w_a\)_\(m:n\)_mnck’\(_w\)-\(i\)
ART\(_{frog-DIM}\)
‘Then the young woman had two frog babies.’

(23) \(?a_l\)ac’i-tu-ti-s\(_k\)\(_c\)?itk’\(_w\)uk way tu\(_m:n\)_mnck’\(_w\)
tell-BEN-\(3PL.OBJ-3SG.SUB_{CL}\) well ART\(_{children-3SG}\_ART\)
‘Well, she told her children:’

(24) ‘lay t’\(\alpha\)’\(\chi\”\) wa\(_{-}\)sul-s ta\(_{-}\)man-l-c, lay t’\(\alpha\)’\(\chi\”\)
“far DEM ART\(_{house-3SG}\) ART\(_{father-SEP-1SG}\) far DEM
“Way over yonder is my father’s house, way over yonder.”

(25) ‘\(\lambda\)_\(n\)_\(\acute{n}\)us wa\(_{-}\)asqaya\(l\)_\(c\)
two ART\(_{totem.pole}_ART\) PREP\(_{ART,}\)front of house\(_{ART}\)
“There are two totem poles in front.”
“Climb the steps if you go and want to see your grandfather, my father and mother.”

She told them this repeatedly.

‘And the frog children did go on their way now.’

‘They tried to see their grandfather.

‘They tried to climb up the steps.’

‘But they were kicked [off the steps] over and over.’

‘This happened to them again and again.’

“These useless frogs!”

“That is what they kept saying about them.’

‘But they kept on climbing.’
(36) ?ay-tu-tim˽kʷtuc’
be.thus-CAUS-3PL.PASS_CL
‘And they were treated the same way again and again.’

(37) χapa-ti-s˽kʷaluc’
ta_qʷalm_tux
carry-3SG.OBJ-3SG.SUBj_CL ART|older.sibling|ART
ʔiɬ|susqʷii-sʔiɬ
ART|younger.sibling-3SG.ART
‘The older brother tried to carry his little sister.’

(38) ?al-ʔay-tu-tim˽kʷtuc’
PRG-be.thus-CAUS-3PL.PASS_CL
CONN-kick-3PL.PASS
s-ka_kl-tim
CONN-HYP_drop-3PL.PASS
‘But again, they were kicked and made to fall [off the steps].’

(39) ?in:ʔixaʔii-na˽kʷalulukʷw
s-ka_c’kt-aw
almost.accomplish.REP-3PL_CL
CONN-HYP_arrive-3PL
ʔuɬ|ta_kʷutii̱xʷ_txʷ
s-ʔay-tu-tim
PREP|ART|topj_ART
CONN-be.thus-CAUS-3PL.PASS
‘And every time they almost reached the top [of the steps], they were treated the same way.’

(40) lip’cut-lx-a˽kʷ
?ac
ʔuɬʔiɬ|stɑ̃-awʔiɬ
return-INCH-3PL_CL DEM
PREP|ART|mother-3PL_ART
‘They had to go back to their mother.’

(41) ?alac’-amk-cut-aw
s-ʔal-ʔay-s
wa_c’kt-tu-tim
tell-APP-REFL-3PL
CONN-PRG-be.thus-3SG
ART|event-CAUS-3PL.PASS
‘And they described to her what had happened to them.’

(42) “ʔay ka_ʔał-kʷn-tuɬap_ʔa”
Alright
HYP|PRG-take-1SG.SUB+2PL.OBJ_CL
“Alright, maybe I should take you to them.”

(43) cut_kʷic’ik
ʔiɬʔaʔiɬ
(ʔiɬ)stan-awʔiɬ
sayj_CL
DEM
(ART|mother-3PL_ART
‘So she, their mother, spoke.’

(44) s-λ’msta-nalus-am-timut-s˽kʷc’
NOM-person-joined-become-CAUS.REFL-3SG_CL
DEM
‘Then she changed herself into a human being.’
(45) ?ic’ama-y-anm-s  s-ka˽ƛ’ap-s
blanket-become-3SG  CONN-HYP-go-3SG
s-ka˽ʔal-kʷn-ti-s
CONN-HYP-PRG-take-3PL.OBJ-3SG.SUB
‘She wrapped herself in a blanket and carried them with her.’

(46) c’kt-s˽ʔu  ?u˽ʔiluc’ik-s  s-k’x-im˽c’
arrive-3SG.CL  PREP_ART_village DEM  CONN-see-3SG.PASS.CL
s-cix-s  ?ił
CONN-be.her-3SG  DEM
‘When she arrived at the village, the people saw that it was her.’

(47) wa-s  s-ʔaɬ-k’ił-txʷumat-s  c’ayx
who-3SG  CONN-PRG-without-direction-3SG  DEM
ʔaɬ_ta˽sul_txɬ
PREP_ART_village ART
‘That she was the one who had strayed from the village.’

(48) ?ay-uc-s˽ʔu  c’ayx
be.thus-mouth-3SG.CL  DEM
s-ka˽nu-t’xʷ-als-m-aw
CONN-HYP_inside-sweep-house-MED-3PL
s-ka˽ʔayaw-als-m-aw
CONN-HYP_change-house-MED-3PL
ʔaɬ_a˽ka˽pacaɬ  s-ka˽ʔustxʷ-s  ?uɬ_txʷ
PREP_ART_HYP_first  CONN-HYP_enter-3SG  PREP_DEM
‘She told them to sweep and change [the sand in] the house before she would go in.’

(49) ?ay-na_s˽ʔu  iluc’ik-s  s-nt’xʷ-als-m-aw
be.thus-3PL.CL  CONN-inside-sweep-house-MED-3PL
‘And they did sweep the house.’

(50) ?ustxʷ-s
enter-3SG
‘And she went inside.’

(51) “χl:χl-tu-ti-c
I sent my children to you for you to be seen by them.”
"But they were kicked off these steps over and over, that is why they came back to me."

“They told me what happened to them, so I brought them to you for you to see them.”

‘That’s what the young woman said to her father.’

‘Then she opened the blanket she was wearing, and placed her frog children on the ground.’

‘That’s the end [of the story].’

References


Part V
Additional contributions
A note on Nez Perce verb agreement, with sample paradigms

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Abstract: The Nez Perce verb agrees with the subject and the object in person and number. This paper considers the full paradigm of verb agreement in transitive clauses, documenting a series of previously undescribed restrictions on the use of agreement affixes as well as extended uses of originally non-agreement morphology as part of the agreement system. Data is drawn from systematic elicitation of four transitive paradigms. Two full paradigms are presented in the appendix.

Keywords: Nez Perce, agreement, morphology, paradigm elicitation

1 Introduction

The Nez Perce verb shows agreement for both the subject and the object, as grammatical work on the language has nearly invariably pointed out. In (1), for instance, the verb bears dedicated prefixes indexing the 3rd person and plural features of the subject, along with the plural feature of the object. (Here and below, subject-indexing prefixes are bolded in numbered examples, and object-indexing prefixes are italicized.)

(1) Matt  kaa  George-nim  kiye
    Matt.NOM and George-ERG  I.PL.INCL.CLITIC
                           hi-pa-náac-’yaž-n-a  cepéeletp’et-pe.
 3.SUBJ-S.PL-O.PL-find-P-REM.PAST  picture-LOC

‘Matt and George found us (inclusive) in the picture.’

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1The following abbreviations are used in glosses: 3/3 3rd person subject and 3rd person object portmanteau, 3SUBJ 3rd person subject, 3OBJ 3rd person object, ACC accusative, C complementizer, CIS cislocative, ERG ergative, DEM demonstrative, FUT future, HAB.PRES present habitual aspect, IMPERF imperfective, INCL inclusive, LOC locative, NOM nominative, O.PL plural object, P perfect/perfective aspect, PRO null pronoun, RECIP reciprocal, REM.PAST remote past tense, S.PL plural subject, SUF numeral suffix, TRANS translocative.

What has been less appreciated is a series of restrictions on agreement, of the general form in (2):

(2) If the object has features X (and the subject has features Y), features Z from the \{subject,object\} cannot be indexed on the verb.

An example of this type of restriction is seen in (3). When the subject is 1SG and the object is 3PL, as in (3a), the verb indexes the plural feature of the object via the prefix naac-. When the subject becomes 1PL, however, as in (3b), the plurality of the object may no longer be indexed on the verb. Only subject plurality is marked, via the prefix pa-.

(3) a. *Pro 'a-náac-’ya̱x-n-a Matt kaa Jim-ne cepéeletp’et-pe. picture-LOC
     ‘I found Matt and Jim in the picture.’

 b. *Pro ‘a-pa-’yáx-n-a Matt kaa Jim-ne cepéeletp’et-pe. picture-LOC
     ‘We found Matt and Jim in the picture.’

Note that the absence of naac- in (3b) cannot be simply attributed to a ban on the co-occurrence of naac- and pa-: these prefixes co-occur in examples like (1). Nor can it be attributed to a two-prefix templatic maximum, given that three prefixes co-occur in (1). Rather, the generalization may be preliminarily stated as in (4):

(4) If the object has features [-PART(3ICIPA N T), PL], and the subject has features [+PART, PL], then [PL] from the object cannot be indexed on the verb.

In (1), the object is [+PART, PL], the subject is [-PART, PL], and there is no agreement restriction. In (3b), the object is [-PART, PL] and the subject is [+PART, PL]; that is, the person features of the subject and object have been reversed. In this situation, an agreement restriction is observed.

My primary goal in this paper is to document a series of restrictions of this type, based on data gained from systematic elicitation of paradigms. Such restrictions, I submit, constitute a real and enduring part of the verbal agreement system of Nez Perce; they surface in slow and systematic elicitation, and are in evidence for earlier stages of the language in paradigms recorded during the missionary period (Morvillo 1891; Smith 1840). Nevertheless, they have largely escaped notice in the modern literature – an omission which is particularly noticable in the
paradigms assembled in Deal (2010a,b). Here, I set the record straight regarding the paradigm of verbal agreement and the existence of restrictions like (4). In so doing, I aim to lay the descriptive groundwork for an explanation of why the restrictions come out as they do.

In the background of this investigation are certain methodological matters that deserve attention before we begin. Why have agreement restrictions like (4) not been noted in the modern literature (Aoki 1970, 1994; Crook 1999; Rude 1985; Velten 1943)? Why are they not in evidence in the paradigms presented in Deal (2010a,b)? One notable generalization about the modern descriptive literature on Nez Perce verbal agreement is the prevalence of what we might call ‘morpheme-based’ description, rather than ‘paradigm-based’ description. That is, rather than presenting a paradigm for (say) agreement with plural objects, modern descriptions have generally concentrated on properties of particular affixes, such as *nees*-(O.PL) (seen in the examples above as predictable variant *naac*-). This prefix been characterized as follows:

- plurality of object, i.e., action affecting several people or things (Velten 1943:280).
- indicating the plurality of the object (Aoki 1970:108).
- (plural object prefix); used when the object is plural (Aoki 1994:478).
- A plural direct object is regularly indicated by the prefix *nees-*.
- Verbs indicate the number of neither a singular subject nor a singular object, but they do indicate the plurality of a direct object with the prefix *nees-*.
- *Nees* is purely number agreement and not person agreement (Crook 1999:125).

This style of presentation is no doubt motivated by the ease with which agreement affixes may be segmented. Yet it turns out that that the basic description of *nees* as a plural object marker is not complete. Object plurality is a necessary but not sufficient condition for the use of *nees*-. In assembling full paradigms for the Nez Perce verb in Deal (2010a,b), I assumed not only the correctness, but also the completeness, of previous morpheme-based descriptions, and aimed to present those descriptions in paradigmatic form. But because the morpheme-based descriptions were incomplete, information was unintentionally added by moving from one style of description to another.

Further complicating the picture is the fact that consultants do sometimes accept and produce forms which violate agreement restrictions. Examples (5), for

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2 For instance, Crook (1999:123) writes that “prefixal inflection involves much less suppletion than is found in suffixal inflection. With one exception, we can treat the different categories of prefixal inflection separately without considering them as part of a morphologically interdependent complex”.  

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instance, violate restriction (4). Examples of this type were taken into consideration in assembling the earlier paradigms.

(5) a. 'Imee 'eetx 'e-pe-nees-hex-nu’ pro.
   2PL.NOM 2PL.CLITIC 3OBJ-S.PL-O.PL-see-FUT PRO.3PL
   ‘You will see them.’ (Deal 2010b:97)

   b. Pro 'e-pe-nees-hex-n-e pro.
      PRO.1PL 3OBJ-S.PL-O.PL-see-P-REM.PAST PRO.3PL
      ‘We saw them.’ (Rude 1985:39)

These data points contrast with the data point in (3b). What is the nature of this variability? Is it true grammatical optionality? Is it variation between dialects or idiolects, variation conditioned by the verb, or some other type of conditioned variation? Or does it simply reflect noise in fieldwork data, of the sort that may result from miscommunications with consultants or simply performance errors (due, perhaps, to the cognitively taxing nature of certain elicitation sessions)? In the absence of evidence bearing on these questions, there is a clear attraction to treating (3b) as the exceptional case. It is (3b), rather than (5), that violates an otherwise simple generalization about the distribution of _nees-_: _nees-_ appears if and only if the object is plural. But it turns out that once repeated, controlled elicitation is carried out, it is (5) whose status becomes clearly exceptional. Consultants who occasionally produce or accept forms like (5) stop producing and accepting those forms in tasks of systematic paradigm elicitation. Only forms like (3b) are produced and accepted. That suggests that the status of (5) may be just be ‘noise’. To put it slightly differently, (3b) deserves explanation in terms of a theory of agreement; (5) deserves explanation by means of a theory of performance or, perhaps, simply a close study of the particulars of an elicitation session. This conclusion becomes clear only through systematic elicitation of multiple paradigms – a technique which has not been discussed in the previous literature on Nez Perce.

In sum, the paradigms in Deal (2010a,b) were based on two assumptions that proved faulty: first, that the standard modern morpheme-by-morpheme descriptions have been not only correct, but also complete; and second, that examples like (5) represent the grammar of Nez Perce, whereas examples like (3b) do not. I hope these remarks make it clear why I take the paradigms presented in this paper to replace those I provided in earlier work, rather than to complement them.

In the rest of this paper, I present my case for an updated view of the verbal agreement system. The next section introduces the basics of the system, drawing on Aoki (1970, 1994); Crook (1999); Rude (1985); Velten (1943), as well as the results of systematic paradigm elicitation. Section 3 then presents the full agreement paradigm and discusses the elicitation methodology behind it. At this point it is possible to state a number of agreement restrictions. Section 4 concludes by discussing several analytical options for the agreement system. Finally, two full verbal paradigms are provided as an appendix.
2 Basics of the agreement system

Nez Perce verb agreement involves three prefix positions and two suffix positions. These positions are bolded in the schematic structure in (6).

(6) Schematic structure of the verb

\[
\text{person} - \text{S #} - \text{O #} - \text{causative} - \text{root} - \text{applicatives} - \text{aspect/mood} - \text{S #} - \text{space} - \text{tense}
\]

We begin with the person marking position. Observe that while there are separate positions for subject and object number marking in (6), there is only one position for person marking. Three morphemes that index 3rd persons are possible in this position: hi- for a 3rd person subject, ’e(w)- for a 3rd person object, and portmanteau pee- for a 3rd person subject along with a 3rd person object. (We will see that the distribution of pee- and ’e(w)- is subject to additional restrictions.)

(7) a. Angel-nim hi-cewcew-téetu pro.
    Angel-ERG 3SUBJ-call-HAB.PRES PRO.1SG
    ‘Angel calls me.’

b. Pro ’e-cewcew-téetu Angel-ne.
    PRO.1SG 3OBJ-call-HAB.PRES Angel-ACC
    ‘I call Angel.’

    Angel-ERG 3/3-call-HAB.PRES Bessie-ACC
    ‘Angel calls Bessie.’

Modern descriptions have generally held that there is no special (non-reflexive) person inflection for 1st and 2nd person. As Rude (1985:30) writes, “the semantic contrast is between 1st and 2nd person on one hand and 3rd person on the other in a participant versus non-participant deictic system.” All acknowledge, however, the existence of two other types of affixes which apparently occupy the same prefix position as hi-/’e(w)-/pee-. One is the reflexive, which contains specialized forms for all person-number combinations (with the exception of 2PL and 3PL, which are syncretic). The other, more crucial for our purposes here, is the reciprocal, which is an invariant prefix pii-. Contrast reciprocal (8a) with non-reciprocal (8b):

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3 The ’ew- allomorph appears when a glottal segment follows.
4 The exception is Velten (1943), who mistakes the initial vowel of certain verb stems for a 1st/2nd person agreement prefix.
5 See Rude (1985:40) for the paradigm of these affixes, and Deal (2010b) for discussion of their status as detransitivizing derivational morphemes.
(8) a. Caan kaa Meeli pii-suk-n-e.  
   John.NOM and Mary.NOM REcip-recognize-P-REM.PAST  
   ‘John and Mary recognized each other.’

b. Pro  ’e-sukí-ce ko-nyá.  
   PRO.1SG 3OBJ-recognize-IMPERF DEM-ACC  
   ‘I recognize that person.’

We will see that the *pii-* prefix has acquired a significant, non-reciprocal use as part of the person agreement system.

There are two positions in (6) associated with subject number. Only one of these positions may be used in a given word; the choice depends on aspect/mood. In the perfect/perfective\(^6\) and the future, prefix *pe-* is used to index a plural subject. The examples below demonstrate for perfect/perfective. (These examples include a verb root triggering vowel harmony; *’ew-* and *pe-* accordingly surface as *’aw-* and *pa-*.)

(9) a. Pro  ’aw’yááxna Matt-ne cepéeletp’et-PE.  
   PRO.1SG 3OBJ-find-P-REM.PAST Matt-ACC picture-LOC  
   ‘I found Matt in the picture.’

b. Pro  ’apa’yááxna Matt-ne cepéeletp’et-PE.  
   PRO.1PL 3OBJ-S.PL-find-P-REM.PAST Matt-ACC picture-LOC  
   ‘We found Matt in the picture.’

The imperfective, habitual, and imperative each use a special suffix for subject plural, appearing immediately after the aspect/mood suffix. The examples below demonstrate this for the (present) habitual, (10), and the imperfective, (11).\(^7\)

(10) a. Pro  ’e-çewçew-tet-tu Angel-ne.  
   PRO.1SG 3OBJ-call-HAB.PRES Angel-ACC  
   ‘I call Angel.’

b. Pro  ’e-çewçew-tée-’nix Angel-ne.  
   PRO.1PL 3OBJ-call-HAB.PRES-S.PL Angel-ACC  
   ‘We call Angel.’

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\(^6\)This is the aspectual category described as ‘P aspect’ in Deal (2010b), and glossed as ‘P’ in examples.

\(^7\)See Deal (2010b) for discussion of the present habitual aspect versus past habitual aspect.
(11) a. \(Pro \ 'e\-'pewi-se \ Angel-ne.\)
    \(\text{PRO.1SG 3OBJ-look.for-IMPERF Angel-ACC}\)
    ‘I am looking for Angel.’

b. \(Pro \ 'e\-'pewi-s-ix\) Angel-ne.
    \(\text{PRO.1PL 3OBJ-look.for-IMPERF-S.PL Angel-ACC}\)
    ‘We are looking for Angel.’

Only plural number is marked here. Evidence that singular number is not marked comes from animacy effects, as reported in Deal (2015b).

Only [+ANIMATE] arguments may control plural agreement in Nez Perce. Inanimate plural arguments occur with the same verb forms as are used for singulars; these forms must therefore be neutral with respect to number. The examples below demonstrate this for the copula, though the effect appears to hold across all verbs. Observe that the animate subjects control the plural agreement suffix -iix in (12a–b), but that the inanimate subject in (12c) does not. The verb form for an inanimate plural subject in (12c) is the same as for an animate singular subject in (12d).

(12) a. \(\text{Émti hi-w-s-ix \ pîilep-t há-ham.}\)
    \(\text{outside 3SUBJ-be-PRES-S.PL four-SUF PL-man.NOM}\)
    ‘Four men are outside.’

b. Lep-ít pícpic hi-w-s-ix \ 'iníit-pe.
    \(\text{two-SUF cat.NOM 3SUBJ-be-PRES-S.PL house-LOC}\)
    ‘Two cats are in the house.’

c. Lep-ít cepéepy’uxtin’ híi-we-s  \ 'iníit-pe.
    \(\text{two-SUF pie.NOM 3SUBJ-be-PRES house-LOC}\)
    ‘Two pies are in the house.’

d. Harold híi-we-s Clarkston-pa.
    \(\text{Harold.NOM 3SUBJ-be-PRES Clarkson-LOC}\)
    ‘Harold is in Clarkston.’

Object number is marked by the prefix \(nees-/neec-\); the latter allomorph appears before a glottal segment. (With vowel harmony, these affixes become \(naas-/naac-\).)

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\(^8^\)See Deal (2015b) for a fuller discussion of gender/animacy effects in Nez Perce. These effects are not discussed in the prior literature.
Once again, singular number is not marked. There is again an animacy effect on the arguments that may condition plural agreement; only animates may control this agreement. See Deal (2015b) for examples and discussion.

A final aspect of verb morphology which bears on the agreement system is space marking. Space markers -m ‘cislocative’ and -ki ‘translocative’ appear between aspect/mood suffixes (followed by a subject number suffix, if applicable) and tense suffixes. These morphemes typically indicate location near or toward the speaker (cislocative) or away from the speaker (translocative), and are studied in this usage in Deal (2009).

Rude (1985:49) notes that “often the existence of a 1st person direct object is reinforced by the cislocative”. In keeping with this observation, we will see that the cislocative (in connection with the reciprocal) has acquired a role as part of the agreement system.

3 Agreement restrictions in systematic paradigm elicitation

Elicitation of person-number paradigms for four transitive verbs was carried out in the summers of 2012 and 2013. Data was collected for all non-reflexive cells in a paradigm varying both number and person for both subject and object. Thus, 28 paradigm cells were collected per verb. The verbs were ‘iyaaq ‘find’, hexte ‘go see, visit’9, ‘ipewi ‘look for’, and cewcewi ‘call on the phone’.10 All arguments were definite and human-referring (generally, pronouns, proper names, or coordinations thereof). Four aspect/mood categories were used: perfect/perfective, future, imperfective and present habitual. (The first two of these categories take

9The verb root here is heki ‘see’ plus suffix -te ‘go to V’.
10This verb originally meant ‘whisper’.

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prefixal subject number agreement; the second two take suffixal subject number agreement.) Data was elicited from two native speakers, who worked together throughout the elicitation task. As each form was elicited, it was written on a whiteboard, and verbally confirmed with the speakers. Two of the paradigms (for ‘iyaaq ‘find’, perfect/perfective aspect, and cewcewi ‘call’, present habitual aspect) were then typed up and reviewed an additional time with the two speakers, to catch any remaining errors.

I present the data in Tables 1 and 2 in schematic form; in the appendix, I present the full paradigms for ‘iyaaq ‘find’ (perfect/perfective aspect) and cewcewi ‘call’ (present habitual aspect). To aid the discussion, I have assigned a number to each paradigm cell in Tables 1 and 2. The (a) form in each cell represents the findings for verb forms where subject number is expressed as a prefix (in this study, perfect/perfective and future). The (b) form represents the findings for verb forms where subject number is expressed as a suffix (in this study, imperfective and present habitual). In the (b) forms, I exemplify with imperfective except in lines 2b and 6b, for reasons to be discussed in the next paragraph. The suffix -se is the general form of the imperfective; -s-iix represents imperfective aspect plus plural subject number. In lines 2b and 6b, I show the present habitual, where the general form is -teetu, and -tee-‘nix represents aspect plus plural subject number. (See (10).)

The data collected in this elicitation task was highly consistent. Of the 112 forms collected, only 3 (2.7%) departed from the schematic paradigm I present below. A first case concerned form 2b (2PL on 1SG). The consensus form given was expected for 2SG on 1SG; however, one of the two speakers also provided the expected (2PL on 1SG) form. A second case concerned form 6b (2PL on 1PL); the consensus form given was for 2PL on 1SG. This occurred immediately after the error just discussed; there may have been confusion about which cell was in question. The third and last case concerned form 28a, 3PL/3PL (3PL on 3PL); the consensus form given was for 3PL on 3SG, which had just been elicited. In each of these three cases, the form provided for one of the four paradigms contrasted with those found in the three other paradigms. I therefore assume that these were errors. (Notably, none of these errors were in the ‘find’ or ‘call’ paradigms submitted to speakers for a second round of review and correction. It is very possible that, had these forms been additionally reviewed in this way, they would have been corrected.) The errors concerning cells 2b and 6b were found in the paradigm using imperfective aspect. That is why, in Table 1, I exemplify these cells using present habitual aspect instead.11

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11I do not switch entirely to present habitual due to a morphological interaction between this aspect and the cislocative, which partially obscures a relevant pattern. See the discussion around (19).
Table 1: Results of systematic paradigm elicitation, collapsed [morphemes]

<table>
<thead>
<tr>
<th></th>
<th>1sg O</th>
<th>1pl O</th>
<th>2sg O</th>
<th>2pl O</th>
<th>3sg O</th>
<th>3pl O</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s S</td>
<td>—</td>
<td>—</td>
<td>9a. 0-</td>
<td>13a. 0-</td>
<td>17a. ’e-</td>
<td>23a. ’e-nees-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9b. 0-•-se</td>
<td>13b. 0-•-se</td>
<td>17b. ’e-•-se</td>
<td>23b. ’e-nees-•-se</td>
</tr>
<tr>
<td>1p S</td>
<td>—</td>
<td>—</td>
<td>10a. pe-</td>
<td>14a. pe-</td>
<td>18a. ’e-pe-</td>
<td>24a. ’e-pe-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10b. -s-iix</td>
<td>14b. -s-iix</td>
<td>18b. ’e-•-s-iix</td>
<td>24b. ’e-nees-•-s-iix</td>
</tr>
<tr>
<td>2s S</td>
<td>1a. (pi)•-m</td>
<td>5a. nees-•-m</td>
<td>—</td>
<td>—</td>
<td>19a. ’e-</td>
<td>25a. ’e-nees-</td>
</tr>
<tr>
<td></td>
<td>1b. (pi)•-se-m</td>
<td>5b. nees-•-se-m</td>
<td></td>
<td></td>
<td>19b. ’e-•-se</td>
<td>25b. ’e-nees-•-se</td>
</tr>
<tr>
<td>2p S</td>
<td>2a. pe-•-m</td>
<td>6a. pe-nees-•-m</td>
<td>—</td>
<td>—</td>
<td>20a. ’e-pe-</td>
<td>26a. ’e-pe-</td>
</tr>
<tr>
<td></td>
<td>2b. -tee-’nix</td>
<td>6b. nees-•-tee-’nix</td>
<td></td>
<td></td>
<td>20b. ’e-•-s-iix</td>
<td>26b. ’e-nees-•-s-iix</td>
</tr>
<tr>
<td>3s S</td>
<td>3a. hi-</td>
<td>7a. hi-nees-</td>
<td>11a. hi-</td>
<td>15a. hi-</td>
<td>21a. pee-</td>
<td>27a. hi-nees-</td>
</tr>
<tr>
<td></td>
<td>3b. hi-•-se</td>
<td>7b. hi-nees-•-se</td>
<td>11b. hi-•-se</td>
<td>15b. hi-•-se</td>
<td>21b. pee-•-se</td>
<td>27b. hi-nees-•-se</td>
</tr>
<tr>
<td>3p S</td>
<td>4a. hi-pe-</td>
<td>8a. hi-pe-nees-</td>
<td>12a. hi-pe-</td>
<td>16a. hi-pe-</td>
<td>22a. **</td>
<td>28a. hi-nees-</td>
</tr>
<tr>
<td></td>
<td>4b. hi-•-s-iix</td>
<td>8b. hi-nees-•-s-iix</td>
<td>12b. hi-•-s-iix</td>
<td>16b. hi-•-s-iix</td>
<td>22b. pee-•-s-iix</td>
<td>28b. hi-nees-•-se</td>
</tr>
</tbody>
</table>

Notes on both tables: The position of the verb stem is indicated with a solid dot (•). Tense inflection is not shown. Cells with cislocative are green; cells with a plural object but no plural object agreement are red; cells with a plural subject but no plural subject agreement are blue.
Table 2: Results of systematic paradigm elicitation, collapsed [glosses]

<table>
<thead>
<tr>
<th>1sg O</th>
<th>1pl O</th>
<th>2sg O</th>
<th>2pl O</th>
<th>3sg O</th>
<th>3pl O</th>
</tr>
</thead>
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<td>—</td>
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<td>13a. 0-</td>
<td>17a. 3o-</td>
<td>23a. 3o-o.pl-</td>
</tr>
<tr>
<td></td>
<td>—</td>
<td>9b. 0-●</td>
<td>13b. 0-●</td>
<td>17b. 3o-●</td>
<td>23b. 3o-o.pl-●</td>
</tr>
<tr>
<td>1p S</td>
<td>—</td>
<td>10a. s.pl-</td>
<td>14a. s.pl-</td>
<td>18a. 3o-s.pl-</td>
<td>24a. 3o-s.pl-</td>
</tr>
<tr>
<td></td>
<td>—</td>
<td>10b. -s.pl</td>
<td>14b. -s.pl</td>
<td>18b. 3o-●-s.pl</td>
<td>24b. 3o-o.pl-●-s.pl</td>
</tr>
<tr>
<td>2s S</td>
<td>1a. (rec)-●-cis</td>
<td>5a. o.pl-●-cis</td>
<td>—</td>
<td>—</td>
<td>19a. 3o-</td>
</tr>
<tr>
<td></td>
<td>1b. (rec)-●-cis</td>
<td>5b. o.pl-●-cis</td>
<td>—</td>
<td>—</td>
<td>19b. 3o-●</td>
</tr>
<tr>
<td>2p S</td>
<td>2a. s.pl-●-cis</td>
<td>6a. s.pl-o.pl-●-cis</td>
<td>—</td>
<td>—</td>
<td>20a. 3o-s.pl-</td>
</tr>
<tr>
<td></td>
<td>2b. -s.pl</td>
<td>6b. o.pl-●-s.pl</td>
<td>—</td>
<td>—</td>
<td>20b. 3o-●-s.pl</td>
</tr>
<tr>
<td>3s S</td>
<td>3a. 3s-</td>
<td>7a. 3s-o.pl-</td>
<td>11a. 3s-</td>
<td>15a. 3s-</td>
<td>21a. 3/3-</td>
</tr>
<tr>
<td></td>
<td>3b. 3s-●</td>
<td>7b. 3s-o.pl-●</td>
<td>11b. 3s-●</td>
<td>15b. 3s-●</td>
<td>21b. 3/3-●</td>
</tr>
<tr>
<td>3p S</td>
<td>4a. 3s-s.pl-</td>
<td>8a. 3s-s.pl-o.pl-</td>
<td>12a. 3s-s.pl-</td>
<td>16a. 3s-s.pl-</td>
<td>22a. **</td>
</tr>
<tr>
<td></td>
<td>4b. 3s-●-s.pl</td>
<td>8b. 3s-o.pl-●-s.pl</td>
<td>12b. 3s-●-s.pl</td>
<td>16b. 3s-●-s.pl</td>
<td>22b. 3/3-●-s.pl</td>
</tr>
</tbody>
</table>

Notes on Table 2: Morphemes are glossed here according to the following conventions:

- 3/3 3rd person subject and 3rd person object portmanteau prefix
- 3o 3rd person object prefix
- 3s 3rd person subject prefix
- cis morpheme typically described as the cislocative
- o.pl plural object prefix
- rec morpheme typically described as the reciprocal
- s.pl plural subject marker
Let us now consider the findings themselves. We see in Tables 1 and 2 that, as a baseline, all plural arguments agree in number and all 3rd persons agree in person. Four agreement restrictions can be picked out as departures from this baseline. (Those involving plural objects that do not agree in plural are marked in red; those involving plural subjects that do not agree in plural are marked in blue.)

First, there is never plural object agreement with a second person object, (15).

(15) *No plural agreement with a 2nd person object:*

If the object has features [ADDR, PL], [PL] from the object cannot be indexed on the verb. (Forms 13–16.)

Second, as discussed above, there is a limitation on plural object agreement for plural 3rd person objects when the subject is a plural participant. Notably, this restriction is specific to aspectual/modal categories with prefixal subject agreement. Observe that *nees-* is absent in the (a) examples in cells 24 and 26, but not the (b) examples. The (b) examples have no agreement restriction: all plural arguments agree plural, whether via prefix *nees-* (for the object) or suffix -iiix (for the subject). The restriction in (4) is accordingly refined as (16).

(16) *No plural agreement with a 3rd person object when the subject is 1pl or 2pl and the subject plural marker is a prefix:*

If the object has features [-PART, PL], and the subject has features [+PART, PL], and the aspect/mood is one that forces a subject number prefix, then [PL] from the object cannot be indexed on the verb. (Forms 24a, 26a.)

Third, there is no person agreement with a 3rd person plural object when the subject is 3rd person, (17). This is one agreement restriction that has been noticed in the previous literature, namely in Rude (1985:39), and is represented correctly in the paradigms of Deal (2010a,b).

(17) *No person agreement with a 3rd person plural object when the subject is 3rd person:*

If the object has features [-PART, PL] and the subject has feature [-PART], [-PART] from the object cannot be indexed on the verb. (Forms 27–28.)

Fourth and finally, there is no plural subject agreement of any kind when both the subject and the object are third person plural, (18). In form 28a, prefix *pe-* is absent, and in form 28b, imperfective aspect appears in the non-plural form.

(18) *No plural subject agreement when both the subject and the object are third person plural:*

If the object has features [-PART, PL] and the subject has feature [-PART, PL], [PL] from the subject cannot be indexed on the verb. (Forms 28.)
To summarize, there are two circumstances when plural objects do not agree in number: when the object is second person (forms 13–16), and when the object is third person, the subject is a plural participant, and subject plural marking is a prefix (forms 24a, 26a). There is one circumstance when plural subjects do not agree in number: when both the object and the subject are 3rd person plural. And there is one circumstance when 3rd person arguments do not agree in person: when both the subject and the object are third person, and the object is plural.

One notable fact about these restrictions, excepting (15), is that they depend on features from both the subject and the object. Object features have a role to play in determining subject agreement; so do subject features in determining object agreement. Two further instances of this type of interaction are seen in cells 1–2 and 5–6 (that is, when the subject is 2nd person and the object is 1st person). First, the cislocative appears across these cells, excepting 2b and 6b. (Cells with cislocative are colored green.) The absence of the cislocative in 2b and 6b is predictable: the plural form of present habitual aspect, unlike imperfective and perfect/perfective, is simply not morphologically compatible with space marking affixes (Rude 1985:67). What we see overall is (19):

(19) The cislocative appears wherever morphologically possible when the subject is 2nd person and the object is 1st person. (Forms 1–2, 5–6.)

It seems quite unlikely that this distribution follows from the spatial meaning of the cislocative – that is, that speakers interpret the action as being spatially located near the speaker, or directed toward the speaker, in all and only 2nd person on 1st person scenarios. More likely is that the cislocative has developed a use which is not a space marker but a 2-on-1 marker, a usage which may ultimately be understood as a type of inverse. Clearly, this role for the cislocative is not an agreement restriction, understood in general terms as a constraint on when the unambiguous agreement affixes may be used. Rather, it is an agreement extension: a morpheme with an additional, non-agreement-based use playing a role in the agreement system.

A second agreement extension concerns the reciprocal prefix *pii-*., which appears in the agreement paradigm optionally when the subject is 2nd person singular and the object is 1st person singular. In paradigm elicitation in 11Z, this morpheme appeared in exactly 50% of the relevant forms. Of the four paradigms elicited, *pii-* was present in cell 1 in one case and absent in another case; in the remaining two cases, consultants provided both a form with *pii-* and a form without it. Consultants did not provide *pii-* in any other cell of the paradigm. This suggests that *pii-* appears in cell 1 not due to a reciprocal interpretation, but because this prefix has acquired a use as a 2SG on 1SG marker. It remains optional in this usage, however. Rude observes that the reciprocal is optional in 2SG-on-1SG imperatives, and remarks that

12The singular form of the present habitual does morphologically allow the cislocative, and the cislocative accordingly appears in 2SG/1SG and 2SG/1PL forms. See the paradigm in the appendix.

13Rude observes that the reciprocal is optional in 2SG-on-1SG imperatives, and remarks that
(20) The reciprocal appears purely optionally whenever the subject is 2nd person singular and the object is 1st person singular. (Forms 1)

The restriction of 2-on-1 \textit{pii-} to the singular contrasts with the reciprocal use of \textit{pii-}. As a reciprocal marker, \textit{pii-} may appear with a plural subject agreement suffix (though not a plural subject agreement prefix) (Rude 1985:41). This behavior is in contrast with cell 2b of the agreement paradigm, where 2-on-1 \textit{pii-} does not appear.

(21) Kiye \textit{pii-temeylek-s-ix}.  
\begin{center} 1PL.INCL.CLITIC \hspace{0.5cm} RECIP-inhale-IMPERF-S.PL \end{center}  
‘We are inhaling each other.’ (Phinney 1934:4)

Thus, while both agreement extensions arise in 2-on-1 contexts, they differ both in optionality and in the role of number features in conditioning the agreement extension.

A final observation about the paradigm concerns cell 22a: 3PL subject on 3SG object in an aspect/mood that uses prefixal subject number agreement. Recall that two of the four elicited paradigms featured aspect/mood categories that use subject number agreement prefixes. In both of these elicitations, speakers switched for cell 22a to a form that includes imperfective aspect, allowing subject number to be expressed as a suffix. Speakers did not generally change aspect/mood over the course of a paradigm elicitation, making these instances of aspect/mood modification quite notable. The forms provided for this cell are shown in (22).\footnote{The plural subject prefix in this case is simply \textit{-i}, not \textit{-iix}; the latter appears only in word-final position. See the discussion of suffix allomorphy in Deal (2010b:ch 2).}

(22) a. ke kaa ha-‘aayat-om \textit{pee-kte-c-i-nu’}  
\begin{center} C \hspace{1cm} then \hspace{0.5cm} PL-woman-ERG \hspace{0.5cm} 3/3-see-go.to-IMPERF-S.PL-FUT  \end{center}  
qiwn-e  
old.man-ACC  
‘when the ladies go to see the old man’

b. Matt kaa George-nim \textit{påa-‘yaå-c-i-na}  
\begin{center} Matt.NOM \hspace{0.5cm} and \hspace{0.5cm} George-ERG \hspace{0.5cm} 3/3-find-IMPERF-S.PL-REM.PAST \end{center}  
Matt-ne cepéeletp’et-pe.  
Matt-ACC picture-LOC  
‘Matt and George found Matt in the picture.’

\footnote{The plural subject prefix in this case is simply \textit{-i}, not \textit{-iix}; the latter appears only in word-final position. See the discussion of suffix allomorphy in Deal (2010b:ch 2).}

\footnote{In the ‘find’ paradigm from which (22b) is drawn, the name ‘Matt’ was always used as the 3SG object. See the appendix.}

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In example (22a), imperfective aspect appears in addition to future. This example was drawn from a paradigm otherwise in the simple future. In example (22b), imperfective aspect appears instead of the perfect/perfective aspect otherwise used in the paradigm. In both instances, subject number is expressed as would be expected for the imperfective aspect. The modification of aspect/mood marking allows all features to be expressed on the verb without the morpheme combination *pee-pe-* ‘3/3-S.pl’.

An initially plausible way to think about these modifications is in terms of agreement extensions: the imperfective is recruited to express the 3PL/3SG feature combination, much as the reciprocal is recruited to express 2SG/1SG. The problem for this account is that imperfective aspect is not required in the 3pl/3sg feature combination per se; in the habitual paradigm, for instance, there is no modification of the aspect/mood value in the 3PL/3SG paradigm cell.

\[ \text{(23) ke kaa } \text{pee-}-\text{cewcew-tée-} \text{'nix Angel-ne}\]
\[ \text{C then 3/3-call-HAB.PRES-S.PL Angel-ACC}\]
\[ \text{‘when they call Angel’}\]

Another potential approach for forms like (22b) would be to see the apparent imperfective as a special allomorph of perfect/perfective, in some way conditioned by the 3PL/3SG feature complex. But this approach struggles on (22a), where the future suffix remains but the imperfective suffix is added. What these failed views have in common is that they attempt to treat the forms in (22) as normal members of the paradigms in which they were elicited—as representing, that is, what is semantically the simple future or semantically the perfect/perfective. A remaining alternative is to reject this assumption: 3PL/3SG feature combinations are simply ineffable in the perfect/perfective and simple future. Speakers provide the forms in (22) as “next best” alternatives, expressing similar meanings. In reflection of this conclusion, I provide no form in cell 22a.

4 Conclusions and analytical prospects

This paper has aimed to end where a theoretical project can begin. The theoretical questions should now be clear: Why is the Nez Perce verbal agreement paradigm as it is? Why are there agreement restrictions/extensions at all, and why in particular these restrictions/extensions? What does this tell us about the syntax of agreement, on one hand, and its morphology, on the other? While I will not be able to properly answer these questions here, I will conclude by pointing to several of what I see as the most interesting prospects for future analysis.

One initial question to ask about agreement restrictions is whether they are syntactic or morphological in nature. Consider, for instance, the restriction we see in forms 28:
(24) **No plural subject agreement when both the subject and the object are third person plural:**

If the object has features [-PART, PL] and the subject has feature [-PART, PL], [PL] from the subject cannot be indexed on the verb.

A syntactic account of this restriction would propose a straightforward mapping between the features realized by agreement morphemes and the features transferred by the operation Agree. If [PL] from the subject cannot be indexed on the verb, then [PL] from the subject does not participate in Agree. What must be explained is why Agree should be restricted in this way. A morphological account, on the other hand, would locate the restriction not in which features are transferred by Agree, but in what happens to transferred features at the PF interface. If [PL] from the subject cannot be indexed on the verb, that suggests that this feature might be deleted in the morphology (via an impoverishment rule) or might simply remain unexponed for some other morphological reason. The absence of exponence is what requires an explanation.

One type of factor suggestive of a syntactic account is the repeated restriction on plural agreement for argument A in the context of plural agreement for argument B. A syntactic account can make sense of why it is the feature [PL] (rather than some other feature) that interferes with agreement in [PL] by reference to a context of intervention. The central constraint, on this type of view, is that a probe P may not agree with a lower [PL] feature across a higher one:

(25) \[ P \left[ I: [\text{PL}] \quad G: [\text{PL}] \quad [\ldots]\right]\]

(26) Agree in feature bundle [F] is possible between probe P and goal G only if there is no I such that P c-commands I and I c-commands G and I bears any feature in [F].

On an intervention approach to agreement restrictions, sometimes [PL] on the subject intervenes for [PL] on the object (e.g. (16)), but sometimes [PL] on the object intervenes for [PL] on the subject (e.g. (18)). The analytical challenge lies in ensuring that subjects and objects occupy appropriate structural positions for this type of variation in the setup for intervention.

A further, related implication of the restrictions and extensions described in this paper concerns the question of how many syntactic loci of agreement (i.e. agreeing functional heads) are involved in the Nez Perce clause. The basic facts of agreement, as in Section 2, might be taken to suggest the involvement of three distinct syntactic loci, each associated with one morphological prefix position (person agreement, subject number agreement, object number agreement). Such a view would be in line with proposals by Sigurðsson and Holmberg (2008) and Preminger (2011), according to which person and number agreement are associated with distinct probing heads in the syntax. Agreement restrictions and extensions constitute a challenge for this view because they require access to both person and number information, generally from both the subject and the object. By the same
token, these facts also challenge more standard views of agreement, which take object and subject agreement to be associated with distinct syntactic loci (ν and T, respectively; see e.g. Deal 2010a). If more than one syntactic locus is involved in the agreement system, some mechanism must ensure that the features available in any one locus are determined by the full φ-specification of both subject and object. Of course, the need for such a mechanism is obviated if a single syntactic head is implicated in verb agreement in Nez Perce. On this type of view, rules of fission are required to ensure that separate morphemes may be inserted.

A Appendix: sample paradigms

A.1 ‘iyaaq ‘find’, perfect/perfective aspect, remote past tense

For this elicitation speakers were asked to imagine that they or others were looking at a portrait of a large group, searching for one or more individuals.

Linguistic notes: this paradigm features both singular and plural 2nd person clitic pronouns, both by themselves and as clitic-doubles of full pronouns or coordinations (see (10a), (13a)). These are discussed in Deal (2015a) and Deal (To appear c). This paradigm also shows two options for case-marking in coordinations: case-markers may appear on both coordinates (‘balanced coordination’), as in (14a), or just on the final one (‘unbalanced coordination’ – the term coming from Johannessen 1998), as in (13a). This pattern is discussed in Deal (To appear c); variation between the two options is apparently free. Argument omission (pro-drop) is very common in Nez Perce and may be seen in numerous examples of this paradigm (e.g. (1a), (3a)). Here, unlike in the text, I do not provide pro arguments in the examples. Some arguments are explicitly marked as optional because speakers volunteered this information when the data was elicited. No conclusion about optionality should be drawn regarding those elements not explicitly marked as optional here.

(1a) ‘Ee ści-‘yaakh-ni-m-a cepéletp’et-pe.
   2SG.CLITIC  RECIP-find-P-CIS-REM.PAST picture-LOC
   2sg/1sg: ‘You found me in the picture.’

(2a) ‘Eetx pa-‘yáax-ni-m-a cepéletp’et-pe.
   2PL.CLITIC  S.PL-find-P-CIS-REM.PAST picture-LOC
   2pl/1sg: ‘You guys found me in the picture.’

(3a) Jim-nim hi-‘yáax-n-a cepéletp’et-pe.
   Jim-ERG  3SUBJ-find-P-REM.PAST picture-LOC
   3sg/1sg: ‘Jim found me in the picture.’
(4a) Matt kaa George-nim hi-pa-’yáaḵ-n-a
Matt.NOM and George-ERG 3SUBJ-S.PL-find-P-REM.PAST
(’iin-e) cepéelep’et-pe.
(1SG-ACC) picture-LOC

**3pl/1sg:** ‘Matt and George found me in the picture.’

(5a) ’Ee náac-’yaḵ-ni-m-a (’iin kaa Matt-ne)
2SG.CLITIC O.PL-find-P-CIS-REM.PAST (1SG.NOM and Matt-ACC)
cpéelep’et-pe.
picture-LOC

**2sg/1pl:** ‘You found us (me and Matt) in the picture.’

(6a) ’Eetx pa-náac-’yaḵ-ni-m-a cepéelep’et-pe.
2PL.CLITIC S.PL-O.PL-find-P-CIS-REM.PAST picture-LOC

**2pl/1pl:** ‘You guys found us in the picture.’

(7a) Jim-nim hi-náac-’yaḵ-n-a (’iin kaa Matt-ne)
Jim-ERG 3SUBJ-O.PL-find-P-REM.PAST (1SG.NOM and Matt-ACC)
cpéeleltp’et-pe.
picture-LOC

**3sg/1pl:** ‘Jim found us (me and Matt) in the picture.’

(8a) Matt kaa George-nim (nuun-e)
Matt.NOM and George-ERG (1PL-ACC)
hi-pa-náac-’yaḵ-n-a cepéelep’et-pe.
3SUBJ-S.PL-O.PL-find-P-REM.PAST picture-LOC

**3pl/1pl:** ‘Matt and George found us (me and someone else) in the picture.’

(9a) ’Ee ’iyáaḵ-n-a cepéelep’et-pe.
2SG.CLITIC find-P-REM.PAST picture-LOC

**1sg/2sg:** ‘I found you in the picture.’

(10a) ’Ee ’im-ené pa-’yáaḵ-n-a cepéelep’et-pe.
2SG.CLITIC 2SG-ACC S.PL-find-P-REM.PAST picture-LOC

**1pl/2sg:** ‘We found you in the picture.’

(11a) Jim-nim ’ee hi-’yáaḵ-n-a cepéelep’et-pe.
Jim-ERG 2SG.CLITIC 3SUBJ-find-P-REM.PAST picture-LOC

**3sg/2sg:** ‘Jim found you in the picture.’
(12a) Matt kaa George-nim ’ee
Matt.NOM and George-ERG 2SG.CLITIC
hi-pa-’yááx-n-a cepéeletp’et-pe.
3SUBJ-S.PL-find-P-REM.PAST picture-LOC

3pl/2sg: ‘Matt and George found you in the picture.’

(13a) ’Eetx ’iyááx-n-a (’iim kaa Matt-ne)
2PL.CLITIC find-P-REM.PAST (2SG.NOM and Matt-ACC)
cepéeletp’et-pe.
picture-LOC

1sg/2pl: ‘I found youpl (yousg and Matt) in the picture.’

(14a) ’Eetx pa-’yááx-n-a ’im-ené kaa Matt-ne
2PL.CLITIC S.PL-find-P-REM.PAST 2SG-ACC and Matt-ACC
cepéeletp’et-pe.
picture-LOC

1pl/2pl: ‘We found you and Matt in the picture.’

(15a) Jim-nim ’ee hi-’yááx-n-a (’iim kaa Matt-ne)
Jim-ERG 2SG.CLITIC 3SUBJ-find-P-REM.PAST (2SG.NOM and Matt-ACC) cepéeletp’et-pe.17
Matt-ACC) picture-LOC

3sg/2pl: ‘Jim found you (yousg and Matt) in the picture.’

(16a) Matt kaa George-nim ’eetx
Matt.NOM and George-ERG 2PL.CLITIC
hi-pa-’yááx-n-a cepéeletp’et-pe.
3SUBJ-S.PL-find-P-REM.PAST picture-LOC

3pl/2pl: ‘Matt and George found you guys in the picture.’

(17a) ’Aw-’yááx-n-a Matt-ne cepéeletp’et-pe.
3OBJ-find-P-REM.PAST Matt-ACC picture-LOC

1sg/3sg: ‘I found Matt in the picture.’

17I suspect that there is an error in this example: the clitic pronoun should be ’eetx ‘2PL.CLITIC’, as in (13a). However, this form was checked with speakers.
(18a) ’A-pa-’yáa-x-n-a Matt-ne cepéeletp’ét-pe. 3OBJ-S.PL-find-P-REM.PAST Matt-ACC picture-LOC

1pl/3sg: ‘We found Matt in the picture.’

(19a) ’Ee ’aw-’yáa-x-n-a Matt-ne cepéeletp’ét-pe. 2SG.CLITIC 3OBJ-find-P-REM.PAST Matt-ACC picture-LOC

2sg/3sg: ‘You found Matt in the picture.’

(20a) ’Eetx ’a-pa-’yáa-x-n-a Matt-ne cepéeletp’ét-pe. 2PL.CLITIC 3OBJ-S.PL-find-P-REM.PAST Matt-ACC picture-LOC

2pl/3sg: ‘You guys found Matt in the picture.’

(21a) Jim-nim paa-’yáa-x-n-a Matt-ne cepéeletp’ét-pe. Jim-ERG 3/3-find-P-REM.PAST Matt-ACC picture-LOC

3sg/3sg: ‘Jim found Matt in the picture.’

(22a) Matt kaa George-nim paa-’yaax-c-i-na Matt.NOM and George-ERG 3/3-find-IMPERF-S.PL-REM.PAST

Matt-ne cepéeletp’ét-pe. Matt-ACC picture-LOC

3pl/3sg: ‘Matt and George found Matt in the picture.’

(23a) ’A-náac-’yáa-x-n-a Matt kaa Jim-ne 3OBJ-O.PL-find-P-REM.PAST Matt.NOM and Jim-ACC

cepéeletp’ét-pe. picture-LOC

1sg/3pl: ‘I found Matt and Jim in the picture.’

(24a) ’A-pa-’yáa-x-n-a Matt kaa Jim-ne 3OBJ-S.PL-find-P-REM.PAST Matt.NOM and Jim-ACC

cepéeletp’ét-pe. picture-LOC

1pl/3pl: ‘We found Matt and Jim in the picture.’

(25a) ’Ee ’a-náac-’yaax-n-a Matt kaa Jim-ne 2SG.CLITIC 3OBJ-O.PL-find-P-REM.PAST Matt.NOM and Jim-ACC

cepéeletp’ét-pe. picture-LOC

2sg/3pl: ‘You found Matt and Jim in the picture.’
(26a) 'Eetx 'a-pa'-yáax-n-a Matt kaa Jim-ne 2PL.CLITIC 3OBJ-S.PL-find-P-REM.PAST Matt.NOM and Jim-ACC cepéletp’et-pe. picture-LOC
2pl/3pl: ‘You guys found Matt and Jim in the picture.’

(27a) Jim-nim hi-náac’-yaax-n-a Bill kaa Jill-ne Jim-ERG 3SUBJ-O.PL-find-P-REM.PAST Bill.NOM and Jill-ACC cepéletp’et-pe. picture-LOC
3sg/3pl: ‘Jim found Bill and Jill in the picture.’

(28a) Bill kaa Jill-nim hi-náac’-yaax-n-a Jim Bill.NOM and Jill-ERG 3SUBJ-O.PL-find-P-REM.PAST Jim.NOM kaa Beth-ne cepéletp’et-pe. and Beth-ACC picture-LOC
3pl/3pl: ‘Bill and Jill found Jim and Beth in the picture.’

A.2  cewcewi ‘call’, present habitual aspect, present tense

Linguistic notes: This paradigm shows when-clauses, formed with temporal demonstrative kaa and agreeing A’ complementizer ke. (The status of this element as an A’ complementizer is discussed in Deal (To appear a); complementizer agreement is discussed in Deal (To appear b).) Therefore, this set of examples shows a full paradigm both for verb agreement and for complementizer agreement.

Like the previous paradigm, this paradigm features clitic pronouns, both balanced and unbalanced coordinations, and extensive argument omission and optionality. In (28b), the object is a deverbal agentive noun which does not inflect for plural, but which controls plural object agreement. On the absence of plural marking for deverbal agentive nouns, see Deal (2015b).

(1b) ke-m kaa (pii)-cewcew-téetu-m (’iin-e) C-2 then RECIP-call-HAB.PRES-CIS 1SG-ACC
2sg/1sg: ‘when you call me’

(2b) ke-pe-m kaa (’iin-e) cewcew-tée’-nix C-PL-2 then 1SG-ACC call-HAB.PRES-S.PL
2pl/1sg: ‘when you guys call me’
(3b) ke-x kaa Angel-nim hi-cewcew-téetu 
C-1 then Angel-ERG 3SUBJ-call-HAB.PRES 
3sg/1sg: ‘when Angel calls me’

(4b) ke-x kaa Angel-nim kaa Tatlo-nm hi-cewcew-tée-'nix 
C-1 then Angel-ERG and Tatlo-ERG 3SUBJ-call-HAB.PRES-S.PL 
3pl/1sg: ‘when Angel and Tatlo call me’

(5b) ke-m kaa ’ee nees-cewcew-téetu-m 
C-2 then 2SG.CLITIC O.PL-call-HAB.PRES-CIS 
2sg/1pl: ‘when you call us’

(6b) ke-pe-m kaa nees-cewcew-tée-'nix 
C-PL-2 then O.PL-call-HAB.PRES-S.PL 
2pl/1pl: ‘when you guys call us’

(7b) ke-x kaa Angel-nim hi-nees-cewcew-téetu nuun-e 
C-1 then Angel-ERG 3SUBJ-O.PL-call-HAB.PRES 1PL-ACC 
3sg/1pl: ‘when Angel calls us’

(8b) ke-x kaa hi-nees-cewcew-tée-'nix 
C-1 then 3SUBJ-O.PL-call-HAB.PRES-S.PL 
3pl/1pl: ‘when they call us’

(9b) ke-m-ex kaa cewcew-téetu 
C-2-1 then call-HAB.PRES 
1sg/2sg: ‘when I call you’

(10b) ke-pe-m-ex kaa cewcew-tée-'nix 
C-PL-2-1 then call-HAB.PRES-S.PL 
1pl/2sg: ‘when we call you (singular)’

(11b) ke-m kaa Angel-nim hi-cewcew-téetu 
C-2 then Angel-ERG 3SUBJ-call-HAB.PRES 
3sg/2sg: ‘when Angel calls you (singular)’
(12b) ke-pe-m kaa Angel-nim kaa Tatlo-nm
     C-PL-2 then Angel-ERG and Tatlo-ERG
     hi-cewcew-tée-’nix
     3SUBJ-call-HAB.PRES-S.PL

3pl/2sg: ‘when Angel and Tatlo call you (singular)’

(13b) ke-pe-m-ex kaa cewcew-téetu
     C-PL-2-1 then call-HAB.PRES

1sg/2pl: ‘when I call you guys’

(14b) ke-pe-m-ex kaa (’eetx) cewcew-tée-’nix
     C-PL-2-1 then 2PL.CLITIC call-HAB.PRES-S.PL

1pl/2pl: ‘when we call you guys’

(15b) ke-pe-m kaa Angel-nim hi-cewcew-téetu
     C-PL-2 then Angel-ERG 3SUBJ-call-HAB.PRES

3sg/2pl: ‘when Angel calls you guys’

(16b) ke-pe-m kaa Angel kaa Tatlo-nm
     C-PL-2 then Angel.NOM and Tatlo-ERG
     hi-cewcew-tée-’nix
     3SUBJ-call-HAB.PRES-S.PL

3pl/2pl: ‘when Angel and Tatlo call you guys’

(17b) ke-x kaa ’e-cewcew-téetu Angel-ne
     C-1 then 3OBJ-call-HAB.PRES Angel-ACC

1sg/3sg: ‘when I call Angel’

(18b) ke-x kaa ’e-cewcew-tée-’nix Angel-ne
     C-1 then 3OBJ-call-HAB.PRES-S.PL Angel-ACC

1pl/3sg: ‘when we call Angel’

(19b) ke-m kaa ’e-cewcew-téetu Angel-ne
     C-2 then 3OBJ-call-HAB.PRES Angel-ACC

2sg/3sg: ‘when you call Angel’

(20b) ke-pe-m kaa ’e-cewcew-tée-’nix Angel-ne
     C-PL-2 then 3OBJ-call-HAB.PRES-S.PL Angel-ACC

2pl/3sg: ‘when you guys call Angel’
(21b) ke kaa Angel-nim pee-çewcew-tëetu Tatlo-na
C then Angel-ERG 3/3-call-HAB.PRES Tatlo-ACC
3sg/3sg: ‘when Angel calls Tatlo’

(22b) ke kaa pee-çewcew-tée-'nix Angel-ne
C then 3/3-call-HAB.PRES-S.PL Angel-ACC
3pl/3sg: ‘when they call Angel’

(23b) ke-x kaa 'e-nées-çewcew-tëetu
C-1 then 3OBJ-O.PL-call-HAB.PRES
1sg/3pl: ‘when I call them’

(24b) ke-x kaa 'e-nees-çewcew-tée-'nix
C-1 then 3OBJ-O.PL-call-HAB.PRES-S.PL
1pl/3pl: ‘when we call them’

(25b) ke-m kaa ('ee) 'e-nees-çewcew-tëetu
C-2 then 2SG.CLITIC 3OBJ-O.PL-call-HAB.PRES
2sg/3pl: ‘when you call them’

(26b) ke-pe-m kaa 'eetx 'e-nees-çewcew-tée-'nix
C-PL-2 then 2PL.CLITIC 3OBJ-O.PL-call-HAB.PRES-S.PL
2pl/3pl: ‘when you guys call them’

(27b) ke kaa Angel-nim hi-nees-çewcew-tëetu
C then Angel-ERG 3SUBJ-O.PL-call-HAB.PRES
3sg/3pl: ‘when Angel calls them’

(28b) ke kaa Angel kaa Tatlo-nm hi-nees-çewcew-tëetu
C then Angel.NOM and Tatlo-ERG 3SUBJ-O.PL-call-HAB.PRES
cépelixniwetúu-ne worker-ACC
3pl/3pl: ‘when Angel and Tatlo call the workers’

References


Gladys Reichard’s ear
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Abstract: The first scientific grammar of a Salishan language was written by Gladys Amanda Reichard (1893–1955). As this year the International Conference on Salish and Neighbouring Languages celebrates its fiftieth anniversary, the author wishes to acknowledge the sixtieth anniversary of Reichard’s death in simultaneous tribute.

Keywords: Gladys Amanda Reichard, Coeur d’Alene, Interior Salishan

1 Introduction

Sixty years ago this summer Professor Gladys Reichard was not in Salish country when death came knocking. She was living in the southeast corner of Diné Biyékah, the Navajo homeland, within sight of the snow-tipped San Francisco peaks on the wooded campus of the Museum of Northern Arizona in Flagstaff. Since 1939, Reichard had made MNA, a privately funded center for the study of the archaeology, biota, and cultures of the Colorado Plateau region, her institutional summer home. She loved MNA and Flagstaff well enough that she had already selected one of four homesites being developed on MNA property on which to build a house. She was three years away from retirement from Barnard College where she had been the only tenured faculty member (and chair) in the department of Anthropology for over thirty years.

The first stroke hit the day after her sixty-second birthday. She was rushed from the tiny Washington Matthews cabin where she customarily stayed to nearby Flagstaff Medical Center. With her sister Lilian at her side, Reichard died there a week later on July 25, 1955. Carl Voegelin, past president of the Linguistic Society of America and first successor to Franz Boas as editor of the International Journal of American Linguistics, was one of Reichard’s pallbearers. Florence “Flo” Voegelin, founder and editor of Anthropological Linguistics, joined other of the American Southwest’s anthropological royalty at Reichard’s graveside. Today Reichard’s modest headstone faces skyward in the broad expanse of grass that is Citizen’s Cemetery. It is safe to say that none of the students who casually cut through the cemetery on their way to the eastern flank of Northern Arizona University’s Flagstaff campus have any idea of its existence.

Because Reichard herself did not stand on ceremony, it matters not that few linguists who have benefitted directly from her pioneering work on North American Indian languages know or care about the location of her physical remains. On the occasion of the 50th anniversary of the International Conference

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on Salish and Neighboring Languages, it is appropriate to recognize—and clarify—the intellectual contributions Reichard made to the study of Salishan and other North American Indian languages lest we be tempted to take them for granted.

2 Hardly a bed of roses

Melville Jacobs (1940) states plainly and accurately that Reichard’s grammar of Coeur d’Alene (1938) was “the first full length portrait of a Salish language,” predicting that her “excellent” contribution to the third volume of the *Handbook of American Indian Languages* would serve as “the foundation upon which most future researches and analyses of the Salish languages may be conducted” (p. 98). As guest editor of *IJAL*, Larry Thompson dedicated the first issue of volume 46 (1980) to Reichard in recognition of her extensive writings on Amerindian languages and cultures. In that same issue Herbert Landar (1980) provides an annotated list of Reichard’s linguistic publications arranged by date and extending to the six posthumous articles on comparative Salishan which Flo Voegelin saw into print. Gary Witherspoon opens his contribution to the memorial issue with the words “Gladys Reichard was an extraordinary ethnologist and an exceptional linguist” (1980, p. 1). Years later Ivy Doak pronounced Reichard’s work on Coeur d’Alene “outstanding” (1997, p. 4). Falk (1999) traces Reichard’s career in North American Indian linguistics in detail, arguing that despite her dedication, talent, and immense productivity, Reichard has been largely overlooked in the history of American linguistics due to a bias in favor of the “great man” theory of history, which argument is not less persuasive in 2015. Falk quotes M. Dale Kinkade as saying of early Salishan linguistics, “It’s too bad there weren’t more Reichards” (p. 140). Ray Brinkman, on staff at the Coeur d’Alene language program for over a decade, credits Reichard as much for her resourcefulness in recording enough Coeur d’Alene data in the first half of the 20th century on which to base a language revitalization effort in the second as for introducing Lawrence Nicodemus to the study of linguistics (R. Brinkman, personal communication, October 25, 2013).

Virtually all of Reichard’s linguistic publications were met during her lifetime with the roar of male disapproval. She refused to observe the absolute partitioning of form from meaning, of method from circumstance then in vogue and she paid with her reputation for her nonconformity. Hockett (1940) panned Reichard’s grammar of Coeur d’Alene. Harry Hoijer discredited Reichard’s work on Navajo for the better part of three decades, culminating in his splenetic review in *IJAL* of her four-hundred page *Navaho Grammar* which he declared “wholly inadequate” and without value to modern linguistics (1953, p. 83). George Trager subsequently piled on, writing in his review of the same book for *American Anthropologist* that Reichard had wasted two decades and the precious funds of the American Ethnological Society on its publication (1953, p. 429). Even after her death certain linguists were so galled by Reichard’s refusal to adopt their terminological prejudices that they all but completed the task of erasing her from American linguistics. Mary Haas asserted that her student Karl
Teeter had been forced to write his dissertation on Wiyot from “an entirely clean slate” based on information from a single 80-year-old speaker because grammatical descriptions prior to 1930—including Reichard’s dissertation on Wiyot grammar (1925)—were “noncommensurate” with the structuralist “plane” Haas favored. Teeter himself told Falk that Reichard “had a poor ear for phonetics” which made the hundreds of pages of fieldnotes, texts, and analyses of Wiyot she left to posterity at the University of California Berkeley “too inaccurate” and “unreliable” for use (Falk 1999, p. 143).

Falk (1999) does a fine if understated job of tracing the animosity expressed by Reichard’s most vocal critics to Edward Sapir. Sapir with A.L. Kroeber had expected Reichard’s grammar of Wiyot to support Sapir’s California Algonquian hypothesis. When he couldn’t convince Reichard to accept his evidence for a historical relationship between Wiyot, Yurok, and the eastern Algonquian family (a relationship which would not be fully accepted by Amerindianists for another fifty years), he wrote her off, permanently. As Falk suggests, Sapir’s persistent, behind-the-scenes attempts to sabotage Reichard’s career until his death in 1939 were as much an outlet for his frustrations with Boas’ higher standards of evidence and methodological pluralism as they were an expression of his well-documented contempt for professional women. Try as he might to eclipse Boas along with the women he encouraged, the best Sapir could do was inspire his students to mistake intolerance for scientific judiciousness. It might be argued that Sapir’s “my way or the highway” approach to scholarship is his most pervasive legacy in the culture of American linguistics. The battles he and his students waged against responsible colleagues like Reichard continue to divide us counterproductively along lines of gender, age, cultural identity, and disciplinary approach.

Accusations that Reichard had a poor ear or was deaf to phonemic theory are easily laid to rest now that we see in Salishan linguistics alone the rich array of dissertations, masters theses, books, and countless articles that are based on, refer to, or take issue with Reichard’s published and unpublished Salishan materials. Even her largely forgotten work on Wiyot is bearing new fruit. Lynnika Butler, the linguist recently hired by the Wiyot Tribe to provide technical expertise for their language revitalization program (the last speaker of Wiyot died in 1962), told me recently that she relies more heavily on Reichard’s records for their phonetic detail than on transcriptions made by Kroeber and Teeter (L. Butler, personal communication, January 31, 2014). In fact, Reichard had far more training in phonetics and grammatical analysis than most linguists realize. A Classics major at Swarthmore College, Reichard did not enter Columbia in 1919 with a background in philology or anthropology. Yet she was quickly captivated by Amerindian linguistics in Boas’ infamously rapid-fire linguistics seminar. Rather than complain as did so many others that Boas did not offer a course in field methods to prepare students for the challenges of fieldwork, Reichard prepared herself. When in 1922 she opted to do linguistic fieldwork and produce a grammar with texts for her dissertation, she made a choice that no other of Boas’ female students made before or since.
Even after she graduated, Reichard continued to refine her perception of speech sounds. During her Guggenheim fellowship year of 1926-27 in Germany, Reichard spent her weekends testing her phonetic judgments against a Rousselot apparatus as a lab for a course in phonetics she audited that was taught by one of Rousselot’s star students, Giulio Panconcelli-Calzia, at the University of Hamburg. In addition to cultivating her hearing Reichard also engaged in sight-training. Before linguistic fieldwork she read all the old sources by missionaries, explorers, and contributors to the Bureau of American Ethnology, taking the volumes into the field with her to check the data they contained with living speakers. No matter how unsophisticated or flawed many of these materials were by contemporary standards, she appreciated even the smallest pinpoint of light they could throw on a linguistic topic that interested her. Still more important were the conversations such materials precipitated with her language consultants, who she preferred to call ‘interpreters’. She approached Native speakers as a student who wished to learn to speak the local language and adopted the role of teacher only so as to teach interested interpreters how to write in a phonetic orthography.

Reichard was keen also to use the latest technology available to her. In her first field season studying Coeur d’Alene in 1927, she arranged for a physician in Spokane to make x-rays of Pascal George pronouncing ten Coeur d’Alene sounds. Handy with a Brownie camera since college, Reichard learned to shoot and edit film in the early 1930s when movie cameras were not yet standard field equipment. She also recorded hours of Navajo speech on wax cylinders for later transcription. Her hands-down favorite tool for fieldwork was the automobile. Once she realized the independence and mobility it gave her in Indian country she valued it as highly as a Navajo man does his horse. Reichard did not invent linguistic field methods but without question she perfected them to meet her needs.

Considering how difficult Sapir made Reichard’s work on Wiyot and Navajo there is a kind of poetic justice in the fact that he was indirectly responsible for Reichard’s entry into Salishan linguistics. When Boas wrote Reichard in Germany to say he had earmarked funding for her summer research through the Linguistics Committee of the Council of Learned Societies she wrote back saying she would like to use it to return to California to extend her study of Wiyot, plus Yurok. Boas demurred, intimating that Kroeber and Sapir were still sensitive over the Wiyot-Yurok flap. “My wish would be that you should take up the Coeur d’Alene with the idea of getting the whole interior Salish,” Boas replied, “We ought to get, then [,] somebody else to take up the coast Salish because the whole field is altogether too vast for one person (F. Boas 1927, May 7 [Letter to Gladys Reichard]). He had no qualms about trusting Reichard with a project of Boasian proportions. “The field that you would gradually have to cover would embrace about eight dialects; some of them fairly divergent and certainly not mutually intelligible. The country to be covered reaches from the Columbia River over to Montana, taking in a considerable part of southern interior of British Columbia. Of course the idea would be that the work would extend over a number of years.” Boas expressed
interest in “mythological materials,” i.e. texts. Reichard knew without asking that a synchronic descriptive grammar and dictionary would be concomitant products of her investigations.

From that fateful summer on, Interior Salishan linguistics became a peaceful refuge from the crowded, highly competitive, and increasingly combative arena of Navajo studies. Reichard spent just two summers, those of 1927 and 1929, collecting data on the Coeur d’Alene reservation but her fieldwork did not end there. She kept in touch by mail with Julia Antelope, Nicodemus’ mother, and Nicodemus spent two winters (1935 and 1936) at Columbia as Reichard’s student. In 1935 Reichard holed up in a tiny hamlet in northwest New Mexico for eight weeks compiling a dictionary of Coeur d’Alene in advance of writing the grammar. She and Julia Antelope wrote to each other in Coeur d’Alene throughout. Reichard was so immersed in the exchange that she remarked to Boas, “I really think I am beginning to think in the language” and declared Coeur d’Alene both “grand” and a joy to analyze (G. Reichard 1935, July 7. [Letter to F. Boas]).

The following year Reichard finished her grammar for the third volume of the Handbook of American Indian Languages making public the fact that Salishan linguistics was a significant component of her burgeoning research portfolio. Her pace of publication on Salishan languages appears slow to us only if we are unaware of how diverse, ambitious, and accomplished her lifetime bibliography is. Ultimately Reichard wrote or edited authoritative monographs that bespoke technical expertise in disciplines that included art history, ethnography, folklore, oral poetics, and religious studies, in addition to linguistics. She was also interested in ethnobotany, language pedagogy, psychoanalysis, race relations, and semiotics. Moreover, Reichard was active as a public intellectual. She championed tribal autonomy from missionary and federal rule in the popular press and applied her vast erudition toward defeating negative stereotypes of American Indians through her writing, radio interviews, public-speaking at museums and universities, and membership in humanitarian organizations that promoted educational opportunities for Native Americans as well as underprivileged women. She reached nearly two generations of college students at Barnard and Columbia through innovative courses in Native art, culture, and psychology, all aimed at countering the racist, assimilationist strains that racked her society. She tried but had to abandon an attempt to establish a department of linguistics at Barnard after Boas’ death; her administrative, teaching, and civic duties combined with her enormous scholarly commitments absorbed the time needed to found a second department. That she tried to do so was one of many overlooked signs that she came to distinguish anthropology from linguistics as the two disciplines diverged in focus.

3 Unfinished business

Two things are abundantly clear from my close reading of Reichard’s published and unpublished writings, correspondence included, over the last several years. First, she had no intention of dying prematurely. Collected in her papers at MNA are a dozen or more drafts of new books and articles related to Navajo
studies that attest to her expectation of much more time to come. The boxes of file slips, notebooks, and drafts on Interior Salish that fell into Flo Voegelin’s capable hands represented a labor of love interrupted. Second, a constant element of Reichard’s nature was a healthy skepticism of labels, whether they were attached to people or phenomena. As a highly-trained scientist she created and used technical vocabulary with ease but she did not value cultural or linguistic terminology as an end in itself. The reputation for disdaining theory ascribed to her by her critics was in reality a suspicion of “catch words” and trendy dogma that defined an intellectual soapbox that the loudest linguists insisted others stand on in order to have a voice in “their” discipline. But Reichard ranked intellectual freedom high above prestige. She chafed at “presets” and premature conclusions enshrined as absolutes. To her, languages bubbled with accident and variation in company with the reassuring, melodic rule. Cautious and selective as she was about emerging concepts, if they facilitated open-ended insights into languages and their speakers she adopted them. It was a matter of personal integrity to her to think about language and culture on a plane as far removed from her received bias as her humanity allowed. She would tell her rapt audiences, “There is no such thing as ‘The Navajo,’” which was no less profound (or heretical) a statement for an anthropologist to make in Reichard’s time than was Noam Chomsky’s doubt that language exists in ours (1984, p. 26). Witherspoon (1980) interprets Reichard’s resistance to one-sidedness as holistic saying,

Although some of her writings—such as Navajo Grammar and the encyclopedic Navajo Religion—contain a certain amount of unconjoined information, always there is a vision that there is a core, where all things connect, and according to which all things make sense and all details derive their place and meaning. Such a vision is never easily grasped by an outsider, much less articulated in a way that the totally uninitiated can grasp it with any degree of clarity. Most people shrink before such a task, deluding themselves with the convenient view that the visions other peoples hold need not be learned but merely need to becatalogued by or transposed into someone else’s vision. (p.1)

Witherspoon’s distillation may not increase Reichard’s appeal to linguists who aim to extricate language as cleanly as possible from its social context. Even so the wellspring of Reichard’s polymath temperament is deeper and more humane than his praise implies. Underlying every act of Reichard’s public speech was a woman in constant contact with her social conscience. Her decision-making was accordingly pragmatic rather than ideological, her choice of research topics based on what she deemed useful to the people she wrote about and for. It was consistently courageous in light of the unforgiving demands made by her elite contemporaries. She was one to be more affected by Pascal George’s mocking of her Coeur d’Alene grammar as obscurely technical
and therefore patronizing to Indians than she was by a dressing-down emanating from the Ivory Tower.

Sixty years after her death we are no closer to definitive answers about whether Reichard was “really” a victim of sexual discrimination, a linguist, a feminist, or just a stubborn “daughter” of Boasian linguistics. The more we learn about her performance and competence as a scholar, the less reducible to category she becomes. What can be said is that Gladys Reichard’s ear was exquisitely alive to the human condition. May she be remembered by students of Salishan and neighboring languages fifty years hence for defining our enterprise as a rigorous one, where respect for honest effort and diverse approaches to our complex tasks call the tune.

References


