Vestiges of Tsimshianic and other Penutian in Bella Coola

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Abstract: Bella Coola is a Salish language that has been heavily influenced by North Wakashan, while more than half of its free morphemes and about a third of its bound morphemes have no known origin. In this paper, I identify possible Tsimshianic matches for some of these morphemes, and evaluate relations within Bella Coola-Tsimshianic-other NW Pacific sets of like forms as well. I also contemplate a Tsimshianic origin for vowel length in Bella Coola, and examine a few connections with coastal Oregon Penutian languages.

Keywords: Bella Coola, Tsimshianic-Penutian, diffusion, lexical and structural copying, trade and migration patterns

1   Introduction

In native Bella Coola, we find an amalgamation of populations from Stuie (1), Kwatna (2), the head of Dean Channel (3), the head of South Bentinck Arm (4), locations along North Bentinck Arm (5), the Bella Coola valley (between 1 and 5), the Dean River area (east-southeast of 3), Dean Channel (south-southwest of 3 and east of Ocean Falls), Kwatna River (east of 2), and South Bentinck Arm (north-northwest of 4) (numbers correspond with the ones in Figure 1). Denizens of this region spoke the Salish language we now call Bella Coola or Nuxalk.
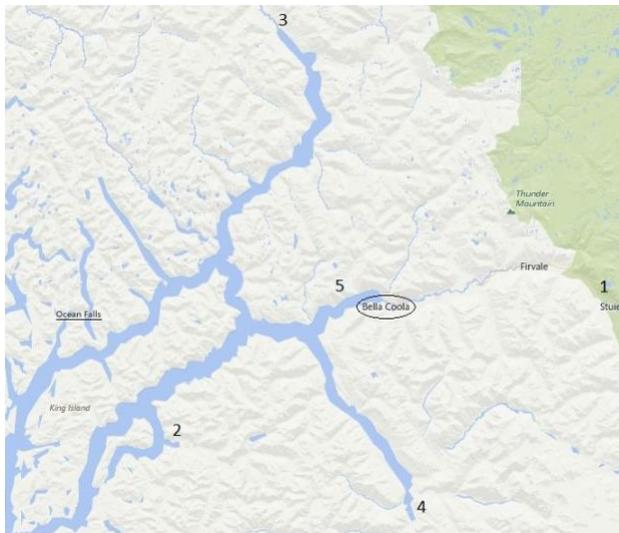
Figure 1: Bella Coola language region (based on bing.com/maps)

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In regard to physical, cultural, and linguistic traits of the Bella Coola people, Franz Boas (1898:26,122–126) saw a close affinity between Bella Coola and Coast Salish on the one hand, and between Bella Coola and North Wakashan on the other. But it was not until much later that areal properties of Bella Coola lexicon as such were addressed in detail, i.e., when Stanley Newman (1973) deliberated the North Wakashan origin of a portion of Bella Coola vocabulary. In 1974, I presented my first account of lexical similarities between Bella Coola and Heiltsuk (Bella Bella), and in 1994, 2010, and 2013, I expanded and adjusted Newman's findings, and cited unique links that indicate southern maritime origins of the Bella Coola (see Section 4.3 for details). Evidence for one such origin is given by Boas himself, who refers to an oral tradition that mentions the location of *Naws* (Bute Inlet, 226 km south of Bella Coola):

> … the Sun created a number of men whom he sent down … Another group of men was sent down to Bute Inlet, and later on migrated to Bella Coola River. (Boas 1898:50)

> Anoxema′axōts, Spānpaʟtnai′x·, Ō′′meaʟk·as, Ō′′meaʟmai, and Nana′tskuiʟ were sent down to Na′us. They desired to move to Nuxa′lk·!, and travelled overland until they reached the mountain Nusq!ɛ′lst, where they found stones for making axes. (Boas 1898:70)

This myth may be based on one or more of a number of events: slaves escaping or being liberated, feuding and warfare, banishment, emergency evacuations (fires, earthquakes, tsunamis), etc. As for the five individuals mentioned by Boas, the names Ō′′meaʟk·as, Ō′′meaʟmai, and Nana′tskuiʟ are not analyzable within Bella Coola, and look North Wakashan: cf. Kwakwala √ʔwm 'mortal, ordinary' (-ił-kas and -ił-may, both also originally North Wakashan, recur in the names *Kaniłkas* and *Kaniłmay*) and Heiltsuk *nánáskʷm̓ala* 'to hang over one's face (said of hair)' (Lincoln & Rath 1980). I recorded the name *Naws* myself in 1972 as referring to a place mentioned in a *Sniniq'* myth. (But geographic and other particulars of *Naws* were ostensibly unknown to my Bella Coola language consultants.) *Sniniq'* has a North Wakashan origin as well: cf. Oowekyala-Kwak'wala *ʒunuq'ʷa* 'Sasquatch' (√ʒuqʷ 'to pucker lips') (Lincoln & Rath 1980). In line with the overall North Wakashan aspects of these *Naws* myths (including the location of Bute Inlet), the place name *Naws* itself has a North Wakashan appearance: cf. Heiltsuk *'Náwís* 'name of Nowish Inlet on Roderick Island' and/or *Náwís* 'name of a place on Hunter Island' (Rath 2010).

My 1974–2013 records suggest that the Bella Coola (a pre-Coast Salish division, see Nater 2013) began, arriving from the south prior to and while settling in the area outlined in Figure 1, to interact with other populations in the following regions: southwest of the head of South Bentinck Arm (Ooweekeno: lexicon, loss of distinctive stress and schwa), west of Kwatna (Heiltsuk: lexicon), east of Stuie (Athabascan: lexicon, other phonological developments), and north of the head of Dean Channel (Haisla: lexicon). (For other scenarios, see Baker 1973:77–79.) But as far as northern contacts other than Haisla are concerned, I have to date seen

little linguistic evidence of frequent interaction with speakers of Tsimshianic languages, even though some Tsimshianic villages were once located rather close to Bella Coola-speaking communities (e.g., the village of *Sucł* was separated from Kitlope by less than 80 km of grease trail). However, Boas writes that there are myth-related and cultural links with Tsimshianic:

> It is very remarkable, that, besides the ancestors of the villages enumerated here, the Bella Coola state that the Sun created a number of men whom he sent down to a mountain on Skeena River, and that they became the ancestors of a part of the Tsimshian.[1] (Boas 1898:50)

> The prayers of the Bella Coola directed to SEnx or Tā′ata bear a remarkable resemblance to the prayers of the Tsimshian directed to Laxha, the sky. In both tribes we find the idea that when the Sun wipes his face it will be clear weather … (Boas 1898:126)

Boas' remarks call for a continued investigation into Bella Coola-Tsimshianic lexical resemblances. In the examination carried out in Section 2 below, I cite forms from proto-Tsimshianic (Tarpent 1997 and p.c.) and three surviving Tsimshianic variants (North Tsimshian (= Dunn's Sm'algyax), Nisqaʔ, and Gitksan) where they are available. Tarpent (p.c.) places North Tsimshian and Sgüüχs (the latter is now extinct) within a Maritime Tsimshianic branch, and classes Nisqaʔ and Gitksan as Inland Tsimshianic, at the same time deeming Nisqaʔ and Sgüüχs more conservative than Gitksan and North Tsimshian.

   In Section 3, I aim to show that Bella Coola vowel length has evolved via Tsimshianic pre-glottalization, and in Section 4, links between Bella Coola and Tsimshianic, between older Bella Coola and pre-Tsimshianic, and between pre-Bella Coola and other Penutian, are considered.

2   Bella Coola-Tsimshianic similarities

In Sections 2.1–2 below, I list Bella Coola morphemes that can be linked with Tsimshianic. In most cases, the copying direction appears to be either Tsimshianic → Bella Coola or Bella Coola ← substrate → Tsimshianic, but ten morphemes are also matched in Wakashan (with two in Quileute and one in Tlingit as well), while 'rabbit' is originally Tlingit-Eyak-Athabascan, and Tsimshianic 'to sweep' and 'to crack' may have a substrate or Salish origin. Where a resemblance may appear opaque, the common sequence is contained in curly brackets (entries 7, 20, 23).

   The Bella Coola phonemes are:

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[1] The Skeena is located – as the crow flies – 383 km north of Bella Coola.

p	*t*	*c*		*k*	*q*	*kʷ*	*qʷ*	
p'	*t'*	*c'*	*λ̓'*	*k'*	*q'*	*k'ʷ*	*q'ʷ*	*ʔ*
		s	*ł*	*x*	*χ*	*xʷ*	*χʷ*	*h*
m	*n*	*l*	*y*			*w*		
m̩	*n̩*	*l̩*	*i*			*u*		*a*

Figure 2: Bella Coola phoneme inventory

Tarpent (1997:70) tentatively reconstructs the proto-Tsimshianic consonant inventory as follows:

*p	**t*		**ts*	**k*	**kʷ*	**q*	**qʷ*
*p'	**t'*		**ts'*	**k'*	**k'ʷ*	**q'*	**q'ʷ*
		*ł	**s*	**x*		**χ*	**χʷ*
*m	**n*	**l*		**y*	**w*	**h*	**hʷ*
*m'	**n'*	**l'*		**y'*	**w'*	**ʔ*	**ʔʷ*

Figure 3: Proto-Tsimshianic consonant inventory according to Tarpent (1997)

Bella Coola χ^w corresponds with current Tsimshianic χ deriving from proto-Tsimshianic $*\chi^w$ (entries 1 and 11); current Tsimshianic [xʷ] varies freely with [χʷ] (entry 8); Bella Coola plain stop = Tsimshianic voiced stop:

> The modern Tsimshianic languages have no labialized postvelar series (…), since labio-uvulars merged with uvulars. … CT has only *X*; others also have *x*, *xw* ~ *Xw*. CT and ST also have glides *ü* and *ü'*, central, unrounded counterparts of *w* and *w'*. Plain stops are usually allophonically voiced before vowels.[2] (Tarpent 1997:70)

The geo-linguistic setting of Tsimshianic is as shown in Figure 4 below (which shows a large portion of Bella Coola territory (in white) to the east of Heiltsuk). Sgüüχs was once spoken at Klemtu, which is located behind the letter *u* in the word *Heiltsuk* at the bottom of the map shown below.

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[2] CT = Coast Tsimshian = North Tsimshian, ST = South Tsimshian = Sgüüχs
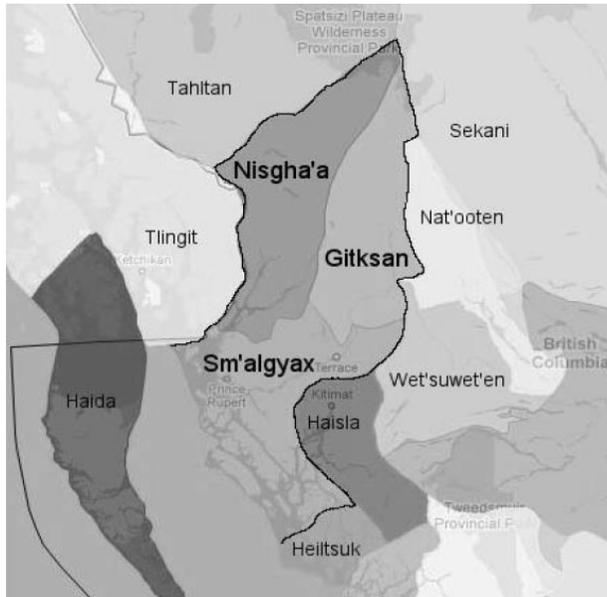
Figure 4: Tsimshianic and neighboring languages (Peterson 2010:7)

2.1 Bella Coola–Tsimshianic common lexicon and bound morphemes

In Nater 2013, I linked four Bella Coola words with North Wakashan or Salish rather than with Tsimshianic, while other connections with Tsimshianic also remained undetected. Thus, *ʔaχʷ* 'not' was believed to derive from older Salish **hawq*, *naχnχ* 'mallard duck' was linked with Heiltsuk *n(i)snáq*, *saaχʷan* 'tidal flats' with Haisla *sàɢʷan* 'grass', and *χaχaqʼ* 'goose' with Heiltsuk *hńɢáq*. These etymologies are revised here, and new ones are added.[3, 4]

    (1)   BC *ʔaχʷ*, *ʔaχ…* 'not' (pre-predicative particle), 'it is not (so), there is no …' (verb stem) = Ni (F) *ʔaχ-* 'not' (pre-predicative prefix)

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[3] Abbreviations used hereafter are: BC = Bella Coola, C = consonant, Ch = Upper Chehalis, Gi = Gitksan, F = FirstVoices, H = Hindle & Rigsby (1973), Ha = Haisla, He = Heiltsuk, K = Kuipers (2002), L = Lincoln & Rath (1980), N = Newman (1973), Ni = Nisqaʔ, NT = North Tsimshian (source: Dunn 1995), NW = North Wakashan, Oo = Oowekyala, P = Peterson (2010), PT = proto-Tsimshianic, R = Rath (2010), TEA = Tlingit-Eyak-Athabascan, tr. = transitive, Ts = Tsimshianic, V = vowel.

[4] While prevocalic plain (allophonically voiced) stops are usually rendered as *bV*, *dV*, *gV*, etc. (Dunn 1995, FirstVoices, Hindle & Rigsby 1973, and in part Peterson 2010), I write phonemically, concurring with Tarpent (1997), *pV*, *tV*, *kV*, etc. in Sections 2.1 and 2.2 (where **c** equals Tarpent's **ts**). However, there is a marginal *plain vs. aspirated* contrast in NT: *taagan* [tʰa·ɢán] 'planking' vs. *daaw* [da·w] 'frozen', *puksk* [pʰukskʰ] 'spit' vs. *bu'il* [búʔɪl] 'warn', *kyooxt* [cʰo·χtʰ] 'grass' vs. *gyoos* [ɟo·s] 'algae' (Dunn 1995).

Allomorphic *ʔaχ* is in BC found before *‿kʷ...* and *‿k'ʷ...*: *ʔaχ‿kʷ* 'I heard that is not so', *ʔaχ‿kʷu* 'but that is not so', *ʔaχ‿k'ʷ* 'that is never so'. Ts origin: Tarpent (p.c.) relates *ʔaχ-* to *ʔaq* 'not to be'.

(2) BC *cap* 'bone' = Ni (F, T:88) *c'ip*, Gi (H) *sip*, NT *sayp*
BC *cap* appears to be a hybrid of the different Ts forms.

(3) BC *muχʷmuχʷ-łt'-uł-ikan-ta* 'large earrings' = Gi (H) & Ni (F) *maχmuxʷ* 'earrings', Gi (H) & Ni (F) *muxʷ* 'ear(s)'
The BC word is an unusual compound consisting of an unidentifiable noun + verb ('?-attach with a hook') followed by *-uł-ikan-ta* 'bulky-ear-gadget' (cf. entry 27). √*muχʷmuχʷ* certainly has been copied from Ts.

(4) BC *naχnχ* 'duck' = Ni (F) *naχnaaχ*, Gi (H) *naχnaaχt*
PT or substrate origin (and cf. Nootkan (Davidson 2002) *na·ḥt'ač*).

(5) BC √*pakʷ* 'having been reached, joined, caught up with' = Gi *pakʷ* 'arrive pl.' (H, P:32), Ni *pakʷ* 'return pl.' (F)
PT or substrate origin. The BC stem is found in *pakʷ-nix* reached-NC.TR 'catch up with somebody' and *pakʷ-n-maxʷ* reached-NC-RECP 'arrive together'.

(6) BC *qaaχ* 'salmonberry', *qaaχaaχ-łp* 'salmonberry bush (-łp)' = NT *qaχaaχ* 'berries in bloom'
Definitely NT origin. BC *qaaχaaχ-łp* is structurally close to NT *qaχaaχ*, which according to Tarpent (p.c.) may consist of *qa-* noun-forming prefix and **χaaχ* = Ni *χeeq* 'blossoms' (= NT *χéeχ* 'foam', cf. entry 9).

(7) BC *{qacq}ił* 'ant' = NT *{qasq}acaχ*, Gi *s{qansq}ocinχt* (H), Ni (F) *{q'asq'}ocinχ*
The formal diversity within Ts suggests a PT origin (cf. entry 2 for glottalization in Ni). BC *…ił* is fossilized *-ił* 'ring-shaped', and *qacq…* may also be linked with *qacχ* 'starfish' (entry 23).

(8) BC *saaχʷan* 'tidal flats' = Gi (H) & Ni (F) *saxʷ* 'mouth of a river'
PT or substrate origin. For Ts [xʷ] ~ [χʷ], see comments after Figure 3. BC *…an* is fossilized *-an* (various glosses).

(9) BC *xʷiq'* 'cow parsnip' = Ni & Gi *χeeq* 'sea foam, foamy white blossoms (e.g., those of cow parsnip or elder)' (Tarpent, p.c.)
Here, Ts appears to have copied from BC, via **xʷeʔq* ~ **χʷeʔq* (for pre-glottalization see Section 3, while [xʷ ~ χʷ] alternation and unrounding is discussed by Tarpent under Figure 3). Cf. entry 6.

(10) BC *χaχaq'* 'goose' = NT *haʔa, haʔq, haaʔq*, Gi (H) & Ni (F) *haq*
PT or substrate origin. For BC *q'* = NT *ʔq* see Section 3.

(11) *χʷsan-im* 'gambling game' = Gi (H), Ni (F), NT *χsan* 'gamble'
PT, substrate, or BC (cf. Nater 2013, entry 557) origin. Regular
unrounding of **χʷ* in Ts. BC *-im* 3SG.PASS is found in a number of
nouns denoting useful or enjoyable things: *knix-im* eat-3SG.PASS
'food', *qaaχla-m-im* drink-APPL-3SG.PASS 'beverage', *nu-ʔakʷn-als-
im* inside-buy-space-3SG.PASS 'store'.

Below, I list a number of BC bound morphemes that have been copied from Ts:
a deictic root, three enclitics, and four prefixes (two of which – as entry 17 –
appear related).

(12) BC √*ʔaw(a)* 'in area, nearby' = Ni & Gi *ʔawáʔ* (Tarpent, p.c.)
PT origin.

(13) BC *ʔit-* 'to speak the language of …' = Ni (Tarpent, p.c.) *ʔit-kʷ* 'to
name', *ʔit-im-* 'to utter, call out'
PT origin. Ni *ʔit-* is isolable as per Tarpent (p.c.).

(14) BC ⌣*ma* 'maybe, possibly, likely' = Gi & Ni (P:57-63) ⌣*ima*
PT origin.

(15) BC ⌣*mas* 'likely, inclined to' = Gi (P:140) ⌣*ima⌣s* 'might, must have
…'
PT origin. Gi ⌣*ima⌣s* = ⌣*ima* + ⌣*s* (a noun determiner) (P:140).
Unlike BC ⌣*ma* and Gi ⌣*ima(⌣s)*, BC ⌣*mas* conveys, besides
possibility/likelihood, an additional sense of frustration: *cutnu⌣mas* 'I
knew you might say that, you always say that', *ʔaχʷ⌣mas ʔixʔakʷkʷas*
'I don't expect him to do any shopping, he never does the shopping'.

(16) BC *sm-* 'from the very start, totally, truly' = Ts *s(i)m-* 'real, genuine'
PT origin. BC *sm-* combines with verbo-nominal stems: *sm-yalxs* 'he
got better right away', *sm-ʔałʔatma* 'he was already dead', *sm̩-nm̩nm̩-
uuc* absolutely-obstructed-mouth 'mute'.
Tarpent (p.c.) disagrees, deeming BC and Ts *sm-* too dissimilar
semantically to be related.

(17) BC *sta(m)-* 'beside, together with', *sti-* 'asymmetrical, one-sided' =
Ts *st…* 'companion, half of symmetrical items' (Tarpent, p.c.)
PT origin. Tarpent states that *st…* is "common in some Northern
Penutian with 'dual' meaning."

(18)   BC ˳ck, ˳cki 'I assume that…, I'm almost sure it is …, it has to be …'
        = Ni *ski* 'circumstantial (weak) necessity' (Matthewson 2013:380–
        385)
        PT origin.

2.2   Bella Coola-Tsimshianic-Other common lexicon and one prefix

We will now examine multilateral resemblances. The direction in which material
was copied is here not always easily determined. Did elements diffuse from
language A to language B to language C, did they spread from A to B and C, did
the shared element come from a substrate language X, etc.? Below, I posit copying
directions where they appear to be implied by structural or other factors. Haisla
data are from Lincoln & Rath 1986, Nootkan data from Davidson 2002, Quileute
data from Powell & Woodruff 1976.

(19)   BC *hawhaw* 'mythical bird' = NT *hawhaw* 'fabulous monster' = Oo
        hauhaukʷ 'mythical bird' (Rath, p.c.)
        Oo *hauhaukʷ* is derived from √*hwkʷ* (L). Oo → BC → NT.

(20)   BC *c'ik'ʷic'* sea urchin' = Ni (F) *c'ik'ʷic'*, NT *cükʷiic* = He (R)
        c'k'ʷíc', c'k'ʷísa = Quileute *{ci~ckʷ}ókʷaʔ* (and cf. Nootkan √*k'ʷič*
        'spiny')
        A widely diffused term. Either originally NW (from where it would
        have diffused to Ts, BC, and Quileute) or of substrate origin.

(21)   BC *łaq's* 'seaweed' = Gi (H) *łaq'asxʷ*, Ni (F) *łaq'askʷ*, NT *łaʔask* =
        Ha *łaq's, łaq'sg* (NW (L) √*łq*) = Tlingit *łaaq'ásk* (Edwards 2009)
        łaq'(a)s has likely been copied from Ts to NW and Tlingit, and from
        Ha to BC: Tarpent (p.c.) posits PT *łaq-ʔ[a]s-kʷ = √*łaq-*
        ANTIP+epenthetic [a]-formative suffix.

(22)   BC *plχani* 'abalone' = NT *pilhaa*, Gi (H) & Ni (F) *pilaa* = Ha *plχʔà*
        Either of substrate origin, or copied from Ha to Ts and BC.
        Formative suffix *-ani* added in BC.

(23)   BC *qacχ* 'starfish' = Gi (H) *{qasq}aac* = Oo (R) *ɢacχ* (NW (L)
        √*ɢaʒ/c/s*) = Quileute *{qasq}ayap* = Nootkan *{qasq}eyap*
        Like entry 20, a wide-spread term that originated either in a substrate
        language or in NW (from where it would have been copied into Ts,
        BC, and Quileute).

(24)   BC *qaχ* 'rabbit' = Gi (H) & Ni (F) *qaχ* = TEA *ɢaχ, *ɢəχ* (N:210,
        Nater 1994:182) = Oo *qaaχ* (L)
        Diffused from TEA to Tsimshianic and BC, and from BC to Oo.

(25)   BC *qayt* 'hat' = Gi (H) & Ni (F) *qayt*, NT *qaayt* 'billed hat' = NW
        (R) √*qyt* 'to surround, encircle (like ring a finger, hat a skull)'

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Does NW √*qyt* underlie the BC and Ts forms, or is it a back-formation of a substrate term?

(26) BC *q'pst* (tr.) 'to taste' = NW (L) √*p'q* = NT *paq*, Gi (H) *paq* 'try, feel', Ni (F) *paq* 'feel, try, taste'
The BC form (← *q'əp-st*) contains fossilized -*st* (TR or CAUS). Either originally NW or a substrate word. The Ts words deviate in terms of semantic range and absence of glottalization.

(27) BC *q'ʷumsxiwa* 'whiteman, European' = Ni *q'amksiiwaa* (Tarpent, p.c.) = He *q'ʷm̓xsiwa*, Ha *q'ʷm̓ksiwa*
BC *q'ʷumsxiwa* is analyzable as *q'ʷum-sx-iwa* "high-bad-similative" (√*q'ʷum* (uniquely combined with another adjective, cf. entry 3), is originally NW (L)); copying sequence is likely NW ← BC → Ts.

(28) BC *sq'* (tr.) 'to cut open' = Gi (H) *saq'* 'to split', Ni (F) *saq'* 'to crack', NT *saʔqt* 'be split' = proto-Salish (K) **səq'* 'split, crack'
Salish or substrate origin.

(29) BC *tχ*- 'geographic location' (a rare prefix) = He (Rath, p.c.) *tχ‿…*, *tχ‿a‿s* … 'the geographical place of …' = NT *tχa*- 'locative', Ni (F) *tχas*- 'all along a place'
The BC and Ts prefixes have likely been copied from NW (where it is more productive than both BC *tχ*- and Ts *tχas*-).
Rath (p.c.) states "The HE/OO use of {*tχ*-} as a proclitic before a place name is compulsory whenever that name is not being used as the predicate of a sentence."

(30) BC *t'q* (tr.) 'to spread out, paste to surface' = PT (Tarpent 1997:98) **t'ʌq* 'flattening, especially by applying pressure' = NW (L) √*t'aq* 'scatter, spread' = proto-Interior Salish **t'əq* (K) 'to put down, pile soft material'
Substrate origin.

(31) BC *t'xʷ* (tr.) 'to sweep, brush' = proto-Coast Salish (K) **t'əxʷ* = Gi (H) & Ni (F) *t'axʷ*
Salish or substrate origin.

3 Bella Coola vowel length from Tsimshianic pre-glottalization

Bella Coola has, unlike most (if not all) other Salish, distinctive vowel and syllabic sonorant length (doubling, see Nater 1984:15): *qaχ* 'rabbit' vs. *qaaχ* 'salmonberries', *ʔiχ'ʷ* 'far' vs. *ʔiiχ'ʷ* 'to burn', *puχ* 'to stir, poke' vs. *puuχ* 'moldy', *mnmnta* 'path' vs. *mnmnnta* 'stairway', *tltlkʷ* 'slippery' vs. *tltllkʷ* 'pill'. In Nater (1994), I ascribed this contrast to older Athabascan influence, but an allophonic-distributional trait of Tsimshianic indicates that it is more plausibly the result of diffusion from Tsimshianic, for which see below.

My hypothesis about a Tsimshianic → Bella Coola copying direction is in part based on an apparent correlation between Tsimshianic pre-glottalization and distinctive vowel/sonorant length in Bella Coola. Regarding pre-glottalization, note that in Tsimshianic, [C'V…] appears to be in complementary distribution with […VʔC#], as observed in some Nisqaʔ and Gitksan FirstVoices sound clips, and as reflected in Dunn's (1995) orthography of North Tsimshian:[5]

Gloss	Nisqaʔ (F)	Gitksan (F, H)	North Tsimshian
'ball'	*łit'* [ɬɪʔtˀ]	*łit'* [ɬɪʔtʰ]	*ła?t* [ɬaʔt]
'dress'	*naq'* [naʔqˣ]	*naq'* [naʔqˣ]	*naaʔq* [na·ʔq]
'sockeye'	*kiƛ'* [ɟɪʔtˡ]	*kiƛ'* (not in F)	*kiʔƛ* [ɟɪʔtˡ]

Figure 5: Pre-glottalized syllable-final stops in Tsimshianic

This distributional feature appears to have diffused to Bella Coola, likely via speakers of Tsimshianic, who – prior to acquiring full fluency in Bella Coola – would have been prone to replace Bella Coola word-final VC'# with VʔC#. Such a trend, then, would result in a, however short-lived and limited, VC' → VʔC phonemic shift. This shift would eventually give rise to the emergence of (I) distinctive vowel length in Bella Coola lexicon (including two suffixes) and (II) VC'# ~ V·C# allomorphy in a few verb stems and suffixes. The allomorphs of two of the latter suffixes ('skin', 'eye') are now distributed randomly throughout the lexicon, while *-aq' 'food' and *-iq'ʷ 'head' are fossilized (non-productive).

(I) <u>VC' → VʔC</u> and <u>VʔC → V·C</u>

√*wiiχ* 'to pry open' (← **wiʔq* ← ***wiq'*); *paaχʷu* 'to be afraid' (← **paʔqʷu* ← ***p'aq'ʷu*); *q'aat* 'small baited hook' (← **q'aʔt* ← ***q'at'*); *-aliixc* 'tongue' (← **-al-ixʷc ~ *-al-iʔxʷc*); *-aaχla* 'berries, juice, liquid' (← **-aʔ-qla*, cf. *qla* 'water', *qaa-χla* 'to drink')

(II) <u>VC' ~ V·C</u>

xʷuk' ~ √*xʷuuk* 'to bathe'; *kic' ~* √*kiic* 'to wring'; √*łuk' ~* √*łuuk* 'disinclined'; *sq'ʷ ~* √*siiqʷ* 'to fly'; *tiq' ~* √*tiiq* 'to sew, stitch'; *-lic' ~ -liic* 'bark, skin'; *-aq'ʷs ~ -aaqʷs* 'eye'; **-aq' ~ -aaχ* 'food' (**-aq'* is found only in *sl-aq'-k* 'sliced

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[5] In re Nisqaʔ and Gitksan phonetic details, Tarpent (p.c.) disagrees insofar as she appears to perceive /VC'#/ as [VʔC'#] rather than [VʔC#]. However, my findings are unequivocally confirmed by Rigsby & Ingram (1987), who state:

> In Rigsby's earlier work, he derived all the preglottalized allophones by a rule that segmentalizes the preconsonantal and the final glottalized obstruents into /ʔ/ followed by the relevant homorganic plain voiceless stop or affricate. The latter segment in final position then undergoes the aspiration rule as formulated in Rule 2 above. (Rigsby & Ingram 1987:11)

(The "earlier work" must be Rigsby 1967, where […VʔC#] is considered on pp. 11–12).

smoked salmon' and *sl-aq'-nk* 'smoked fish tail' (*sl* 'to cut, slice', *-k* = *-ik* 'flat top surface', *-nk* 'tail')); **-iq'ʷ* ~ *-iiχʷ* 'head' (**-iq'ʷ* occurs only in *q'ʷumn-iq'ʷ* 'skull')

4   Interaction through time: Tsimshianic, pre-Tsimshianic, Penutian

The observations made above raise a few questions. Can one determine when Bella Coola groups began to interact with Tsimshianic people? How, and where, was contact first made? In the following sections, I posit an approximate time depth for Bella Coola-Tsimshianic relations, reflect on possible contacts with pre-Tsimshianic groups, and consider three Bella Coola–Penutian links.

4.1   Bella Coola and Tsimshianic

If one accepts Swadesh's 55 *century units* of divergence for Bella Coola and Coastal Salish (see Baker 1973:15), one might infer that interaction between Bella Coola and Tsimshianic may have started as early as 5500 BP, when proto-Bella Coola groups would have entered, and settled in, the area shown in Figure 1. But the *century unit* concept is notoriously flawed, and Swadesh did not take into consideration the substantial non-Salish lexical influence that must have accelerated the attrition of Salish vocabulary in Bella Coola (e.g., the entries 'dog', 'horn', 'stone' (North Wakashan), 'not', 'bone' (Tsimshianic), 'tree' (Athabascan), 'hair', 'head' (other) from his 100-word list). We should therefore hypothesize a shallower time depth, say, around 2000 BP. Note here that Suttles & Elmendorf (1963) prefer to think in terms of *relative units*: they agree with Swadesh on the number, but not the size, of units counted.

4.2   Pre-Tsimshianic or other substrate presence in the Kwatna area

Having considered the linguistic evidence for the comparative recentness of Salish migrations into the Bella Coola region, let us now contemplate pertinent archaeological records:

> An even earlier phase which is not found at FaSu 2 is manifest at four sites in the area. Carlson has named this earlier phase "Cathedral" and says:
>
> > The geological picture suggests that the sites of this phase belong in a period of time when sea level was lower than it is today, at least in the Kwatna locality … The site locations themselves are strongly indicative of a maritime coastal oriented culture with watercraft and utilization of sea resources (1972:43).
>
> The Cathedral phase material is described by Carlson as probably the earliest in the locality … One radiocarbon estimate from the type site at Cathedral Point yielded a date of approximately 300 B.C., but Carlson

feels the Cathedral phase will eventually be shown to date between 4000–1000 B.C.[6] (Baker 1973:62)

A time depth of this magnitude, however, casts doubt on the presence of Bella Coola populations in the region so long ago. One might expect Bella Coola and other Salish languages – if they did separate 6000–3000 years ago – to have diverged a bit more than they actually have. As well, the links with Chimakuan, South Wakashan, and Chinookan mentioned earlier may imply a more recent origin, as do Hobler's (1970) observations (italics mine):

> Within the Bella Coola domain, four intensive use areas can be identified: the Bella Coola Valley, the Dean River at Kimsquit below the canyon, the Kwatna River, and the south end of South Bentinck Arm. … *With the exception of the Kwatna sites, few artifacts were found by the survey*. We did only surface collecting and no test excavations. *On the basis of surface characteristics only five of the forty-eight surveyed sites are estimated to have any quantity of cultural material or depth of deposit. Taken as a whole, the sites do not give an impression of great time depth or of a large population*. (Hobler 1970:85)

Regarding the identity of these early Kwatna inhabitants, we should allow for the possibility that they were either pre-Tsimshianic Penutians or speakers of another substrate language alluded to in Sections 2.1 and 2.2. This population, then, may later have made contact with Salish groups travelling through and/or settling around Kwatna Inlet. The language spoken by the ancient Kwatna ethnos may be the source of e.g. Bella Coola *χʷuχʷuci* 'yearling mountain goat'; this word resembles Tahltan *xúˑʒe* 'id.' (a non-Athabascan word listed in my Tahltan field notes), but differs from 'yearling mountain goat' terms in all surrounding languages. (However, Oo *xʷuxʷ ciʒa* 'mountain goat suet' – now analyzable as √*xʷw(xʷ)s* 'ball, airbag, lungs' + *-siʒ-a* 'foot, base' (Rath 2010 and p.c.) – may, like Bella Coola *χʷuχʷuci* and Tahltan *xúˑʒe*, also be based on substratal **xʷu(xʷ)ci* ~ **χʷu(χʷ)ci*.)

4.3 Bella Coola and Penutian: beyond Tsimshianic

There is a striking resemblance between Bella Coola and Coast Oregon Penutian reciprocal suffixes: this suggests that Penutian- and pre-Bella Coola Salish-speaking populations must once have been in close contact. In Figure 6 below, Penutian data are from Frachtenberg 1917:506 (Siuslaw) and Frachtenberg 1914:332 (Coos), Bella Coola data from Nater 1984:66, other Salish data from Kinkade 1989:29.

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[6] Cathedral Point is a cape located at the confluence of Kwatna Inlet and Burke Channel about 12 km north-northwest of Kwatna.

Penutian	Bella Coola	Interior Salish	Coast Salish
Siuslaw *-muxʷ/-muχʷ*	*-maxʷ*	Kalispel *-uwéxʷ*	Tillamook *-əgʷl*
Coos *-mew*		Colville *-nwáxʷ*	Squamish *-way*
		Spokane *-wéʔxʷ*	Sechelt *-áwəł*

Figure 6: The reciprocal suffix in Coast Oregon Penutian and Salish

As concerns Siuslaw *-muxʷ/-muχʷ*, note that Hymes (1966:338) states that in Siuslaw the /k(ʷ)/ series and /q(ʷ)/ series do not appear to be phonemically distinct. Note also that while the difference between Interior Salish and Coast Salish here seems considerable, Kinkade managed – taking Cowlitz *-awlx* and Quinault *-tulalxʷ* into account as well – to reconstruct proto-Salish *-*awalxʷ*, effectively uniting the Coast and Interior Salish forms. Bella Coola *-maxʷ* may be based on *-*n-waxʷ* (with transitivizing *-n-*, see Nater 1984:64) (via *-*mwaxʷ*, à la "sandwich" [sǽ<u>nw</u>ɪtʲ] → [sǽ<u>m</u>ɪtʲ]), cf. Colville *-nwáxʷ*.

It appears, then, that a pre-Bella Coola reciprocal suffix was here copied by Coos and Siuslaw, rather than the other way around. (Frachtenberg 1917:506 writes that *-muxʷ/-muχʷ* is less productive than *-naw(a)* RECP.) Note, in this respect, that Tarpent (p.c.) quotes Kinkade (2005) in re Alsea ← Salish pronominal suffix copying. Of these pronominal suffixes, Kinkade cites two that, conversely, appear to have been copied (with 2SG.SBJ → SG.IMP and DU → PL modifications) from Alsea-Siuslaw into pre-Bella Coola:

Bella Coola	Alsea	Siuslaw
-χ SG.IMP	*-aχ* 2SG.SBJ	*-nχ* 2SG.SBJ
-aw 3PL.SBJ	*-auχ* 3DU.SBJ	*-awχ* 3DU.SBJ

Figure 7: Similar pronominal suffixes in Bella Coola and Alsea

Reduction of Coast Oregon Penutian *-awχ* to *-aw* in pre-Bella Coola is likely due to …χ being construed and copied as IMP. However, *-χ* IMP was later added to *-aw* again to form *-*aw-χ* → *-aχʷ* PL.IMP (Nater 1984:37).[7]

We can now confidently add *-maxʷ*, *-χ*, and *-aw* to the list of morphemes that Bella Coola has in common only with maritime languages spoken west of the Cascade Range:

(1) BC *x̣* 'via' (Nater 1984:50) = Ch *š* 'to, into' (Kinkade 1991:127)

(2) BC *-(s)t(u)-* CAUS (Nater 1984:67) = Ch *-(s)t(u)-* (Kinkade 1991:371-73)

(3) BC *t'nχʷ* (**t'əχʷ*) 'head' = Quileute *ʔóˑ-t'iqʷ* (Powell & Woodruff 1976) = Nootkan √*t'uχ*, √*t'uḥʷ* (Davidson 2002)

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[7] For pronominally neutral *-aw…* PL.SBJ in general, see Nater (1984:113, 116, 130–131).

(4)   BC *mnɬkʷa* (*m-əɬkʷ-ən*) 'hair' = Quileute *boɬkʷ* (*moɬkʷ*) (Powell &
      Woodruff 1976)

(5)   BC *k'awn* 'type of salmon' = Chinook *i-k'awan* (Nater 2010)

(6)   BC *-uks* PL = Chinook *-ukš* (Nater 2010)

(7)   BC *ʔaw* 'yes' = Chinook *aw* (Nater 2010)

(8)   BC *-maxʷ* RECP = Coast Oregon Penutian *-muxʷ/-muχʷ*, *-mew* (this
      paper)

(9)   BC *-χ* SG.IMP = Coast Oregon Penutian *-aχ*, *-nχ* 2SG.SBJ (this paper)

(10) BC *-aw* 3PL.SBJ = Coast Oregon Penutian *-auχ*, *-awχ* 3DU.SBJ (this
      paper)

The pairs shown in 1–2 are obviously cognate, whereas the ones in 3–10 are the
result of lexical copying between unrelated languages. Entries (1) and (2) (with
…*(u)*…) are to my knowledge not attested as such in Salish other than Upper
Chehalis and Bella Coola.

5   Summary

In Sections 2–4 above, I considered Tsimshianic influence on Bella Coola and
interaction around Kwatna and the Olympic peninsula, citing diverse evidence:
archaeology (Baker 1973, Hobler 1970), oral traditions (Boas 1898), and
etymologies (various sources). Below, I offer additional evidence and summarize
my findings.
      Further to the southern pre-Bella Coola phase considered in Section 4.3, one
notes that the significance of ancient migrations and trade patterns is as a rule
overlooked, ignored, or underestimated. Thus, Kinkade (2005) found it difficult
to reconcile similarities between Salish and Coast Oregon Penutian languages
with the seemingly insurmountable distances separating these languages. Neither
could he imagine how similarities between Penutian and Salish could have
resulted from interaction with Tillamook, as this language would – in view of its
deviant phoneme inventory – not appear to be a likely source for Penutian
pronominal suffixes. In his own words (italics mine):

  If Alsea has borrowed from Salish, how did it get forms with *p* or *m*,
  which could not have come from Tillamook, Alsea's only Salishan
  neighbor (*unless the changes of *p to h and *m to w are recent changes
  in Tillamook*)? Unless there have been major population shifts in the area,
  borrowing is possible, although problematic, given changes in Tillamook
  phonology and morphology. *Intermarriage, slavery, or trade would not*

provide adequate sources for borrowing in either direction because of the distances involved. Contact between Alsea and non-Tillamook Salish must have been minimal. (Kinkade 2005:66–67)

Yet, Alsea is located (between Chinookan and Takelma) within the ancient trade region shown below, and it is inconceivable that contact with Salish (incl. pre-Bella Coola and (pre-)Tillamook) would <u>not</u> have transpired. It is precisely this type of regular interaction that would motivate lexical and structural copying. (But contact between speakers of pre-Bella Coola and groups located in, and east of, the Cascade Range must have been rather infrequent, as there is a noticeable lack of lexical similarities between Bella Coola and e.g. Sahaptin (for the latter see Beavert & Hargus 2009).) And whereas Kinkade *did* allow for contact between Coast Oregon Penutian and Tillamook prior to the *$p \rightarrow h$ and *$m \rightarrow w$ shifts, his assumption that these shifts would have to have been completed *recently* is unwarranted, since Penutian–(pre-)Tillamook contact may have been established much earlier than surmised (see below for details).
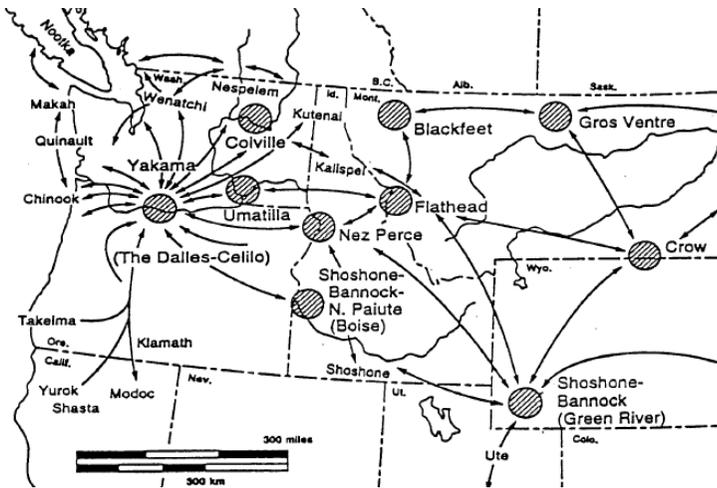

Figure 8: Traditional trade centers and networks (Walker 1997)

On the scope and antiquity of this network, Walker (1997) states (italics mine):

> Archaeological evidence suggests that the Plateau way of life has remained fundamentally the same for *at least ten thousand years* prior to the first Euroamerican influences of the eighteenth century … The Yakama were part of a *prehistoric, protohistoric, and historic system of trade and exchange* that linked them with other Plateau tribes as well as more distant tribes of the Northwest Coast, Plains, and Great Basin culture areas.

Eventually, proto-Bella Coola parties began their northbound exodus out of the Olympic area. Contact was now made with Coast Salish and North Wakashan groups, as confirmed by certain terms that Bella Coola has in common only with Kwak'wala or with Kwak'wala and Coast Salish: *łq* 'wet' = Kwak'wala √*λ̓q* 'id.', *sχʷat* 'globe, bulb' = Kwak'wala √*χʷat* 'testicle', *sχiiłla* 'boastful song' = Kwak'wala *χiλla* 'to shout', *k'ʷult* 'porpoise' = Kwak'wala *k'ulut'a* 'id.' = Sechelt and Squamish *k'ʷúnut'* 'id.', *χʷs* 'to oil, grease' = proto-Coast Salish **χʷəs* 'id.' = Kwak'wala √*χʷs* 'seal blubber', *cał* 'lake' = proto-Coast Salish *cal'ał* 'id.' = Kwak'wala *ʒl'ał* 'id.' (Kuipers 2002, Lincoln & Rath 1980, Nater 2013). Continuing their voyage, these travellers made contact with more northerly coastal groups, i.e., Heiltsuk and Ooweekeno.

In view of (a) connections between pre-Bella Coola and other populations west of the Cascade Range and (b) Bella Coola-Coast Salish-Kwakwala lexical overlap, I infer that proto-Bella Coola migrants approached the territory shown in Figure 1 via the Inside Passage, Fitz Hugh Sound, and then via Fisher Channel–Dean Channel and Burke Channel.[8] Having passed through North Wakashan territory west of Elcho Harbour and Kwatna, some would settle on or near King Island and in the Kwatna River area. Others would move on, with Dean Channel travellers venturing deeper into Dean Channel and beyond. The latter would interact with NT groups, as suggested by the occurrence of names with NT mythical origins: *Wic'lks* 'a man's name' ← NT *W'ii C'alks* 'Big Whirlpool', *Wiłpun* 'a woman's name' ← NT *W'ii Łpuun* 'Big Whale' (Tarpent, p.c.). Those who continued to travel up Burke Channel entered North Bentinck Arm, with some settling there and others dispersing into South Bentinck Arm and throughout the Bella Coola valley. Athabascan and inland Tsimshianic groups now came into contact with Bella Coola speakers. Later, contact was established with Haisla groups that had dislodged Tsimshianic populations.

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[8] Note here that the dialect formerly spoken at the head of Dean Channel and the mouth of Dean River was considered by some of my language consultants to be a deviant form of Bella Coola (cf. Boas 1895:31). This view is consistent with the Fisher Channel/Burke Channel split path scenario.
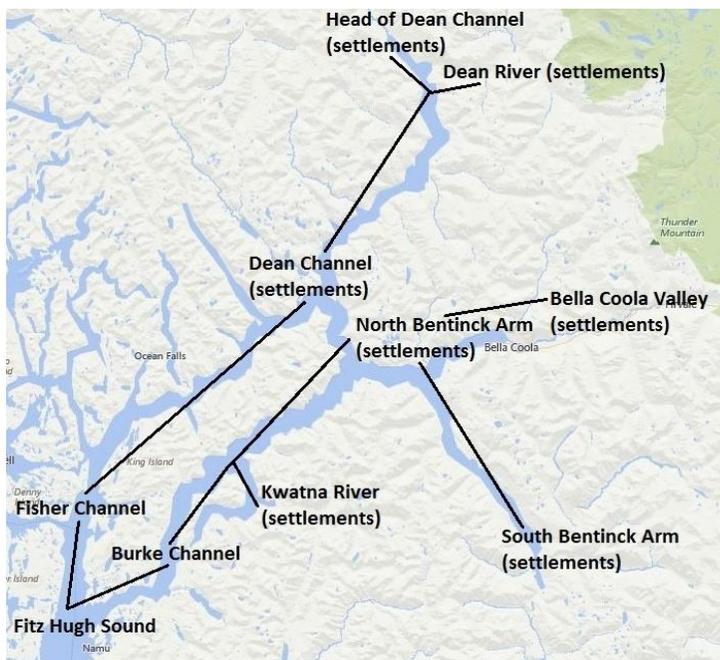
Figure 9: Prevailing Proto-Bella Coola migration routes (based on bing.com/maps)

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