Boas and the Babblefish Part 2: Making Sense of pentl'ach ¢ and ç[*]

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Abstract: The primary documentation of pentl'ach (Pentl'ach, Central Salish) was by Boas in 1886, at a time when there were no standardized phonetic symbols for representing speech sounds. Without access to audio recordings or speakers to verify the sounds that go with the symbols, it is necessary to reconstruct the pronunciations that correspond to the symbols. This paper explores the sounds that are represented by the symbols <¢> and <ç> by Boas (~1890) in his field notes transcribing pentl'ach. We look at a variety of evidence to determine whether it is the voiceless dental fricative [θ] or voiceless alveolar affricate [ts]. We discuss many factors related to which sound to adopt, given that this is part of a larger goal to develop principles for reconstructing pentl'ach from sparse documentation, to reawaken pentl'ach, and support language revitalization by the community.

Keywords: pentl'ach (Pentlatch), Boas transcription, phoneme inventory, reconstruction

1   Introduction

The people of the Qualicum First Nation are the descendants of the traditional pentl'ach (Pentlatch) speaking people and stewards of the land and waters of Qualicum. The pentl'ach language was traditionally spoken from Cape Lazo to Parksville on the central East Coast of Vancouver Island, making our community one of many whose ancestors spoke or had a relationship with this language. Since the 1940s, the pentl'ach ancestors have been erroneously labeled by anthropologists and linguists as "extinct". The harmful impact of this label cannot be understated, nor can its rippling intergenerational effects in the community. The definition of pentl'ach as "extinct" has led to cultural and spiritual disconnections within the community and disrupted relationships as Indigenous peoples with identities and traditional ways of being. This definition has also led to a lack of professional linguistic investigation and research into the language with the community and its potential to be spoken where it once was active in people's day-to-day lives.

Despite the harmful impacts of this label, since 2017, with the support of elected Chief and Counsellors, dedicated members of the community on and off reserve have been undertaking efforts to reconnect with and revitalize pentl'ach language and culture through partnerships with the Ministry of Indigenous Relations and Reconciliation as well as the First Peoples' Cultural Council and the University of Victoria. These ongoing relationships have allowed Qualicum First Nation to develop and hire a structured working team of community members and professional linguistic consultants to carry out the revitalization and reconstruction of pentl'ach.

A challenge our team has faced in our work is reconstructing the language based on Franz Boas' original linguistic documentations of pentl'ach he acquired in 1886. This has shown that comparative work with neighboring and relative languages will continue to be a key in our reconstruction efforts, allowing the pentl'ach descendants to reconnect not only with their language, but with those of their relatives and neighbours with whom the pentl'ach ancestors also surely exercised relationships and resources, as well as cultural and linguistic sharing. Making these connections has proven to be an exciting prospect as we delve further into our reconstruction work and recognize more and more the linguistic webs of relations and influences along the coasts in what is now known as British Columbia. Part of our hopes in sharing pieces of our work in this paper is to begin to learn how the research and reconstruction of pentl'ach and its documentations can offer back where we have been learning from others, in order to collectively embrace and learn from a once thought missing relative language along the coasts of British Columbia.

The pentl'ach team has been working with documentation that Boas collected in late 1886, developing some resources with grant funds through First Peoples' Cultural Council. As part of that work, the team requested being officially recognized as one of the Indigenous languages of BC. This multi-year process culminated in the Minister of Indigenous Relations and Reconciliation signing a ministerial order on Nov. 1, 2023, adding pentl'ach as the 35th Indigenous language of British Columbia.[1]

Part of the work we have done is to develop a writing system and alphabet chart. The writing system was designed to be keyboard-friendly, so people do not need to use a special font to type the language. As a result, there are some consonants that require more than one letter, such as /č/ which is written as <ch>. In developing the writing system, we also noted that it wasn't clear what consonant sound corresponds to <ç> and <¢> that Boas used.[2] We are currently using <c> for the consonant under discussion. The question we are focusing on in this paper is whether <c> should be pronounced as a dental fricative [θ] or a plain alveolar affricate [ts]. Without access to audio recordings to aid in this work, we are exploring many different types of evidence. The rest of the paper discusses the evidence and issues that arise with interpreting the Boas documentation (Section 2), what the neighbouring languages are and where they are spoken (Section 3), the contrasts in glottalization found in consonants made at dental and alveolar places of articulation (Section 4), and the distribution of dental consonants in Central Salish languages (Section 5). By collaborating on this work, we feel we are able to engage in a fulsome investigation of a myriad of factors that lead to how to pronounce <c> and acknowledge that ultimately the pronunciation of this sound will depend on how the community of emerging speakers will pronounce it in modern times.

2   Boas documentation

Boas documented pentl'ach and ʔayʔaǰusəm (a term we adopt to refer the dialect of K'omoks (Comox) spoken on Vancouver Island) during a three-week trip to Comox in late 1886. This documentation was done at the tail-end of his first field trip to British Columbia, in which he aimed

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[1] https://www.bclaws.gov.bc.ca/civix/document/id/lc/bcgaz2/v66n19_231-2023
[2] Many thanks to Daniel Reisinger who has noted the following regarding K'omoks (which Boas documented at the same time as pentl'ach): <ç> shows up in the version of the orthography that Boas used for the vocabulary cards, while <¢> shows up in the version of the orthography that he used for the German/K'omoks word list. In the latter, there are some additions in pencil, where the corresponding sound is represented by an <s>. Generally, these symbols represent /θ/ in Modern ʔayʔaǰuθəm.

to document as much as possible of as many languages as possible. His goal in doing this was to create an ethnographic map of the region. In these early stages of his work, Boas used a range of different symbols to document pentl'ach, while also tuning his ear to the language. He regularized his transcription later but did not provide a key to what sounds correspond to what symbols in his field notes. In aiming to determine the sounds associated with the symbols <ç> and <¢>, linguists have uniformly proposed that the sound is the dental fricative /θ/ (Galloway 1988; Kinkade ~1980; Mellesmoen 2019). Little or no discussion is provided about why this sound is adopted. Our goal is to outline a range of evidence for what the sound could be: the voiceless dental fricative /θ/ or the voiceless alveolar affricate /ts/.[3]

One of the challenges in working with the Boas corpus is keeping track of the various symbols he used. For example, in his word lists (Boas ~1910) both <¢> and <ç> were used for the same sound, arranged in different kinds of word lists. Boas seems to have regularized his system later in his work, switching to <ç>, and not using <¢> after a particular time. We note that he uniformly used <ç> in the "Comparative Salishan vocabularies" (Boas 1925). This word list contains a number of Salish languages that were collected around the same time. They include Lekwungen (a dialect of North Straits originally spoken in the Victoria area), shashishalhem (Sechelt), the Snuneymexw dialect of Halkomelem, pentl'ach, satlolt (Island Comox), S̲k̲w̲x̲wú7mesh (Squamish), and Nuxalk (Bella Coola).[4] In doing a comparison of pentl'ach words to shashishalhem words from this collection, there are some words that are almost entirely different words, some of which will be presented below.

In terms of evidence for the pronunciation being a dental fricative, we found a key to the pronunciation of <ç> in the front matter of Part 1 of the "Comparative Salishan vocabularies", in which Boas describes <ç> as a "voiceless interdental (English th)" (Boas 1925, Pt. 1, p. 4). We note that this same symbol was used for ʔayʔaǰusəm and shashishalhem in this comparative work. Little is known about the backgrounds of the speakers Boas worked with, but because he was on Vancouver Island in Comox, we assume that he was working with a speaker of the Island dialect of Comox (which we refer to as ʔayʔaǰusəm) (see also Bouchard & Kennedy 2002:177, who have determined that one of Boas' consultants was a speaker of Mainland Comox). A key difference between the modern-day dialects of Comox is that the Mainland dialects (ʔayʔaǰuθəm) have dental fricatives and affricates, while the Island dialect (ʔayʔaǰusəm) has alveolars (see discussion in Harris 1977:23–24). Of particular interest is the following quote from Harris: "Tommy Bill, Sapir's informant, however, says that his dialect is Comox proper and he used no thetas" (1977:25). As well, if we take the assumption that the <ç> is a modern "th" sound, it is something to note that "th" once existed in old shashishalhem from Boas' studies. But at some point between 1886 and the time of Beaumont's (1985, 2011) work, the "th" sound had effectively disappeared from the language documented in the *Sechelt Dictionary*. Somewhere a shift happened where the "th" sound evolved into a "ts" sound in shashishalhem.

Boas' "Comparative Salishan vocabularies" is an important starting place for this study because it represents a slice in time, before individual languages shifted pronunciations. It is a fairly large document and has five parts, each contained in a different folder, held at the American Philosophical Society (APS). Some of these folders include file slips and notes for comparative

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[3] We leave aside the question of whether or not the symbols in question represent the voiceless dental affricate /tθ/ as it is quite rare and generally only occurs in function words in the neighbouring languages. Our study primarily looked at how Boas wrote content words.

[4] We follow each community in whether or not to capitalize the name of their language.

study across all the Salish languages. We note that parts 1 and 3 have the most helpful information for our study. Part 1 has headings for over 700 words, with rows for every variety of Salish language that Boas had documentation for. Part 3 includes word lists in a different handwriting organized alphabetically by the English translation. We reviewed these files, looking for all instances of <ç>, keeping track of the word forms for the other languages, focusing mostly on comparing what we found in pentl'ach with those forms given for ʔayʔaǰusəm and shashishalhem.

There are many forms in the "Comparative Salish vocabularies" where <ç > is used for all three languages. The following examples are provided. They are represented by indicating the meaning on the top line, and the forms found for the three most closely related languages, using a representation that aims to approximate the system Boas used. All the forms below are from Part 1 of the APS files.

Table 1: Forms from "Comparative Salishan vocabularies"

	'grandchild'	'eyebrow'	'mouth'	'beard'
pentl'ach	ē'maç	çō'man	çō'çin	qō'poçĕn
ʔayʔaǰusəm	ē'maç	çō'men (pl.)	çō'çin	qō'poçĕn
shashishalhem	ē'maç	çeçōten	çō'çin	kwa'yōçin[5]

As pointed out above, neither modern-day ʔayʔaǰusəm, nor shashishalhem has the dental fricative [θ] in their phoneme inventory, though ʔayʔaǰuθəm does. For ʔayʔaǰusəm, Harris (1977:153) does not list the dental fricative as an underlying consonant, noting that it only occurs in borrowings or onomatopoetic words. He does list both plain and glottalized alveolar affricates. Beaumont (2011) also does not include any dental fricatives <th> for shashishalhem, though he does note that both plain and glottalized alveolar affricates do exist. Thus, there appears to have been a complete shift in the sounds for shashishalhem and the Island dialect of Comox. Might pentl'ach have also shifted to /ts/ after Boas documented it?

In addition to looking for instances of <ç> in the pentl'ach forms, we also looked for words written with <ts>. The words below indicate that there are cases in which pentl'ach <ts> corresponds to <ç> in the other languages.

Table 2: Forms from "Comparative Salishan vocabularies" (Boas 1925, Pt. 3)

	'chisel, to'		'swamp'
pentl'ach	tsī'icam	(with hammer)	ts'ē'ts'ēq
ʔayʔaǰusəm	çetsā'em	(with hammer)	ts'ē'ts'ēq
shashishalhem	çē'tc'Em		ts'ē'ts'ēq

What is noticeable about 'chisel' is that the initial consonant of the word is written with <ç> in both ʔayʔaǰusəm and shashishalhem, while it is written with <ts> in pentl'ach. The modern equivalents for these words in ʔayʔaǰuθəm and shashishalhem cannot be found in the available sources.[6] The closest form we could find in shashishalhem is *tsek̲'-t* 'hammer s.th. firmly into ground' (Beaumont 2011:201). The shashishalhem word for 'chisel (tool)' is *k̲'éya-sh-t-ámin* (Beaumont 2011:83). The

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[5] The first few letters of this shashishalhem form were hard to decipher, due to the copy quality, but the last syllable was legible, which is the relevant part of the word for comparison.

[6] Many thanks to Daniel Reisinger for sharing forms he has re-elicited for 'to chisel' and 'mud, muddy' in ʔayʔaǰuθəm: the first starts with a dental fricative /θ/, while the second with an alveolar stop /t/.

other notable point about the forms above is that the languages seem to consistently have the ejective affricate. This is retained in the modern-day shashishalhem word for 'mud' *s-ts'íts'ik̲'*.

We also checked to see whether there were any words in which pentl'ach is written with <ç>, but ʔayʔaǰusəm and shashishalhem are written with <ts>. We found the word for 'shadow'. However, these seem so different that they may not be cognates. We found four words in which pentl'ach <ç> corresponded to either <s>, <ts>, or <t> in the other languages. Three are presented below, noting that the fourth word was 'small' and is quite similar to 'narrow'.

Table 3: Forms from "Comparative Salishan vocabularies" (Boas 1925, Pt. 1)

	'tomorrow'	'hat'	'narrow'
pentl'ach	*kū'içē*	*çī'aqup*	*çē'içō*
ʔayʔaǰusəm	*kū'iska*	*sĕdja'qōm*	*tī'tōl*
shashishalhem	*kū'isĕm*	*sī'aqōm*	*ts'ēatE*

As you can see, there is an incredible amount of inconsistency among what symbols Boas used to document the different languages. In his discussion of the dialects and forms for dental consonants in ʔayʔaǰusəm, Harris notes: "It is more likely that some of the forms given by Boas are incorrect" (1977:24). We discuss dialect variations in the use of dental consonants in Central Salish further in Section 5.

A key articulatory difference between [θ] and [ts] is manner of articulation, with the former being a fricative, and the latter an affricate. We note that Boas did not reliably distinguish between stops and fricatives in other places of articulation as well, particularly for uvulars.[7] The following are examples in which back consonants were recorded differently for the three languages.

Table 4: Forms from "Comparative Salishan vocabularies" (Boas 1925, Pt. 3)

	'stern (of boat)'	'vertebra'
pentl'ach	*xē'xiap*	*q'ē'qoalō*
ʔayʔaǰusəm	*qē'ap*	*xōmā'ō* (of fish)
shahishalhem	*qē'qelap*	*xau'wa* (of fish)

In these words, pentl'ach has a fricative where the other languages have stops for 'stern (of boat)' and vice versa for 'vertebra'. This second word illustrates a regular sound shift where pentl'ach retains the original /l/, and shishalhem has a sound shift to /w/. The <m> in ʔayʔaǰusəm may be a misprinting of <w> from Boas' original notes, which can be challenging to decipher in places.

Boas also did not reliably distinguish between lateral fricatives and affricates. When comparing what Boas documented in pentl'ach with modern-day languages, we found variation in laterals. As you can see below, the difference between a lateral fricative and affricate in pentl'ach was not accurately recorded. The list below compares the forms Boas used in his German-English word list (Boas ~1910), with what has been documented for ʔayʔaǰuθəm on FirstVoices.com and shahishalhem in Beaumont (2011). Boas used <lᵛ> for both the lateral fricative [ɬ] (e.g., 'to fly')

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[7] While we are assuming that Boas used symbols consistently in the 'Comparative Salishan vocabularies', though he may have mixed up the use of <q> and <x>. Daniel Reisinger has also pointed out that it can be challenging to distinguish these sounds with modern ʔayʔaǰuθəm speakers as well.

and lateral affricate [λ̇] (e.g., 'long'), while on rare occasions using a plain <l> for the lateral fricative [ɫ] (e.g., 'woman').

Table 5: Boas field notes (Boas ~1910)

Source	'to fly'	'woman'	'eyelash'	'long'
pentl'ach	*lʸōʼlʸōk̲*	*slāʼnaē*	*lʸēʼptĕn*	*lʸ̣ākt*
ʔayʔaǰuθəm	*ɫukʷ*	*saɫtxʷ*	*ɫɛpawus*	*ƛaqt*
shashishalhem	*sek̲wʼ*	*s-lhánay*	*lhíp-ten*	*tlʼak̲t*

This shows that Boas did not reliably distinguish between fricatives and affricates for dorsal consonants and laterals in general. It could be the case that Boas also didn't reliably distinguish alveolar affricates from fricatives. One place we would like to look next is whether Boas was accurate in distinguishing palato-alveolar consonants from each other.

We conclude our examination of the Boas materials along the lines of Harris: there are likely many inaccuracies, particularly regarding a contrast between fricative and stop/affricate. This means we will need to be very careful in reconstructing pentl'ach forms. We can use the Boas transcriptions as a rough guide but need to reconstruct every form by careful comparison with cognate forms in the neighbouring languages. We turn next to a wider look at the neighbouring languages.

3   Neighbouring languages

We look at the neighbouring languages for several reasons. First, to see the closest cultural and linguistic connections and, second, to make an observation about dialect distribution on Vancouver Island and the mainland of British Columbia. The cultural and linguistic connections are important for this work, so we know what languages to look at for reconstruction and borrowing. The dialect distribution is important to consider as well — languages evolve first as varieties, then eventually become distinct languages over many generations of language transmission.

The languages and varieties around pentl'ach territory are as follows. To the north are ʔayʔaǰusəm (Island Comox) and Kwak'wala (a northern Wakashan language). To the east, is shashishalhem (Sechelt) on the mainland. To the south is hul'q'umi'num (Island Halkomelem), and to the west is the hupachesaht dialect of nuu-chah-nulh (a southern Wakashan language). Because Qualicum was a gathering place, interaction would have occurred with these different groups of people. Many of these languages have been the most frequent places to look for cognates to compare with the reconstruction of pentl'ach. We also include Sk̲wx̲wu7mesh (Squamish) and the other two main Halkomelem languages (Musqueam and Upriver), because we have found cognates there as well. Part of our work involves learning how connections with these neighbouring languages and nations continue to exist and their potential for change and growth as we reintroduce pentl'ach to our coasts. We continue to learn how pentl'ach has and can be influenced by nearby languages historically and see this work also as a way to guide in understanding the historical connections of pentl'ach to neighbouring languages and communities.

Maps have historically been used to refer to the general boundaries of language use. While there is a grain of truth to having boundaries, we caution that this doesn't necessarily account for the complex nature of kinship structures that Coast Salish peoples have within their culture and lifestyle. Keeping this in mind, it is useful to note the dialect pairings that each language appears to have when crossing a major body of water, namely the Salish Sea. When we compare the

presence of Island and Mainland dialects of Comox speaking peoples, we note that there exists a distinction in the dialect, similar to how a distinction can be noted between Hulq'umi'num (on Vancouver Island) and hənq̓əminə̓m (Musqueam, on the mainland). There is a gap in this dialect distribution when we look at the placement of shashishalhem and pentl'ach, as seen below.
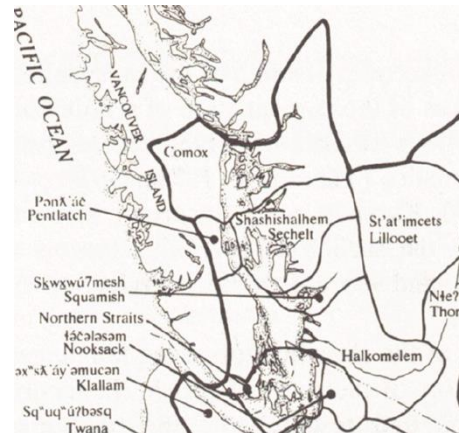

Figure 1: Salish languages adjacent to pentl'ach (Czaykowska-Higgins & Kinkade 1998:2)

Notice that pentl'ach is to shashishalhem as ʔayʔajusəm is to ʔayʔajuθəm to the north and Hul'q'umi'num' and hənq̓əminə̓m to the south. However, pentl'ach lacks a mainland counterpart, just as shashishalhem lacks an island dialect. Also, note that Sk̲w̲x̲wú7mesh does not have an island dialect either.

Our goal is not to provide an in-depth discussion on whether or not pentl'ach is "island shashishalhem", but rather it is a point to keep in mind when referencing the level of similarities that exist between the two languages. Swadesh (1950) notes that there is a 51% shared vocabulary between shashishalhem and pentl'ach. Also, pentl'ach shares 45% of the vocabulary with ʔayʔajusəm. Interestingly, pentl'ach shares 42% of its vocabulary with the Sto:lo dialect of Halkomelem over on the mainland, but only 38% with the Snuneymuxw dialect just to the south on Vancouver Island. These numbers may not be as accurate as they could be today, as Swadesh based his study on the materials in the Boas "Comparative Salishan vocabularies" from a century ago. We may find in the future that there are more shared forms between pentl'ach and shashishalhem, as more precise work is done in analyzing pentl'ach language data from stories and vocabularies.

We are undertaking this research with the goal to reconstruct pentl'ach as accurately as possible, for pentl'ach descendants to speak it once again. When languages are passed on intergenerationally, this comes with growth and change. This process was halted for pentl'ach due to the imposition of colonial practices of forbidding Indigenous languages from being spoken. The last fluent first language speaker — Joe Nimnim — passed away in 1940, well after the initial documentation Boas did, but just after Barnett documented some pentl'ach forms (Barnett 1955). Accumulating pentl'ach vocabularies was a very unique task, in that the work done by Boas documented the language during a time of approximately thirty years when there was a lot of interaction with ʔayʔajusəm speakers. We also note that Barnett's documentation (~1935) is from a primarily ʔayʔajusəm speaking woman (Joe Nimnim's wife) providing a "pentl'ach" vocabulary at a time where ʔayʔajusəm speaking people had been present for upwards of 80 years.

Language is influential. The presence of multiple languages in one area can create situations of close contact and interaction, leading to rapid language change. Over several generations, this can result in a new language. Multiple languages and dialects exist in the Coast Salish *temixw* for a reason, and the pentl'ach lands are one of the most culturally and linguistically diverse regions of Vancouver Island (as noted above, neighbouring three Central Salish languages, a Northern Wakashan language and a Southern Wakashan language). In working with the Boas corpus, our analysis of Boas' early data in comparison with more contemporary language patterns often shows different results — the word forms are sometimes completely different and sound shifts associated with <ç> have occurred in shashishalhem and ʔayʔaǰusəm to /ts/. The sound shifts in the modern languages occurred because they have been spoken continuously; they naturally shift over time, much in the way of our contemporary slang and other colloquial terminology.

Finally, languages are influenced by other languages. Without the benefit of continuous documentation of the languages and dialects in the region, recording incremental changes or detailed information about the speakers to guide our work, we aim to try to fill the gaps with some other avenues of investigation. There are a few theories that can point to what may have happened regarding the shift in shashishalhem. One idea is that perhaps Boas spoke with a person who knew one dialect of shashishalhem that had the /θ/. Perhaps Boas had a better ear for hearing /θ/ than other linguists that followed suit, such as Barnett and Suttles who have both done some other work including shashishalhem. These interactions among people and languages are important to consider in reconstructing sounds for a modern-day pentl'ach language. We hope that by doing this work, it will also aid in understanding the interactions that occurred in the past. As an important aspect of this work, we review some of the sound inventories of the neighbouring languages to explore some linguistic factors about systematic sound systems. We look first at contrasts in glottalization (Section 4), and then look at the distribution of dental consonants in Central Salish (Section 5).

4   Consonant inventories and contrasts in glottalization

Phoneme inventories are usually symmetrical when contrasting for glottalization. If <ç> and <¢> represent a dental fricative [θ], then pentl'ach would have a dental fricative and an ejective alveolar affricate, as illustrated in (6) below. Recall that Boas also documented <ts>, which corresponds to the alveolar affricate /ts/. There are two ways we can interpret this when considering <ç>. One is to assume that these are all variants of the same sound: /θ/. Recall that Boas used different symbols for the same sound. The other way to interpret this is that there are in fact two different sounds: /θ/ and /ts/. Because we are at the early stages of this work, we remain ambivalent about this, and so represent /ts/ in parentheses.

Table 6: Consonant contrasts in pentl'ach, if <ç> is /θ/

	Dental	Alveolar	
Stop		t	t'
Affricate		(ts)	ts'
Fricative	θ	s	

If /ts/ is absent, then there is a gap in consonants: there is an ejective /ts'/, but no plain /ts/. If /ts/ is present and represented in the Boas corpus by the symbols <ç> and <ts>, then there is a contrast in plain and glottalized alveolar affricates. The contrast in place is in the fricatives only. We look at

the phoneme inventories of languages which lack dental consonants first, then look at Halkomelem, which is the only language that has both series.

The situation in which pentl'ach lacks /ts/ would make it different from other Central Salish languages that have alveolar affricates. The languages and varieties that have the alveolar affricate all have plain and glottalized counterparts. Some dialects of Northern Straits show variation in having dental fricatives and affricates and that will be discussed further below (Section 5). The key point here is that all the languages with an ejective /ts'/ also have a plain /ts/. None of the languages have a plain dental fricative (though Galloway 1984 notes that while some Nooksack speakers have dental consonants, these speakers are also speakers of Halkomelem which has both dental and alveolar places). This gives us confidence in assuming that pentl'ach has /ts/.

Table 7: Central Salish alveolar obstruents

Language	Plain	Ejective	Fricative	Source
shashishalhem	ts	ts'	s	Beaumont (1985, 2011)
Halkomelem	ts	ts'	s	Suttles (2004)
Skwx̱wú7mesh	ts	ts'	s	Jacobs (2011)
Nooksack	ts	ts'	s	Galloway (1984)
Lushootseed	ts	ts'	s	Bates et al. (1994)

So, we can assume that pentl'ach has both /ts/ and /ts'/. The question is now whether or not <ç> should always represent /ts/. We look next at Halkomelem, which is the only language to have both dental and alveolar fricatives and affricates.

The following chart illustrates a full complement of segments in all manners of articulation for both dental and alveolar place of articulation. Suttles notes that plain /t$^\theta$/ occurs in limited environments and we will see that is the same for ʔayaǰuθəm.

Table 8: Musqueam Halkomelem alveolar and dental fricatives and affricates (Suttles 2004:3)

	Plain	Ejective	Fricative
Dental	t$^\theta$	t̓$^\theta$	θ
Alveolar	ts	ts'	s

Notice that there is a contrast in place for all the affricates and fricatives here. This differs from what we saw in Table 6 for pentl'ach.

If <ç> represents the alveolar affricate /ts/ and not /θ/, there is a balanced inventory, with plain and ejective affricates, and no dental consonants at all. The phoneme inventory without dental fricative would be as indicated below.

Table 9: Consonant contrasts in pentl'ach, if <ç> is /ts/

	Dental	Alveolar	
Stop		t	t'
Affricate		ts	ts'
Fricative		s	

5   Distribution of dental consonants in Central Salish languages

One aspect of our research is tracking the languages and varieties that have dental consonants. In order to have confidence in reconstructing the sound system of pentl'ach, it is important to do so in the context of how consonants shifted in closely related language systems. What are the sources of the sound shifts? Could they be due to natural sound change or via influence from neighbouring languages. We have found that in doing this tracking, the presence of dentals in many languages and varieties is likely due to influence from Halkomelem, so we begin our discussion there.

Halkomelem seems to be the only Salish language in which all varieties have dental consonants (Galloway 1990; Hukari & Peter 1995; Suttles 2004). For example, Musqueam has the dental fricative, the ejective dental affricate, and marginally has the plain dental affricate, as indicated above (Suttles 2004:3): /(t$^\theta$), t̓$^\theta$, θ/. Importantly, Halkomelem is also the only language that maintains a contrast between dental and alveolar obstruents, having both plain and ejective alveolar stops and affricates and the alveolar fricative: /t, t̓, ts, ts', s/. As the only language with the full set of phonemic fricatives and affricates at both places of articulation, we consider this to be a stable system.

ʔayʔaǰuθəm has two dialect groups (that we know of). The mainland dialects (Klahoose, Homalco, Tla'amin) have dental fricatives and affricates, with the plain affricate only occurring in a few function words (Watanabe 2003): /(t$^\theta$), t̓$^\theta$, θ/. It lacks a contrasting series of alveolar affricates. On the other hand, the Island dialect has been described as lacking dental place of articulation (Harris 1977:152), having the alveolar series: /ts, ts', s/. Interestingly, Harris lists /θ, t$^\theta$/ as phonemes that were documented by Sapir or Boas, but not found in his own work. We can infer that a sound shift may have occurred in the different generation of speakers from when Boas and Sapir documented the Island variety.

Mellesmoen (2019) presents a detailed examination of how the dental fricative may have evolved from Proto-Salish *ts. She identifies modern shashishalhem has having /ts/. However, as noted above, Boas uses <ç> in many Sechelt forms in his "Comparative Salishan vocabularies". Therefore, it seems that both the Mainland dialect of ʔayʔaǰusəm and shashishalhem have shifted back to /ts/. Given the closeness of these two varieties to pentl'ach, it is likely that pentl'ach would also have shifted to /ts/ as well.

Another language that shows variation in terms of dental and alveolar affricates and fricatives is Northern Straits. Thompson et al. (1974:186) present a table of sound correspondences, noting that the SENĆOŦEN dialect is the only one that has dental place. They observe that the use of dentals in the SENĆOŦEN dialect is likely due to influence from Halkomelem.

The influence of Halkomelem has also been noted for Nooksack. Galloway (1984:25) discusses how some speakers who have a significant background in Halkomelem replace /ts, ts'/ with interdentals.

It therefore seems that the dialects of North Straits and Nooksack which are innovating by having some words with dental place — which is quite marked cross-linguistically — are doing so by social factors, not linguistic factors. One question we raise here, is whether the speaker(s) that Boas worked with also knew Halkomelem. The closest language to the south of pentl'ach is Halkomelem, and Qualicum First Nation currently has a number of families who either know or are learning Halkomelem. If Boas' pentl'ach consultant knew Halkomelem — in addition to ʔayʔaǰusəm, then their pronunciation of both languages could have been influenced by Halkomelem as well.

6   Implications for language reclamation

Making decisions about the pronunciation associated with <ç> has implications for revitalizing pentl'ach. The work we do is connected to other aspects of culture and connectedness of pentl'ach language and culture. The comparative work being done linguistically is relational work; as Coast Salish peoples, relations with other communities help strengthen each other. Looking to relatives as Indigenous peoples has always been an Indigenous methodology in academic terms; traditionally it would be to help ensure safety of all. Looking to share what we learn about pentl'ach and its interconnectedness with others in exchange for what others might not have helps everyone; all benefit from the gifts the lands the pentl'ach descendants take care of. In today's world, the act of looking to relations has shifted, yet continues; and for the purposes of this paper and in consideration of further comparative work within our reconstruction efforts, the act of looking to relatives and the language work their communities have been able to accomplish has helped in lifting our work up as we endeavor in our early stages to continue meeting success in our revitalization work.

It is our intention in sharing our work to continue looking to relatives and neighbours in their linguistic work and open up opportunities to reciprocate what their work has done to lift ours and offer what we have to lift others in their linguistic efforts. Prioritizing and incorporating these traditional forms of sharing knowledge and values amongst our neighbouring and relative Nations is meant to facilitate the continuation of decolonial methodologies throughout our work. By recognizing the gifts and abundance of linguistic resources found in our neighbours' communities and territories and how they can lift and strengthen our reconstruction work when we visit through our research, we can then make appropriate offerings of our own work in return. This allows our language to once again contribute to the traditional reciprocal circle of relationships among our linguistic relatives that has existed since time immemorial. By recognizing, honouring and enacting our shared histories and relations along the coasts of our territories as Coast Salish Peoples we aim to restore these connections and practices to strengthen our communities.

Finally, we close by saying that the pentl'ach writing system uses <c> for the consonant pronunciation in question. While there have been many assumptions about <ç> being a dental fricative, our research leans towards thinking that /ts/ could be a better interpretation, based on a closer look at Boas' lack of consistencies in general, and an examination of the sound systems in neighbouring languages. Nonetheless, whether to pronounce it as 'th' vs. 'ts' is open for now, we will look forward to seeing how pentl'ach pronunciation evolves as people start to speak it.

References

Barnett, Homer G. 1935. Unpublished Fieldnotes: Coast Salish No. 2 – Pentlatch and Cape Mudge Comox.

Barnett, Homer G. 1955. *The Coast Salish of British Columbia*. Eugene: OR: University of Oregon Press

Bates, Dawn, Thom Hess, and Vi Hilbert. 1994. *Lushootseed dictionary*. Seattle, WA: University of Washington Press.

Beaumont, Ronald, C. 1985. *She shashishalhem, the Sechelt language: Language, stories and sayings of the Sechelt Indian people of British Columbia*. Penticton, BC: Theytus Books.

Beaumont, Ronald, C. 2011. *Sechelt dictionary*. Sechelt, BC: Sechelt Indian Band.

Boas, Franz. ca. 1890. *Pentlach materials*. American Council of Learned Societies Committee on Native American Languages, American Philosophical Society (Item s2j.3). Philadelphia, PA: American Philosophical Society.

Boas, Franz. ca. 1910. *Comox and Pentlach texts*. American Council of Learned Societies Committee on Native American Languages, American Philosophical Society (Item s2j.1). Philadelphia, PA: American Philosophical Society.

Boas, Franz. ca. 1925. *Comparative Salishan vocabularies.* American Philosophical Society (Mss.497.3.B63c)

Bouchard, Randy & Dorothy Kennedy. 2002. *Myths and legends from the North Pacific Coast of America: A translation of Franz Boas' 1895 Edition of Indianische Sagen von der Nord-Pacifischen Küste Amerikas*. Vancouver, BC: Talon Books.

Czaykowska-Higgins, Ewa & M. Dale Kinkade. (1998). Salish languages and linguistics. In Ewa Czaykowska-Higgins and M. Dale Kinkade (eds.), *Salish languages and linguistics: theoretical and descriptive perspectives*. The Hague, Netherlands: Mouton de Gruyter, 1–68.

Galloway, Brent. 1984. A look at Nooksack phonology. *Anthropological Linguistics* 26(1):13–41.

Galloway, Brent. 1988. Some Proto-Central Salish sound correspondences. In William Shipley (ed.), *In honor of Mary Haas: From the Hass Festival Conference on Native American Linguistics*. New York, NY: Mouton de Gruyter, 293–343.

Galloway, Brent. 1990. *A grammar of Upriver Halkomelem*. Berkeley, CA: University of California Press.

Harris, Herbert. 1977. *A grammatical sketch of Comox*. Ph.D. dissertation, University of Kansas.

Hukari, Tom & Ruby Peter. 1995. *The Cowichan dictionary of the Hul'q'umi'num' dialect of the Coast Salish People*. Duncan, BC: Cowichan Tribes.

Jacobs, Peter. 2011. *Skwxwú7mesh Sníchim – Xwelíten sníchim skíxwts – Squamish – English dictionary*. Seattle, WA: University of Washington Press.

Kinkade, M. Dale. n. d. [pentl'ach vocabulary database with Salish cognates]. University of Washington Special Collections (51008-005, 1, Vocab).

Mellesmoen, Gloria. 2019. A fricative-first path from Proto-Salish *c to /s/ and /θ/ in Central Salish. In D. K. E. Reisinger & Gloria Mellesmoen (eds.). *Papers for ICSNL 54*:125–138.

Suttles, Wayne. 2004. *Musqueam reference grammar*. UBC Press.

Swadesh, Morris. 1950. Salish internal relationships. *International Journal of American Linguistics* 16:157–167.

Thompson, Laurence, Mary Thompson, & Barbara Effrat. 1974. Some phonological developments in Straits Salish. *International Journal of American Linguistics* 40(3):182–196.

Watanabe, Honoré. 2003. *A morphological description of Sliammon, Mainland Comox Salish*. Osaka, Japan: Endangered Languages of the Pacific Rim Publications.