

Chinookan word classes and Chinuk Wawa etymologies¹

Henry B. Zenk and Tony A. Johnson
Confederated Tribes of Grand Ronde, Oregon

Documentation presented in this paper establishes that Chinookan source forms of Chinuk Wawa (CW) lexical items in Grand Ronde Chinuk Wawa (GRCW) are heavily weighted to three of the four Chinookan word classes defined by Hymes: Particle, Pronoun, and Noun. The remaining word class, Verb, is remarkably underrepresented both in GRCW and in regional CW, including the variety documented by Gibbs (GCW), which we take to be representative of lower Columbia English speakers' CW. Chinookan phonology and morphology are both plainly visible in Chinookan-contributed GRCW items, irrespective of original Chinookan word class. While GCW does exhibit extensive phonological distortion of CW's Chinookan contribution, this variety is found to be virtually indistinguishable from GRCW in other respects, suggesting that both varieties go back to a common ancestral CW. The data adduced here are consistent with an hypothesis that the latter arose when Chinookan speakers, the only contributors to CW who could have systematically distinguished between different Chinookan word categories, improvised a simplified Chinookan largely free of the most complex of Chinookan forms, the Verb.

Zenk and Johnson (2004) have claimed that the Chinookan contribution to Chinuk Wawa (CW) (this is roughly 50% of the CW lexicon in sources documenting lower Columbia Indian varieties) "originated with grammatical simplifications that only Chinookan speakers could have made." This paper attempts to test that claim by evaluating the morphologies of presumed Chinookan source forms of CW lexical items, primarily in Grand Ronde CW (GRCW) (Zenk and Johnson 2003), but also in the English speakers' variety represented by Gibbs's (1863) historically influential compilation (GCW; see Zenk and Johnson 2004, note 2). If we are right, Chinookan source forms of CW items should suggest a deliberate avoidance of forms that Chinookan speakers themselves would have considered too elaborate or complex to be

¹We are indebted to Sally Thomason for her detailed comments to our last year's conference offering. This paper grew largely out of an attempt to come to terms with some of those comments. Thanks also to Tom Larsen for commenting on a previous draft of this paper, and to Dell Hymes for generously making available to us his dissertation and other Chinookan materials in his possession. Needless to say, all errors remain our own.

easily grasped by non-Chinookan speaking foreigners. While we must grant that deliberate simplification by Chinookan speakers is not the only historical scenario that would predict a paucity of complex Chinookan forms in CW, we feel that the linguistic evidence adduced here is at least consistent with such a scenario. See Zenk and Johnson (2004) for a more extended discussion incorporating historical with linguistic evidence.

Since neither of us knows Chinookan, we have had to base our attributions of speaker-perceived complexity/elaboration on linguists' descriptions. Fortunately, Chinookan is represented by some excellent descriptive work; we have depended especially on Boas (1911), Dyk (1935), and Hymes (1955). A striking feature of Chinookan revealed by these sources is a sharp contrast between polysynthetic inflected verbs, characterized by usually simple stems (often only 1-3 phonemes long) and up to six positions each for prefixes and suffixes, versus all other categories of Chinookan word, the inflectional morphologies of which are usually much less involved.² Compare, for example, the inflections of polysynthetic verbs in group (1) below, with those of the nouns, pronouns, and particles in group (2). These examples, which exclude any forms suggesting CW, are from Boas's (1901) Kathlamet texts (KT), given with normalized Kathlamet Chinook (KC) respellings parsed *à la* Hymes (1955).

- (1) a. aginlō'ta 'she shall give me' (KT30.8)
a₁-g₂-i₃-n₄-l₅-ú-t₆-a₁
 she₂will₁give₆him₃to₅me₄ (u- [directive])
- b. qanō'ix 'I went' (KT222.19)
qa₁-n₂-ú-i₃-x
 I₂gO₃[PAST]₁ (u- [directive], -x [usitative])
- c. aqiXEluwā'lalEma-îtx 'they always went to hunt' (KT39.2)
a₁-q₂-i₃-x(θ)₄-l₅-uá₆-lal₇-(θ)m₈-ait-x
 someone₂will₁repetitively_{7,8}pursue₆him₃for₅[himself?]₄ (-ait [situational], -x [usitative])
- (2) a. iā'newix 'first' (KT123.16)
i-ániw(a)-ix
 masc3sg-[PRONOUN STEM]-[SUFFIX]

²The aforementioned authorities have little to say about Chinookan derivational morphology. Regarding Chinookan nouns, Boas (1911:612-613) comments:

On the whole the derivation of the numerous polysyllabic nouns in Chinook is obscure. Evidently a considerable number of nominal affixes exist, which, however, occur so rarely that their significance can not [sic] be determined.

- b. tɛ'qLkX 'wooden armours' [sic] (KT27.9)
 t(ə)'-q[ʔ?λ?]kx³
 plural-[NOUN STEM]
- c. tqilā't!awulXtiX 'leggings' (KT26.10)
 t-qi[ʔ?λ?]át' awulxt-ix
 plural-[NOUN STEM]-[SUFFIX]
- d. q!ēq!é'tcktan 'the left' (KT14.2)
 q'iq'í'čktan
 [PARTICLE STEM]

Our claim that Chinookan speakers were largely responsible for simplifying the Chinookan contribution to CW rests largely on one simple observation: with relatively few exceptions, presumed Chinookan source forms of CW lexical items are restricted to pronouns, nouns, and particles like those in group (2) above, versus polysynthetic verbs like those in group (1). As subsequent discussion will show, even the exceptions reinforce the impression of deliberate simplification by someone knowledgeable in Chinookan.

1 Chinookan word classes

Chinookan word classes as defined by Hymes (1955:68-69, 86-87, 153-154, 264-268) are:

Pronouns (Pr): words that invariably (a) have person-marker prefixes, and (b) lack any other prefixes.

Verbs (V): words with initial tense prefixes and one or more person-marker prefixes.

Nouns (N): words that (a) have classificatory (also called number/gender or n/g) prefixes and/or "initial prefixes" (*agentive/gerundive, locative, archaic, derogative, situational*), and (b) are subject to possessive inflection by person-marker prefixes.

Particles (P): unprefixated words.

Some Chinookan words meet criteria for membership in more than one

³Comparative data from upriver dialects suggest that both Kathlamet Chinook and Lower Chinook must have had ʔ, λ as separate phonemes, corresponding to Boas's L for any unejected voiceless lateral (Dell Hymes personal communication, 1996). Hence, our bracketed transliterations here and throughout.

word class. Hymes accordingly also defines VN (verb/noun), VP (verb/particle), VNP (verb/noun/particle) and NP (noun/particle) subtypes. For example (these are from the *Appendix*, sets 52, 147):

The stem-*pšū* 'cache, hide' is attested both with an n/g prefix ($t_1-k' i + pšū-li$ 'the₁cache'), identifying it in that instance as a noun; and with initial tense and person-marker prefixes ($a_1-n_2-x_3-pšū-t-a_1$ 'I₂will₁hide.myself₃'), identifying it in those instances as a verb.

The stem *wa(wa)* 'talk' is attested variously as a noun ($a_1-wáwa$ 'the₁talk=it is said'), a verb ($i_1-č_2-t_3-i_4-xá_5-wa-čk$ 'he₂talk.ed₁them₃him[it?]₄ [itself?]₅=he answered [them with it?]''), and a particle (*wáwa* 'talking').

Although it cannot be taken for granted that cognate stems in the different Chinookan dialects and languages exhibit identical word-class memberships, Hymes's criteria are sufficiently broad and the varieties of Chinookan sufficiently morphologically uniform to permit their general application to the Chinookan corpus. The *Appendix* to this paper is meant as a beginning effort to that end. In this collation, GRCW forms (Zenk and Johnson 2003) are grouped according to the Chinookan word-class memberships of those KC forms (Hymes 1955) most closely resembling them. Relevant citations from CW's principal lexifier language, Lower Chinook (LC) (Boas 1894, 1911), are included where available (that is, insofar as identified and collated to date; we don't pretend that this tabulation is anywhere near complete). In almost all instances, the relevant LC forms appear to exhibit word-class memberships identical to those of their KC cognates.

2 Results

155 sets of GRCW-KC matching forms were identified. Taken according to the most closely resemblant KC form in each case, these break down into:

- 8 Chinookan pronouns (sets 1-8, or 5% of the total sample).
- 43 Chinookan nouns (sets 9-51, or 28%).
- 8 Chinookan verbs (sets 52-59, or 5%).
- 90 Chinookan particles (sets 60-149, or 58%).
- 6 ambiguous Chinookan word-class memberships (sets 150-155, or 4%).

It will be observed that Chinookan nouns and particles taken together account for 86% of the sample. While the contributions of Chinookan pronouns and verbs to CW therefore appear to be equally minor, this impression must be evaluated in terms of the relative proportions of pronouns and verbs in Chinookan. Verb stems account for a significant proportion of KT stem forms identified by Hymes, whereas he isolates only nine stem forms for KT pronouns. Four of the latter nine are represented in the GRCW-KC sample (2.2 below). Therefore, while KC pronouns and verbs show equal numbers of matching CW forms in the sample, CW verbs represent only a few available KC verb stems,

while CW pronouns represent nearly half of all KC pronoun stems identified.

Some observations on the sample, with special reference to evidence of Chinookan speakers' manipulation of Chinookan forms contributed to CW, follow:

2.1 Phonetic changes

Sapir (in Boas 1911:638-645) describes a rich and productive system of diminutive-augmentative consonantism for Wishram Upper Chinook (UC). Boas (1911:645-646) was able to find only sporadic indications of like sound changes for KC and LC, most clearly in some examples contrasting *š*-series (unmarked) fricatives and affricates from corresponding *s*-series (diminutive) fricatives and affricates. Boas's following comment is especially to the point of our own findings for Chinookan-matching CW items, in that it suggests that one of the functions of diminutive-augmentative consonantism in Chinookan was to draw contrasts between different linguistic varieties:

... the significance of the process [of changing between *š*-series and *s*-series sounds] does not seem to have been very clear in the mind of my sole [Chinook proper] informant, Charles Cultee, while my only Clatsop informant considered changes of this type as distinguishing characteristics of the Chinook [proper] and Clatsop dialects [of LC]. For instance: Clatsop, *ē*'cElqElq [*>i'šəlqšəlq*]: Chinook, *ē*'sElqSElq PORCUPINE.

All of the LC and KC citations in the sample represent Boas's work with Charles Cultee, and do indeed show much confusion between *š*-series and *s*-series sounds: so much so that Hymes, considering the contrast sub-phonemic, eliminated it from his phonemic respellings of KT forms. That being said, there are enough sets in which the CW *s*-series corresponds to LC and/or KC *š*-series to suggest that at least some Chinookan speakers used the contrast as a device for drawing a "line" between Chinookan and CW.

The following sets have CW *s* corresponding to one or more occurrences of Chinookan *š*: 4, 19, 24, 26, 28, 30, 31, 32, 36, 42, 49, 51, 52, 53, 76, 83, 110, 118, 132, 133.

The following sets show the same contrast for CW *c* or *c'* and Chinookan *č* or *č'*: 6, 9, (66?: see note 12), 71, 135.

Matches between Chinookan plain segments and CW ejectives in some sets suggest like unmarked : diminutive contrasts noted for UC by Sapir (these are all footnoted in the sample): 34 (note 8), 82 (note 13), 122/123 (note 18), 131 (note 19), 142 (note 22), 146 (note 24), 152 (note 26).

Left unexplained by these considerations is a tendency for Chinookan *ə* to be represented by CW *i*: 4, 6, 24, 42, (44?), 56, 57, (84?), 88, 97, (98?). 106, 107, 143.

2.2 Pronouns

According to Hymes, all KC pronoun words are based on pronoun stems, which as already pointed out amount to only nine stem forms in KT. With one exception, these nine stem forms occur only as members of the Pr word class. By contrast, all other Chinookan word classes include numbers of stems with over-lapping word-class memberships. Four of Hymes's nine pronoun stems have GRCW matches: -iXt 'one' (set 1), -ai- 'person' (sets 2?, 3, 4, 5, 6), -xa.lu.ita 'different' (set 7), -ax 'person, demonstrative' (set 8).

Notice that although Chinookan independent pronouns are inflected forms, they are based on a small set of stems modified by a limited number of affixes, the former unique and most of the latter resembling frequently-used nominal and verbal affixes. Chinookan speakers may accordingly have perceived pronoun words (or at least, more frequently used ones) as relatively "obvious" or even "simple" forms, albeit not being Chinookan speaker ourselves it behooves us to be cautious in making such judgments.

2.3 Nouns

The GRCW matches to KC/LC nouns show a nearly 50:50 split between forms retaining Chinookan n/g prefixes and forms dropping them. Excluding the five special cases discussed below, these amount to 15 CW forms retaining Chinookan n/g prefixes and 17 dropping them. With only a few exceptions, n/g dropping is predictable: when the CW form and a closely resemblant Chinookan form both show stress on the n/g prefix, the prefix is retained; when such matching forms show an unstressed n/g prefix, the latter is dropped. The exceptions, excluding the special cases below, are six: sets 10 (in which the CW:Chinookan match is questionable, perhaps indicative of an unrecorded particle as original source), 12, 13 (problematic: see note 6), 35, 50, 51.

Special cases include at least one example (38) in which LC attests an unprefixated vocative form, meaning that the source-form for the CW is likely to have been a particle, not a noun. In fact, the "line" between noun and particle is not always unambiguous. Sets 25 and 29 also attest unprefixated LC forms in Boas's (1894) Chinook texts (CT). And Hymes (1955:269) struggles to explain two instances in which forms ordinarily attested as KC nouns appear unprefixated in KT: (-)kásait 'robin' and (-)kúsait 'mink' (Hymes remarks: "possibly absence of classificatory prefix is Jargon [i.e., CW] influence"; however, neither of these words appears in any CW source of which we are aware).

The other *special cases* are 36, 39, 40, and 43, which are all nouns with both n/g and possessive prefixes (the latter obligatory for certain noun stems according to Hymes, though the limited nature of the KT corpus does not permit definitive classification of very many cases). In all cases stress falls on the possessive: in 36 and 43, both n/g and possessive are retained; in 39 and 40, the possessive is retained but the n/g is dropped.

2.4 Verbs

Of the eight CW items clearly matching KC verbs, three (sets 53, 56, 57) also match Chinookan forms translated as imperatives: CW *ĩskam* 'to take, get': LC $[\theta-]ĩ-šgam$ '[present-]him-take=take him!'; CW *mĩʔayt* 'to sit, stay, reside': LC, UC $[\theta-]m\theta-ʔait$ '[present-]thou-sit!/stay!'; CW *mĩʔx^wit* 'to stand, stride': LC, KC, UC $[\theta-]m\theta-ʔx^w-it$ '[present-]thou-stand.up!'.
CW *ĩpsut* 'to hide' (52) and *ĩxpuy* 'closed, shut' (54) strongly suggest Chinookan imperative constructions on the model of *ĩ-šgam* above. CW *súpna* 'to jump' (58) also suggests a Chinookan imperative, though its interpretation is less straightforward because the Chinookan imperative cited as example in 58 lacks the directive prefix *u-*, retained by the CW form (albeit we see nothing in the grammars contraindicating forms with *u-* as imperative).

This leaves only sets 55 and 59 not apparently accounted for by the simplest of all Chinookan inflected verb forms: the imperative. It will be noted that the interpretation of Chinookan forms cited for both sets is somewhat problematic. At least, the Chinookan morphological constituencies indicated by the CW forms seem intact as far as they go. While clearly morphologically reduced as Chinookan, the CW forms all begin at Chinookan morpheme boundaries. (The word-ending in 55 is obscure to us, but Chinookan suffixes are in general more difficult to identify and interpret than Chinookan prefixes.)

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2.5 Particles

While Charles Cultee may have had an attenuated feeling at best for Chinookan diminutive-augmentative consonantism (2.1 above), expressive sound-meaning correspondences (Childs 1989) nonetheless loom large in Boas's understanding of this speaker's Chinookan. Boas (1911:629-630) cites his own intuition, presumably the result of countless hours spent with Cultee, to support his claim that even particles lacking obvious indications of such correspondences may turn out to have them:

It seems likely that, in a language [like Chinookan] in which onomatopoeic terms are numerous, the frequent use of the association between sound and concept will, in its turn, increase the readiness with which other similar associations are established, so that, to the mind of the Chinook Indian, words may be sound-pictures which to our unaccustomed ear have no such value. I found that, as my studies of this language progressed, the feeling for the sound-value of words like *wāx* TO POUR; *k'!ē* NOTHING; *k!ōmm* SILENCE, *lō* CALM, *pā³ pā³* TO DIVIDE, increased steadily.

If Boas is right, expressive sound-meaning correspondences were an important aspect of word formation in Chinookan, as observed in the forms of some nouns (note the Chinookan forms cited for sets 21, 23, 33), but more especially, in the forms of many of the languages' large stock of uninflected

particles. Quite a few of these Chinookan expressive particles have entered CW, lending an impression that the vocabulary of CW is to some extent “by onomatopoeia” (Hale 1846:639). However, as Boas (1892) noted long ago, onomatopoeic-seeming CW words almost always turn out to be Chinookan-derived. Zenk’s experience with elderly GRCW speakers confirms that these items are not felt as particularly onomatopoeic in CW. Words that we might be inclined to see as onomatopoeically suggestive, like *čxəp* ‘snuff’ and *k”i’t* ‘snap, break’, were felt by them simply as *words*, much as *snuff* and *snap* would ordinarily feel to us as English.

Chinookan forms from the following sets appear as examples in Boas’s (1911:628-629) discussion of sound-meaning correspondences in Chinookan particles: 67, 69, 81, 83, 84, 88, 91, 94, 103, 104, 107, 119, 122/123, 133, 143, 145.

Chinookan’s plethora of uninflected particles, many (or perhaps most) with apparent sound-meaning associations, taken alongside the complex polysynthetic verbs at the heart of its grammar, presents a study in contrasts that could well have implications for understanding the deeper history of CW. Chinookan expressive particles are strikingly reminiscent of *ideophones*, words and phrases with sound-meaning correspondences used expressively in many African languages, including many pidgins and creoles (Childs 1994). While Chinookan-particle derived words do not seem to have been used expressively in GRCW, Boas’s observations indicate that Cultee did so use Chinookan particles. By Boas’s (1894:6) own account, he and Cultee communicated “only by means of the Chinook jargon [CW],” raising the possibility that such particles might have been expressive for Cultee also in CW. The further question arises: could such expressive particles have been characteristic also of neighboring lower Columbia languages?; could some of them have been the property of a region, as opposed specifically to Chinookan? Quite possibly, Chinookan particles and their ubiquity in CW provide important clues to cross-language communication in the lower Columbia region before the intrusion of European-language speaking traders.

3 Conclusions

According to Zenk and Johnson (2004:420), “an important discontinuity contrasting the Chinookan and Nootkan contributions to CW” is that only the former suggests control of the morphology and phonology of the donor language. The comparisons adduced in the appendix confirm that the Chinookan contribution to GRCW retains a strongly Chinookan character. GRCW reproduces mostly whole Chinookan forms, which in turn reproduce the entire range of Chinookan phonological contrasts. Where GRCW forms correspond to incomplete Chinookan forms, word boundaries in the former correspond in almost all cases to morpheme boundaries in the latter. For nouns, reduction of form is rule-governed: stressed n/g or possessive prefixes are retained, unstressed n/g or possessive prefixes dropped; reduced forms show clean breaks at stem (or in sets 39, 40 prefix) boundaries, implying a Chinookan

speaker's knowledge of where prefixes end and stems begin. For most Chinookan-derived CW verbs, minimum whole forms, probably in all cases originally Chinookan imperatives, are generalized as CW base forms, leaving a very few (in the sample only two) verbs lacking prefixes necessary to their integrity as complete Chinookan words. Here again, the CW word boundaries coincide with Chinookan morpheme boundaries, implying a Chinookan speaker's knowledge of how to disarticulate whole words.

If CW really was created by predominantly English-speaking traders, as some now claim (Samarin 1996), the Chinookan portion of the CW lexicon should exhibit evidence of phonological and morphological distortions like those observed for Nootkan (Nuuchahnulth) derived CW words. The distortions illustrated by the following GRCW-Nootkan matches are consistent with transmission by English speakers (Thomason 1983:860-862), and therefore, with the reconstructions of historians like Howay (1943), who argue that the first British and Euro-American traders to enter the lower Columbia carried Nootkan words with them from earlier trading contacts on Vancouver Island:

- | | |
|--|---|
| GRCW <i>pálač, pá+ač</i> 'give': vs. | Nch <i>p'ał-p'a-/+-č</i> 'potlatch' (Bright) |
| GRCW <i>kə'mtəks</i> 'know': vs. | Nch <i>kamat+-a'h</i> 'known+ irrealis' (Silverstein) |
| GRCW <i>kákšat</i> 'beat, whip': vs. | Nch <i>qax-šič, qah-šič</i> 'to die' (Clark) |
| GRCW <i>háyk^wa</i> 'dentalium': vs. | Nch <i>hiix^wa</i> 'dentalium shell' |

Such distortions are typical of the Nootkan-contributed portion of the GRCW lexicon, but very unusual for local indigenous-language contributed items. Set 109:

- | | |
|---------------------|--------------------------------|
| GRCW [máhwəli]: vs. | LC <i>má+x^wli</i> ; |
|---------------------|--------------------------------|

provides one example—in this case, readily explained as a semi-speaker's hazy recollection of a little-used word. One of the few examples of a frequently used CW word that may reflect phonological distortion of an originally indigenous item is:

- | | |
|--|---|
| GRCW <i>mə'k^hmək</i> 'eat': vs. | Upper Chehalis <i>mə'q^w</i> – 'swallow' (Kinkade). |
|--|---|

If European-language speaking seafarers really did create CW, then the indigenous phonetics recorded for Indian varieties must have come about as a result of subsequent "nativization": that is, of local Indians taking (apparently) distorted forms like *mə'k^hmək* above and restoring to them their original source-

language phonological and morphological integrity. Arguers for nativization must however answer two questions:

(a) how likely would local Indians have been to even recognize and/or acknowledged non-Indian introduced CW words as distorted attempts to reproduce words from local languages?

(b) how *motivated* would local Indians have felt to set right such perceived distortions?

Zenk is able to cite some of his own experiences with elderly CW speakers from Grand Ronde on these points. All of these speakers had spoken English at least as long as they had spoken CW, yet they all faithfully preserved the mildly to markedly distorted English word-forms characterizing many English contributions to CW, such as: CW [mə'n] (<Eng [mæ'n]), CW [tɪlə'ɪ] (<Eng [drə'ɪ]). Because these elders were all completely at home with the phonetics of their own rural variety of Pacific Northwest English, [mə'n], [drə'ɪ] came just as "naturally" to them as English words, as [mə'n], [tɪlə'ɪ] did as CW words. Zenk's impression is that in ordinary daily usage, such items were not felt as distorted English at all, but simply as proper CW words *versus* more-or-less similar-sounding English words. In fact, so-called "distorted" feature distinctions were sometimes insisted on as diacritics of CW vs. English pronunciation. For example, the most actively fluent elder with whom Zenk worked, the late Mr. Wilson Bobb (1891-1985), insisted that the word [bə'stən] 'American, White [person]' must be pronounced with [b] slightly devoiced as a CW word, *versus* with English voiced-[b] as an English word, a distinction that try as he might, Zenk could not consistently hear.

The question of speaker motivation is crucial to the disputed indigenous vs. seafarer origin of CW. Judging by the spellings of CW items in the old English-orthography "Chinook" dictionaries, English speakers distorted the Chinookan phonetics of Chinookan-contributed items at least as much as Indians did the English phonetics of English-contributed items (see the examples below cited from Gibbs 1863). Arguers for a seafarer-created CW have presented no evidence that Chinookans ever in fact reversed such expected distortions of Chinookan-contributed CW items, as opposed to just leaving well enough alone. If (primarily) English-speaking seafarers did create CW, most if not all Chinookan-contributed CW words should have undergone significant morphological and phonological distortions like those shown by the (both Nootkan and local) examples cited above. Lacking evidence from the historical record either of earlier distorted forms corresponding to later-recorded Indian-pronounced intact forms (Zenk and Johnson 2004:430-442 survey the early record in some detail), or of strong motivation on the part of local Indians to restore the integrity of seafarer-"butchered" Chinookan, we are forced to attribute most of the local indigenous portion of the CW lexicon to the unmediated influence of speakers of local indigenous languages.

This conclusion is contrary to those of Hale and Gibbs (and more recently, of S. V. Johnson 1978), in which "leaving [mutually convergent phonological distortions] well enough alone" is exactly how CW is supposed to work for *all* of its speakers, both Indian and White.

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 of no sound which cannot be readily produced by all three. (Hale 1846:640)

Words adopted [into CW] from the several languages were, naturally enough, those most easily uttered by all. (Gibbs 1863:vi)

. . . the only phonemic distinctions that could be used [to define CW phonology] were those shared by all of the contact languages, plus a few that could be realized by substitution . . . (S. V. Johnson 1978:180)

To repeat our own conclusions in Zenk and Johnson (2004): while there is abundant evidence (as further expanded upon here) pointing to systematic *grammatical* simplification in the Chinookan contribution to CW, there is no evidence that Chinookans themselves ever systematically reduced the indigenous phonetics of their CW to accommodate European-language speaking foreigners.

The sample of GRCW forms with presumed Chinookan etymologies marshalled in the appendix permits the following further conclusions:

(1) GRCW's Chinookan etymologies show a preponderance of Chinookan pronouns, nouns, and particles, with but few Chinookan verbs.

(2) Those few Chinookan verbs exemplified are restricted to (a) Chinookan imperatives generalized as CW base-forms, and (b) morphologically reduced, but not morphologically distorted forms.

(3) Chinookan augmentative-diminutive consonantism appears to have been used to underscore the line between GRCW and Chinookan.

(4) GRCW shows a roughly 50/50 split between unprefixated vs. prefixated Chinookan>CW nouns, prefix presence/absence being determined by stress-placement: stressed prefixes being retained, unstressed dropped.

(5) GRCW shows a preponderance of Chinookan-derived particles (nearly 60% of the CW<Chinookan etymologies sampled), many of them with inferred expressive sound-meaning correspondences in Chinookan, if not in GRCW.

It is instructive to compare these findings with what is known of other lower Columbia CW varieties. Taking Gibbs (1863) (GCW) as representative of lower Columbia English speakers' CW (Zenk and Johnson 2004, note 2), it is remarkable how well this non-Indian variety exemplifies the features just described for GRCW, notwithstanding GCW's more English than indigenous phonetics:

(1) Both varieties exemplify nearly the same CW lexicon. With respect to the sample, 129 of the 155 GRCW entries have GCW matches.

(2) GCW has practically the same set of Chinookan-verb derived words as GRCW. Allowing for English-speakers' expected distortions of indigenous phonetic features, the Chinookan morphologies of the CW items are as intact in

GCW as they are in GRCW. Referring to the sample:

GCW	Ip'-soot	:	GRCW	<i>i'psut</i>	'hide' (52).
	Is'-kum	:		<i>i'skam</i>	'get' (53).
	Ik-poo'-ie	:		<i>i'xpuy</i>	'closed' (54)
	Kel'-a-pi	:		<i>k'i'lapay</i>	'reverse' (55)
	Mit'-lite	:		<i>mi'tayt</i>	'sit, stay' (56)
	Mit'-whit	:		<i>mi'tx^wit</i>	'stand' (57)
	So'-pe-na	:		<i>súpna</i>	'jump' (58)
	Háh-lakl	:		<i>xálaqat</i>	'open' (59)

(3) *s*-series sounds replace Chinookan *š*-series sounds about as frequently in GCW as they do in GRCW, with almost all GCW-GRCW matches showing agreement between specific segments. Of course, this is an English-congruent contrast, not subject to the distortions typifying English-speakers' realizations of other Chinookan phonetic features. The sample shows only a few exceptions to the rule of GCW-GRCW *s/š*-series agreement:

GCW	Chuk	:	GRCW	<i>cəq^w</i>	'water' (9).
	Si-am	:		<i>šayim</i>	'grizzly' (37).
	Siksh~Shiksh	:		<i>šikš</i>	'friend' (38).
	O'-poots ~O'-pootsh	:		<i>úp^huč</i>	'buttocks' (48).

(4) GCW has practically the same set of Chinookan-noun derived CW words as GRCW. This match-up extends to presence/absence of Chinookan *n/g* and possessive prefixes in almost every case. With respect to the sample, there are corresponding GCW forms matching 38 of the 43 GRCW items in the Chinookan-noun derived portion of the sample. Except for two problematic cases (set 23, in which GRCW *k^wi'sk^wis* 'chipmunk' matches GCW *Skwis'-kwis* 'squirrel'; and set 50, in which GRCW *úyxat* 'road' matches GCW *Way'-hut*), the sample shows complete GCW/GRCW agreement with respect to presence/absence of *n/g* and possessive prefixes.

(5) 67 of the 90 Chinookan-particle derived items sampled for GRCW are also to be found in GCW.

To sum up, apart from certain phonetic distortions more-or-less general to English-speaking users of CW, GCW provides little or no indication of having been created by English speakers. GCW, like GRCW, respects Chinookan morpheme boundaries and the integrity of complete Chinookan forms. Had European-language speaking foreigners really created CW, they surely would have mangled Chinookan morphology, just as they mangled the Nootkan morphology of Nootkan-contributed CW items they introduced to the lower Columbia.

Appendix: CW-KC matching forms, by Chinookan word class

Abbreviations:

CG	Lower Chinook (LC) forms as originally appearing in Boas's <i>Chinook Grammar</i> (Boas 1911).
CT	Lower Chinook (LC) forms as originally appearing in Boas's <i>Chinook Texts</i> (Boas 1894).
JC	Clackamas Upper Chinook (UC) forms as originally appearing in Jacobs's Clackamas slip files (Jacobs n.d.).
KT	Kathlamet Chinook (KC) forms as originally appearing in Boas's <i>Kathlamet Texts</i> (Boas 1901).
__(1) > __(2)	Normalized respelling (2) of form as originally spelled by Boas (1) (normalization following Jacobs 1958-59:5-7, Silverstein 1990:533 fn.).

Pronouns (Pr)⁴ (Hymes 1955:67-85)

1)ixt 'one'	(i)-iXt (KT20.2 ēXt>(i)-ixt) 'one (denoting person)'.
2)+áska '3 pl'	L-ai-c-ka(-pa) 'them(-from)' (KT169.15 Lā'itckapa; cf. CG626 Lā'ska 'it'>[4]áska). GRCW also has +as: cf. L- '3 pl' (pronominal prefix).
3)máyka	m-ai-ka '2 sg [emphasis]'. Also CRCW <i>ma</i> : cf. m-'2 sg' (pronominal prefix).
4)msáyka, misáyka '2 pl'	m-s-ai-ka (KT44.8 mē'caika>mō'sáyka; cf. CG626 mcaika>mšaika) '2 pl'. Also GRCW <i>msa</i> : cf. m-s-'2 pl' (pronominal prefix).
5)náyka '1 sg'	n-ai-ka '1 sg'. Also GRCW <i>na</i> : cf. n-'1 sg' (pronominal prefix).
6)ncáyka, nisáyka '1 pl'	n-s-ai-ka (KT153.8 nē'saika>nē'saika; cf. CG626 ntcaika>nčaika) '1 pl'. Also GRCW <i>nca</i> : cf. n-s-'1 pl (exclusive)' (pronominal prefix).
7)xlúyma 'different'	-xa.lu.i.ta (KT46.7, 91.11, 156.2 i-/a-/L-xal[ō]jita ⁵ 'masc.sg./fem.sg./neut.sg.-...'; cf. CG659 -xEl=ōima>-xəluima, CT261.16, 187.25 L-/t-xalō'ima 'neut.sg./pl.-...') 'another, different'.

⁴Only independent pronouns count as words in Hymes's schema. GRCW also has a set of short-form pronouns, as noted under sets 2, 3, 4, 5, 6, 8. While these appear to be related to the indicated Chinookan pronominal prefixes (Jacobs 1932:41-42), their derivation is not entirely transparent. Chinookan pronominal prefixes are bound forms, while the GRCW short forms are clitic words.

⁵The forms as they appear in *Kathlamet Texts* are ixalā'ita, axalō'ita, and Lxalō'ita, respectively. The first seems anomalous.

8) yáxka, yáka '3 sg' i-ax-ka (KT11.5 yā'xka>ya^xka) 'he, it'. Also GRCW ya: cf. i- '3 sg (masc)' (pronominal prefix).

Nouns (N) (Hymes 1955:86-151)

- 9) cəq^w 'water' -cúqua (KT25.2 Ltcúqoa>[+]-čúq^wa; cf. CT14.4 Ltcuq^o>[+]-čúq^w) 'water'.
- 10) c'i 'sweet' -c?ác?iman (cf. CG600 -'ts!ēmEn>[i]-c'iməŋ) 'sweet'.
- 11) i'kta 'thing' -kti (KT28.13 intā'ktē>i-ntá-kti 'our ...s'; cf. CG610 i'-kta) 'thing'.
- 12) iláy^tix 'slave' -láitiX (KT166.9 alā'etiX>a-láitix 'fem.sg. ...'; cf. CG597 éláētix', óláētix'>i-/u-láitix 'masc.sg.-/fem.sg.- ...') 'slave'.
- 13) i'li?i 'land' -lX (KT11.9 ē'lX>i'-lx; cf. CG612 ilē'ē>i-l'i) 'land'.⁶
- 14) i'natay 'on one side' -nata, -nat(-iX) (KT35.10 ē'nata>i'-nata, 148.10 ē'natiX>i'-nat-ix; cf. CG638 ē'natai>i'natai, JC i'nadix) 'on one side'.
- 15) i'uk^huma 'handgame' -Lukuma (KT103.1 ē'lukuma; cf. JC i'ug^wma) 'handgame'.
- 16) i'4(?)wəl(i) 'flesh' -Lqúl (KT138.10 ilqúl; cf. CG608 ē'-L³wule >i'-[4?λ?]wuli, JC ilǵ^wə'l) 'flesh'.
- 17) i'qsiX 'son-in-law' -qsiX (KT13.9 ē'qsiX>i'-qsiX) 'son-in-law'.
- 18) i'q^hix 'bro-in-law' -xqixi-nana (KT15.7 Liā'xqēXināna>[+]-iá-xqixi-nana 'his ...s'; cf. CT12.2 ē'qxiX>i'-q(x)ix) 'brother-in-law'.
- 19) i'sik 'paddle' -síki (KT241.4 Lcîkē>[+]-š'i'ki; cf. cf. CG601 '-sik>[i]-sik) 'paddle'.
- 20) kəni'm 'canoe' -kánim (cf. CG603 ikanĩm, ōkunĩm>i-/u-kanĩm 'masc.sg.-/fem.sg.-...') 'canoe'.
- 21) kéyskeys⁷ 'bluejay' qí'sqis (KT17.16 iqē'sqēs>i-qí'sqis) 'bluejay'.
- 22) kúpkup 'sm. dentalia' -kupkúp (KT51.5, 27.15 a+/i+kupkúp 'fem.sg.-/masc.sg.-...') 'small dentalia'.
- 23) k^wi'sk^wis 'chipmunk' -kuskuá's (KT141.13 aguskuá's>a-gusk^w[i']s) 'chipmunks'.

⁶The derivation of GRCW *i'li?i* from Chinookan *-lx* is problematic. Boas (1911:568, 612) derives LC *il'i* from the stem *-lx*, by the following phonological rule: $lx > l/_$. To explain the GRCW form on this pattern, we must assume that a Chinookan form with *-l*, not *-lx*, also had first-syllable stress, thus explaining the retention of *i-* in the GRCW form. However, Harrington (1942) records the following form as Bay Center (Willapa Bay, Washington) CW for 'ground': 'il'i'ri>il'i'ri.

⁷Perhaps for *qisqis*. Our citation form was from an untaped elicitation. The vowel was transcribed as [e^ʔ], which is anomalous (vs. [e], [eɪ], [ɛɪ]): perhaps conditioned by an unheard or original [q].

- 24) $t_i k^h \text{əmuks}$ 'blk.berries' – $\text{km}(-\text{uks})$ (KT150.16 $\text{LE}^k \text{Emukc} > [+]\text{ə}^h -k\text{əm} -\text{uks}$) 'blackberries'.
- 25) $\lambda^h \text{əmi}^n \text{x}^w \text{ət}$ 'fib' – $\text{L}^h \text{mi}^n \text{xut}$ (KT 52.16 $\text{iL}^h \text{mē}^n \text{xut} > i - \lambda^h \text{mi}^n \text{xut}$; CT 271.22 has uninflected $\text{L}^h \text{Emē}^n \text{xut} > \lambda^h \text{əmi}^n \text{xut}$) 'fib'.
- 26) $\text{mi}^m \text{əlust}$ 'dead' – $\text{mi}^m \text{əlust}$ (KT49.6 $\text{Lmē}^m \text{əlōc} > [+]\text{-mi}^m \text{əlušt}$) 'corpses'.
- 27) $\text{m}^h \text{ulak}$ 'elk' – $\text{m}^h \text{ulak}$ (KT58.10 $\text{im}^h \text{ōlak} > i - \text{m}^h \text{ulak}$) 'elk'.
- 28) $\text{pa}^h \text{s}i^h \text{si}$ 'blanket' – pasiskwa (KT18.8 $\text{Lgē}^h \text{pasiskua}$; cf. CT259.20 $\text{Lpac}i^h \text{ci} > [+]\text{-pa}^h \text{s}i^h \text{si}$) 'blanket'.
- 29) $\text{p}^h \text{ulak}^h \text{li}$ 'night' – $\text{pulakl}^h -$ (KT85.17 $\text{Lp}^h \text{ōlake}^h \text{IEmax} > [+]\text{-pulakə}^h \text{l}(\text{ə}) - \text{max}^h \dots^h$; CT 29.8 has uninflected $\text{p}^h \text{ōlakli} > \text{p}^h \text{ulakli}$) 'night'.
- 30) $\text{p}^h \text{ánaqs}$ 'liver' – $\text{p}^h \text{ánaqs}$ (KT 99.9 $\text{ip}^h \text{lā}^h \text{naqc} > i - \text{p}^h \text{ánaqs}$) 'liver'.
- 31) $\text{p}^h \text{i}^h \text{s}xas$ 'skunk' – $\text{p}^h \text{i}^h \text{s}xas$ (KT69.2 $\text{ap}^h \text{lē}^h \text{cxac} > a - \text{p}^h \text{i}^h \text{s}xas$) 'skunk'.
- 32) $\text{q}^h \text{úsax}$ 'sky' – kúsax (KT11.15 $\text{ig}^h \text{ō}^h \text{cax} > i - \text{g}^h \text{úsax}$) 'sky'.
- 33) $\text{q}^h \text{é}^h \text{xq}^h \text{é}^h \text{x}$ 'duck' – $\text{qu}^h \text{i}^h \text{xqu}^h \text{i}^h \text{x}$ (KT85.1 $\text{aqo} - \text{i}^h \text{xqo} - \text{i}^h \text{x} > a - \text{q}^h \text{i}^h \text{xq}^h \text{i}^h \text{x}$; cf. CT150.2 $\text{ōgoē}^h \text{xgoē}^h \text{x}$ [sic?], 150.10 $\text{ōqoē}^h \text{xqoē}^h \text{x}$) 'duck'.
- 34) $\text{q}^h \text{i}^h \text{su}$, $\text{k}^h \text{i}^h \text{su}$ 'apron' – $\text{qi}^h \text{su}$ (KT79.5 $\text{Lqē}^h \text{cō} > [+]\text{-qi}^h \text{su}$) 'cedar bark'.⁸
- 35) $\text{sik}^h \text{áluks}$ 'pants' – $\text{sak}^h \text{al} - \text{uks}$ (KT219.2 $\text{tiā}^h \text{sak}^h \text{aluks} > t - \text{iā}^h - \text{sak}^h \text{al} - \text{uks}$) 'his ...' 'leggings'.
- 36) siyáxus 'eyes, face' – xust (KT76.14 $\text{siā}^h \text{Xōstpa} > s - \text{iā}^h - \text{xust} - \text{pa}$ 'on his ...', 18.4 $\text{siā}^h \text{xōst} > s - \text{iā}^h - \text{xust}$; cf. CT29.20, 275.12 $\text{siā}^h \text{xōst}$, $\text{ciā}^h \text{xōct} > s - \text{iā}^h - \text{xust}$, $\text{s} - \text{iā}^h - \text{xušt}$ 'his ...', JC $\text{isyá/xus} \sim \text{xus}$ 'his ...') 'eyes, face'.
- 37) šáyim 'grizzly' – sá.iim (KT25.3 $> \text{ica}^h \text{y}^h \text{im} > i - \text{šáyim}$) 'grizzly'.
- 38) šikš 'friend' – siks (KT213.6 $\text{itci}^h \text{c}^h \text{ikc} > i - \text{é}^h - \text{šikš}$ 'my ...'; cf. CG612 $\text{c}^h \text{ikc} > \text{šikš}$ [vocative], 611 $\text{i} - \text{ci}^h \text{kc} > i - \text{š}i^h \text{kš}$) 'friend'.⁹
- 39) $\text{tá}^h \text{umunaq}$ '100' – $\text{k}^h \text{amunaq}$ (KT164.2 $\text{itcā}^h \text{k}^h \text{amunaq} > i - \text{čá}^h - \text{k}^h \text{amunaq}$; cf. JC $\text{idák}^h \text{amunaq}$ [$> i - \text{dá}^h - \text{k}^h \text{amunaq}$]) 'hundred'.
- 40) $\text{tá}^h \text{lam}$ '10' – LilXam (KT26.10 $\text{itā}^h \text{Lē}^h \text{Xam} > i - \text{tā}^h - [+]\text{ilxam}$; cf. CG607 $\text{i} - \text{tā}^h - \text{Lē}^h \text{lam} > i - \text{tā}^h - [+]\text{ilam}$, JC $\text{itá}^h \text{ilxm}$) '10'.
- 41) $\text{tá}^h \text{q}^h \text{əla}$ 'hazelnuts' – qula (KT143.3 $\text{tē}^h \text{qxola} > \text{tə}^h - \text{q}(\text{x})^h \text{la}$; cf. JC $\text{idə}^h \text{q}^h \text{la}$) 'hazelnuts'.
- 42) $\text{ti}^h \text{psu}$ 'grass' – psu (KT 188.6 $\text{tē}^h \text{pcō} > \text{tə}^h - \text{p}^h \text{su}$) 'grass'.

⁸The shift of Chinookan [q] to CW [q'] in this set appears to fit Sapir's schema of Chinookan diminutive consonantism, except that the uvular place of articulation in the KC forms should also shift to back-palatal (that is, [q] should shift to [k'], although: "the treatment of velar [=uvular] stops...seems to be somewhat irregular") (Boas 1911:638-639).

⁹The occurrence of an unprefixd vocative form suggests that this stem should be classified as NP (noun/particle), at least for LC.

- 43) t^hi'yá?wit 'leg, foot' -qu.it (KT80.1 tiā'qo-it>t-íá-q^wit 'his ...-s'; cf. CG568 tiā³wit>t-íá-?wit 'his ...-s') 'leg'.
- 44) ti'líxam 'people' -lXam (KT26.10 tē'lXam>ti-lxam; cf. CG613 tē'lx'Em>ti'-lxəm, JC idə'lxam) 'people'.
- 45) t'álap'as 'coyote' -t'álapas (KT45.3 it!ā'lapas>i-t'álapas; cf. JC it'álap'as) 'coyote'.
- 46) úlali 'berries' -lili (KT118.4 ā'lele>á-lili 'salmonberry'; cf. CT100.9 Lā'lēlē>[+]/á-lili 'salmonberries', LC u-'fem.sg.').
- 47) úlu 'hungry' -lu (KT36.1 wálo>wá-lu; cf. CG600 '-lō>[ú]-lu) 'hungry'.
- 48) úp^huč 'buttocks, anus' -puc (cf. CG601 '-putc>[ú]-puč) 'buttocks, anus'.
- 49) úskan 'cup' -skan (KT127.7 ē'ckan>i'-škan 'cedar'; cf. CG603 ōcgan>ú-šgan 'basket, cup' [fem.N], ē'cgan>i'-šgan 'cedar' [masc.N]).
- 50) úyxat 'road, trail' -iXatk (KT248.5 ā'eXatk>á-ixatk; cf. CG666 uē'χatk>u-i'xatk) 'road, trail'.
- 51) yáqsu 'hair' -qsu (KT68.17 ē'yāqcō>i'-ia-qšu 'his...') 'hair'.

Verbs (V) (Hymes 1955:153-263)

- 52) i'psut 'hide' -psut [VN] 'to hide' (KT157.13 anxpco'ta>a₁-n₂-χ₃-pšút-a₁ 'I₁will₁hide.myself₃', 17.16 itca.lxápcōt>i-č₁-a₂-[+]₃-χá₄-pšút 'he₁hid.her₂from₄him₃' 150.14 tk!ē'pcolē>t-k'i+pšū-li 'a cache' [N]; cf. CG660 -o=pcut>-u+pšút 'to hide' [V-stem]).
- 53) i'skam 'to get' -sk(-)am 'to get, find, take'¹⁰ (KT21.6 iniū'ckam>i-n₁-i₂-ú-škam 'I₁found.him₂'; cf. CG591 ē'-cg-am>[θ-]i'šgam '[present-]take.him₁!' [transitive-imper.]).
- 54) i'χpuy 'closed, shut' -pu 'to close' (+ -i [completive]?); examples have χ- (cf. ex. 64 below) (KC143.8 amxpua'ya>a-m₁-χ-puá-ia 'you₁close(it)', 43.14 igisxpō'Xuít>ig-i₁-s₂-χ-pú-xuít 'he₁closed.the-two₂ (=his two eyes)'; cf. CT12.3 ixpō'tē>i-χpúti 'it is locked').
- 55) k'i'lapay 'reverse' (-k?i)-lap¹¹ 'fall over' (KT150.4 igē'k!elapχ'itíX>

¹⁰All found KT and CT examples translated 'take, hold, get, find, obtain' have the form -škam (V-stem + -am, Hymes's V-suffix 1121 'purposive, completive').

¹¹k?i- is V-prefix 614 in Hymes's schema; he labels it "(substitutive)?", commenting: the function of 614 k?i- is not known. In many occurrences it appears to replace the object. In other cases a replaced object cannot be identified... In at least one instance the presence of 614 k?i- parallels a noun construction with

- ig-í₁-k'í-lap-xit-ix 'he₁ fell over'; cf. CT165.7 aLē'k'lēlapx'itxē>a[+]ik'í'lapxitxi 'he fell over', CT63.5 kLík'lēlā'lēplē>k[+]ik'ílā'lēpli 'she turned them over often', JC gašik'í'lapxit 'he fell back', JC gatk+iq'í'lapayx 'they lay them down on their backs').
- 56) mi'tayt 'sit, be at'
 -Lait 'be, remain, stay' (KT103.7 amōLā'ita>a-m₁-u-[+]áit-a 'you₁ sit down!', 29.7 iō'La-ít>[θ-]i₁-ú-[+]ait 'he₁ stays/sits'; cf. CT15.12 mE'La-it!>[θ-]mō'₁-[+]ait 'you₁ stay!', CG665 -o=La-it> -u-[+]ait 'to be, sit [V-stem]', JC mō'tayt 'sit!', JC gašdú'ayt 'they (two) lived there').
- 57) mi'tx^wit 'stand'
 -tXui 'to stand, step' (KT61.10 mE'tXuit>[θ-]mō'₁-tx^w(i)-it 'you₁ stand!'; cf. CG612 -ō=tx-uit 'stand [V-stem]', 591 mE'-tx-uit 'stand up!', JC gayúttx^wit 'he stood', JC mō'tx^wit 'stand up!').
- 58) súpna 'jump'
 -pna 'to jump' (KT147.14 sE'pEna>[θ-]sō'₁-p(ə)na 'jump!=jump.the₂₁(feet)!'; cf. CG649 alksō'pEna>a-[+]i₁-k₂-s₃-u-p(ə)na 'it jumped=it₁ jumped [trans.₂]the-2₃(feet)', JC gagō'supna, gagō'subna 'she leaped').
- 59) xálaqt 'open'
 -aqL 'to open' in Hymes (1955:155); Hymes (personal communication 1996) has since decided that the stem is more probably -laqL, which in the examples I have found always occurs with x- (function not always obvious: Hymes translates 'reflexive', 'relational', 'reciprocal') (KT143.15 itcixE'laqLq>i-č₁-i₂-xə'-l(-)aq[+]q 'he₁ opened.him₂'; cf. CT130.11 atcixā'laqL>a-č-i-xá'-laq[+] 'he opened it [=him]', JC gačixə'laq 'he opened it').

Particles (P) (Hymes 1955:264-298)

- 60) ac 'y. sister' áci (cf. CG612 áts) 'y. sister' [vocative].
- 61) á+qi 'later' aL+qi (KT19.8 alqi; cf. CG634 ā'Lqē, JC á+qi) 'later on'.
- 62) aná [interj.] an(a) (cf. CG621 anā) [interj.]
- 63) ánqati 'long ago' an+qa (cf. CT22.10 ā'nqatē) 'already'.
- 64) jaw 'y. brother' á.ui (cf. CG612 aō, CT193.21 au) 'y. brother' [vocative].
- 65) áyaq 'quick' ai'.aq, á.iaq (KT16.9 ai'aq, 37.10 áyaq; cf. CG 568 ai'yaq) 'quick'.

66)c'əx, č'əx 'split' ¹²	c7x (KT204.11, CG630 ts!Ex>c'əx) 'splitting'. Cf. also: c7x c7x [NP] (KT123.7 tc!E'xtc!Ex>č'ə'xč'əx) 'cut'.
67)čxəp 'extinguish'	cXup (KT47.15 tcXup>čxup; cf. CG631 tcxup, tcxəp>čxup, čxəp) 'extinguish'.
68)č'ux 'chip'	c7ux c7ux (KT114.7 tc!úxtc!ux>č'úxč'ux; cf. JC č'úx ^w) 'skin, strip off'. Cf. also: c7ux (KT62.9 tc!úX>č'ux) 'scratch'.
69)hi'hi 'laugh'	hā hā (KT231.2, CG630 hē'hē>hi'hi) 'laugh'.
70)í'wa 'that one'	í'ua (KT27.11 ē'wa; cf. CG621 ē'wa) 'thus, there' (cf. also JC í'wa 'already').
71)kácaq 'middle'	kácak [NP] (KT50.11 kã'tcak>káčak; cf. CG568 kã'tsek>káčək) 'middle'.
72)kápxu 'o. sibling'	ápux 'o. brother' [vocative] (cf. CG612 kã'pxō 'o. sibling' [vocative]).
73)ki'k'əli 'below'	ki'+kuala, ki'+kual(a)(-iX) (KT43.4 gē'kuala, 12.12 gē'gualix; cf. CT16.25 gē'kXulē>gí'k(x)uli, 217.13 gē'kule, JC gí'k ^w li) 'below'.
74)k ^h a 'still, yet'	ka (KT109.12 kã) 'when, while'.
75)k ^h ánawi 'all'	kana+ui (KT19.14, CG637 kánauwē; cf. JC kánawi) 'all'.
76)k ^h ánumak ^w st 'both'	kana+makst (KT123.8 kanamôkct>kanamáčst; cf. CG637 skanasmôkct, CT29.6 kã'namôkct, JC škanamáčst) 'both'.
77)k ^h ə'nəx 'even (if)'	qaná+qa (KT91.15 qanā'qa) 'vain' (cf. JC qánaç 'even').
78)k ^h upá, k ^h apá 'over there'	kú+pa, ku+pá (KT10.6 kō'pa, 36.10 kopā; cf. JC k ^w ába, k ^w abá) 'there'.
79)k ^w ánisim, k ^w ánsem 'always'	kuánsu (KT185.2 guã'nēsum; cf. CT197.22 guã'nsum, 15.8 kuã'nēsum, JC g ^w ánisim) 'always'.
80)k'áw(-k'aw) 'tie'	k7auk7au [NP] (KT39.14 k!áuk!au; cf. CG633 k!au, k!au'k!au, JC k'áw) 'tying'.
81)k'a? 'silent'	k7a (cf. CG632 k!ā) 'silent'.
82)k'uy? 'wanting'	qui (KT39.9 qoē; cf. CG634 qōi) 'must, will'. ¹³
83)k ^w as 'afraid'	k7uas (KT243.17, CG632 k!wac>k ^w as; cf. JC k ^w ásš) 'afraid'.
84)k ^w ít(-k ^w it) 'break off'	k7ut (KT106.16, CG631 k!ut) 'break, tear off'. Cf. also: k7ut k7ut [NP] (KT70.7 k!útk!ut) 'cut' (cf. CG631 k!útk!ut 'clear up', JC k ^w é'tk ^w t 'pick, tear

¹²It is possible that CW c'əx, č'əx, both recorded for 'split', actually go back to two Chinookan forms distinguished by Chinookan consonant symbolism: č' (unmarked) > c' (diminutive) (Sapir in Boas 1911:639).

¹³Possible diminutive consonantism: q (unmarked) > k' (diminutive) (Sapir in Boas 1911:639)

	up’).
85) lákit, lakt ‘4’	lakt [NP] (KT41.5 lakt; cf. CG637 lákit, JC <i>lákít</i>) ‘4’.
86) lax ^w ‘tipped’	lax (KT67.11 lāX>lax, 115.1 lāx ^o >lax ^w); cf. CG633 lāx>lax, CT15.25 lāX ^o >lax ^w) ‘tilt, rock’.
87) lí’li ‘awhile’	lí’li (KT10.7, CG634 lē’lē>lí’li) ‘long (time)’.
88) lí’plip ‘boiling’	lp (KT147.5, CG631 lēp>lēp) ‘boiling’. Cf. also: lp lp lp lp (KT104.17 lēp lēp lēp lēp; cf. JC <i>láp lap</i>) ‘bubbling’.
89) [lō’q(‘)ʌ] ‘drink’ ¹⁴	lq? [VP: see 153] (KT148.3 lēq! ^o >lēq ^w) ‘swallow’.
90) lúlu ‘carry’	(See 91)
91) [lʊʔlʊ(?)] ‘round’	lúlu (KT11.5, CT186.23 lō’elō; cf. CG632 lō’lō, JC <i>lē’wlēw, lúlu</i>) ‘round’ (cf. also 90, and JC <i>lúlu</i> ‘gather, collect’). ¹⁵
92) †aq ^w ‘off, removed’	Laq ^u (cf. CT223.9 Lāq ^o) ‘out, take off’.
93) †awá ‘slow’	La.ua (KT152.1 Lawā; cf. JC †awá) ‘slowly’.
94) †ax ‘come out’	Lax (KT26.8 Lāx; cf. CG633 Lāx, JC <i>lax</i>) ‘come out, visible’.
95) †áxani, láxani ‘outside’	Láxa+ni (KT68.18 Lā’xanē; cf. CT211.15 k ^u Lāxani [> ? ku+[λ]axani; see set 79: LC ku corresponding to KC ku(+pa)?], JC <i>lāxnix</i>) ‘outside’.
96) †ik ‘silly’	Lik? (?) (KT63.1 lēk! ^u ‘start’ [with pain]; cf. CG632 Lēk!, Lāk! ‘weak[ened]’).
97) †i’x-†ix ‘scratch’	Lí’XLiX ‘prepare [a corpse]’ (?) (cf. CG631 lē’xlex ‘scratching’, JC †ə’x†x ‘scratch’). ¹⁶
98) †i’?il ‘black’	L’l [VNP] (KT44.6 lēl; cf. CG632 lē’el, CT25.11 lē’el) ‘black’.
99) †k’ up ‘burst’	Lk?up (KT11.7, CG631 lk!ōp) ‘squeeze’ (cf. also: JC †k’úp ‘broke’).
100) †q’ up ‘cut’	Lq?up (KT93.2, CG600 lq!up) ‘cut’.
101) †úk(-†uk) ‘break’	Lāk, Lā’kLāk (KT145.15 Lāq 145.1 lē’2klex; cf. CG631 lēk ^u , 631 lē’klex) ‘break’. Cf. also: L’kLk (KT17.3 lē’klex; cf. JC <i>lə’kək</i>) ‘dig’.
102) †un ‘3’	Lun [NP] (KT48.15, CG637 lōn; cf. JC †un) ‘3’.
103) †x ^w ap ‘hole’	Lxuáp [NP] (KT17.4, CG631 lxoáp; cf. JC <i>lax^wáp</i>)

¹⁴On finding the indicated Chinookan match, Zenk went back to his field tapes and attempted to retranscribe this item, which appears in Zenk and Johnson (2003) as *loq^ha*. The elderly speaker who spoke this word tended to under-enunciate ejectives medially, and unfortunately, Zenk did not recheck this item with him while there was still opportunity. We do now suspect an unreleased or hardly released ejective, albeit this is very difficult to clearly audit.

¹⁵The Chinookan forms are confusing, leaving an impression that linguists’ phonemic transcriptions may have conflated two originally distinct Chinookan particles meaning ‘round’ vs. ‘gather, collect’.

¹⁶Cf. also GRCW †ix ‘horny’, matching LC (CG633) Lēx ‘cohabit’.

	'hole, dig'.
104)λ'ap 'find'	L7ap (cf. CG633 L!ap>λ'ap) 'find'.
105)λ'ə'x(-λ'əx) 'tear'	L7x' 'cut'. (Cf. also: CG646 L!E'x>λ'ə'x, JC λ'ə'x 'split'; CG631 L!E'xL!Ex 'tear').
106)λ'i'min(-λ'imin) 'soft'	L7man, L7man L7man (cf. CG632 L!mEn, L!mEnL!mEn > λ'mən(λ'mən), JC λ'mə'n) 'soft'.
107)λ'ip 'sink'	L7lap (cf. CG631 L!lep>λ'ləp) 'under water'. (Cf. also: Upper Chehalis [Kinkade 1991:75], Lower Cowlitz [Kinkade 2004:47] λ'əp 'under water'.)
108)λ'uχ 'fall'	L7ux (KT100.12 L!uX; cf. CT113.21 L!ōx>λ'uχ) 'fall'.
109)[máhwəli] 'inland'	mLxliu [NP] (cf. CG648 mā'xlolē> má[+]/x ^w li) 'inland'.
110)mak ^w st '2'	makst [NP] (KT55.10 mākt>makšt; cf. CG637 mōkt, JC mák ^w št) '2'.
111)mának'i 'too, more'	manaq?i' (KT101.5 manaqlē'; cf. CG634 maniq!ä) 'too (much)'.
112)masáči 'bad'	masáciL (KT146.14 masā'tciL>masáči[+]); cf. CT218.18 masā'tsiLx>masáci[+]/x) 'pretty'. ¹⁷
113)na [interrogative]	na (cf. CG634 na) [interrogative].
114)ni'x ^w a 'let's...'	ni'Xua (KT18.1 ní'Xua>ní'x ^w a 'well!'; cf. CG niχua>nix ^w a [exhortative], JC ní'x ^w a 'let's...', 'do...', 'suppose...').
115)o [interj.]	u (KT58.6, CG635 ō) [interj.] ¹
116)pil 'red'	LpL (KT42.14, 126.9 Lpil, Lpāl; cf. CG632 Lpil, CT235.10 LpE'lpEl, JC †be'l) 'red'.
117)pi'lpil 'blood'	(See 117).
118)pus 'supposing...'	pu (KT52.16 pō; cf. CG634 pōc>puš, CT44.3, 51.8, 61.3 pōs, puc, pus) [conditional].
119)p ^h a+, p ^h aλ 'full'	paL (cf. CG631 pāl, JC páλ) 'full'.
120)p ^h čix 'green, blue'	pcix (KT42.14, CG630 ptcix>pčix) 'green'.
121)p'ə'q(-p'əq) 'hit'	p?aq, p?aq p?aq (KT100.12, 116.14 p!āq, p!āqp!aq) 'slap'.
122)p'u 'shoot'	pu (KT86.12, CG630 pō) 'blow'. ¹⁸
123)p'u? 'fart'	(See 122, note 18).
124)q ^h a, q ^h aχ 'where'	qa, qax (KT 130.6, CT13.16 qa, KT66.1 qāx>qax; cf. CG618 qax>qax, JC qāx) 'where'.
125)q ^h áta 'how'	qa+ta (KT26.4, CG658, JC qáda) 'how, what'.
126)q ^w et 'reaching'	quā't (KT238.14, CG633 qoā't) 'reaching'.

¹⁷Hale (1846:611) records "mačátci" as UC for 'bad', corresponding to the CW item. How Hale's form is related to KC, LC for 'pretty', we are unable to say. The referents we found for KC, LC 'pretty' include arrows, arrowheads, a canoe, and facial painting.

¹⁸CW p'u and p'u? (next entry) both suggest Chinookan diminutive consonantism: p (unmarked) > p' (diminutive).

- 127)q^wi'nəm '5' qui'nəm, qui'nma [NP] (KT151.7 qui'nEm, 150.18 qui'nEma; cf. CG607 qui'nEm, JC ġ^wə'nma) '5'.
- 128)q^wəλ 'hanging' quL (KT29.6, CG633 quL; cf. JC q^wə'λ) 'hang up, put on'.
- 129)q'at 'love' qʔat (KT166.8, CT60.11 q!āt; cf. JC q'át) 'love'.
- 130)q'əl 'hard' qʔl qʔl (KT63.8, CG631 q!E'lq!El 'hard'; cf. CG631 q!El>q'əl 'strong').
- 131)q^wan 'get used to' kʔuan (KT197.14, CG632 k!wan>k^wan 'hopeful'; cf. g CG632 k!wánk!wan 'glad', JC k^wánk^wan 'glad').¹⁹
- 132)sáxali 'above' saxala [NP], sáxal(a)-iX (KT38.2, 19.14 cá'xala >śáxala, sā'xaliX>sáxal(a)-ix; cf. k^ucā'xalē [ʔ>ku+śáxali; see set 79: LC ku corresponding to KC ku(+pa)?], JC śáxlix) 'above'.
- 133)sp^húʔuq 'grey' spiq (KT244.11 cpēq>špiq; cf. CG609 cpEq>špəq, JC špúq) 'grey'.
- 134)stúx(-stux) 'untied' stux, stúx stux (KT14.7, 45.6 stuX^u>stux^w, stúXstuX >stúxstux; cf. CG632 stux>stux, stúxstux>stúxstux, JC sdúx, sdúx^wsdux^w) 'untied'.
- 135)táci 'must be'²⁰ ta+cʔa (KT69.6, CG636 tate!a>tač'a; cf. CT 44.4 tate!, 260.7 tatca>tača) 'behold, although, but'.
- 136)táxam '6' txm' [NP] (cf. CG607 tE'xE'Em>tə'xə'm) '6'.
- 137)táʔan+k^hi 'yesterday' ta+q'L (KTtaqE'L; cf. CT155.7 tā'anLkī) 'yesterday'.²¹
- 138)tə'mtəm 'heart' tm (KT223.15 tEmm>təm [noise of birds flying]; cf. CG630 tEmm [noise of feet]). (Cf. also: 139, 141.)
- 139)tə'mwáta 'waterfall' (See 138, 141)
- 140)tí'ntin 'bells, o'clock' tántin (KT248.14 tá'ntēn 'bells'; cf. CG628 ti'ntin 'clock').
- 141)tum 'thump' tum (KT160.14 tumm [noise of thundering]; cf. CG 217.3 tumm 'thump').
- 142)tuwáx, t'wax 'light'²² t(a)+u.áx (KT18.4, CG631 tuwá'x>tuwáx) 'light'.
- 143)t^hl(-t^hil) 'tired' tl, t'l tl (KT10.7 tEl>təl 'tired', 224.4 tE'lteI 'weak'; cf. CG632 tElI, JC təl 'tired', CG632 tE'llteI 'tired

¹⁹If *q^wan* and *k^wan* go back to one Chinookan form with diminutive-augmentative consonantism, it appears that in this case it is the CW form that preserves the unmodified form (according to Sapir in Boas 1911:639, *q'* is unmarked, *k'* diminutive).

²⁰A variant slur-form [tsə'(t)sə] could have been slurred or misrecorded for **táč'a*. The change from either *tač'a* to *tac'a*, or from *tača* to *tac(a)* suggests Chinookan diminutive consonantism: *č' > c'*, *č > c* (unmarked > diminutive) (Sapir in Boas 1911:639).

²¹The difference between the KC and LC forms may be explained in part by an LC phonological rule not shared by KC: *'q > 'ʔ* (Boas 1911:568; cf. set 16 above). If this is true, Boas appears to have missed [ʔ] in the LC form, which should be placed just as in the CW form.

²²Chinookan diminutive consonantism may explain the two CW forms: *t* (unmarked) > *t'* (diminutive) (Sapir in Boas 1911:639).

- all over').
- 144)t^hk'up 'white' tkʔup (KT35.9, CG632 tk!ōp; cf. JC tk'úp) 'white'.
- 145)t^hq'i 'want, need'²³ tqʔix (KT19.10 tq!ēx>iq'ix; cf. CG632 tq!ex, JC tq'ix) 'desire'.
- 146)t'ux 'spit' tu (KT149.3 tō) 'spit'.²⁴
- 147)wáwa 'talking, talk' uá.ua [VNP] (KT180.3 wá'wa; cf. JC wáwa) 'talking'.
- 148)ḡáwqa+ 'can't' xáuqaLx (KT36.1 xāoqxaLx; cf. CT139.26 qxā'oxaL, 165.16 xā'ōqxaL>xáuq(x)a[ʔ]) 'can't'.
- 149)yák^wa 'here' i.úkua (KT57.8 iō'koa 'there'; cf. CG621 yákwa, iakwá 'here').

*Classification Uncertain*²⁵

- 150)kála-kala 'bird' -ka 'to fly' [V] (KT44.3 qtkgā'la>q₁-t₂-k₃-gá₄-la₅, 'those₁,they₂,their₃,fly₄,ing₅=fliers=birds'; cf. CT60.6 ktgE'kal>k-t-gō'-ka-l 'fliers=birds', JC i#c'í'gala 'a bird').
(Cf. also KT70.10 iq!elē'q!elē>i-q'iliq'ili 'turkey', CG608 t-k!elak!elā'ma>t-k'ilak'ilāma 'geese'.
These are nouns proper, vs. q-t-k-gá-la, k-t-gō'-ka-l, which are verbal nouns with the nominalizing prefix k- (q-). Possibly though, all of these forms belong to one Chinookan word family.)
- 151)q'áy?wa 'crooked' -qʔa.ia 'to squeeze' [V] (KT32.1 qāyaxawi!ā'yakoax > qa-i₁-a₂-x₃-au₄-i₅-q'áya-(a)k^wa-x 'he₁squeezed. himself₃through.her₂against₅them₄' [?]).
(But cf. Upper Chehalis [Kinkade 1991:111] q'ə'yw- 'crooked'.)
- 152)q'u? 'arrive'²⁶ -qu 'to reach, get to' (also?: -kʔua 'to return, go

²³Demers, Blanchet, St. Onge's (1871:29) CW shows the complete Chinookan form: tke卜>t[q'ji[x] 'like, love, desire, wish'. Harrington (1942) transcribes Bay Center CW tək'í'>təq'í' 'to want'.

²⁴Chinookan diminutive consonantism?: t (unmarked) > t' (diminutive).

²⁵In these examples, the precise identifications and/or word-class memberships of the source forms that presumably gave rise to the indicated CW form are uncertain. In 151, 153 the immediate source form may not be Chinookan.

²⁶The shift of Chinookan [q], [k] to CW [q'] in this set appears to fit Sapir's schema of Chinookan diminutive consonantism, except that the uvular place of articulation in the KC forms should also shift to back-palatal (that is, [q] should shift to [k'], although: "the treatment of velar [=uvular] stops...seems to be somewhat irregular") (Boas 1911:638-639). Harrington shows k'ó'>q'ó 'get there' in Bay Center CW, matching [q'ó], an alternate form recorded from one of the elderly fluent Grand Ronde speakers. Demers, Blanchet, St. Onge (1871:66) have ko>[k'ʔq'ʔ]o 'arrive'.

home'?) (KT53.7 atilqō'ya>a-t₁-i₂-l₃-qú-ia
 'they₁shall.go.to₃him₂'; cf. CG662 -kō 'to go home, to
 pass [V-stem]', CT25.9 nē'xkō>n-i-x-ku 'he went
 home', 212.2 mXatgō'ya> m-xa-t-gú-ia 'you come
 back').

153)ulq' 'snake'

-uulq?, -lq? 'to swallow' [VNP] (KT121.10
 anLuwúlq!ama>a-n₁-[ʔ]₂-u-wúlq'-am-a 'I₁will.eat.
 them₂', 65.11 iamō'leq!>ia₁-m₂-ú-ləq' 'I-you₁
 swallow.you₂=I swallow you').

(But cf. Lower Chehalis [Snow 1969:69] ulq' 'snake'.
 Cf. also set 89.)

154)yúckat 'short'

-sk?txax [N] (KT192.4 giā'sk!Etxax>
 g-(i)-iá-sk'ətxax; cf. CG646 iū'tsqat>i-úcqat).

(Note: Boas explains LC -ucqat as a verbal stem
 presumably with the directive prefix u-, but gives no
 CT citation supporting -cqat as Hymes's type V.)

155)yúʔqat 'long'

-Lqt [N] (KT44.11 ē'yaLqt>i'-ia-[ʔ]qt, 84.6
 iō'LqtíX> (i)-iú-[ʔ]qt-ix; cf. CG638
 iō'Lqt>i-ú-[ʔ]qt) '(it is) long'.

(Note: Hymes wonders if -iú- in the second KT
 example may be explained as "LC u for UC a." 'Boas
 explains the LC stem as -[ʔ]qt presumably with
 directive u-. As with yuckat above, he gives no CT
 citation supporting -[ʔ]qt as Hymes's type V.)

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Henry B. Zenk
hzenk@pdx.edu

Tony A. Johnson
tony.johnson@grandronde.org