Salish numerals in "Old" Nitinaht

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Mary Haas collected a set of numerals from 1 to 10 from
Nitinaht speakers in 1931, which speakers called "old"
Nitinaht, but they are not Nitinaht. Comparison with other
languages shows that they most resemble Quinault, a Salish
language. They are not identical to Quinault numerals,
however, so it must be assumed that they came from an extinct
dialect of Quinault or an extinct language closely related to
Quinault. The number 4 is anomalous, however, and 2 and 8
present problems for a Salish origin.

1 Background

In 1931, while doing fieldwork on Nitinaht at Pachena Bay on western
Vancouver Island in British Columbia, Mary Haas collected a set of numerals
that speakers claimed were "old" Nitinaht. In a message she sent to Laurence
and Terry Thompson in 1969, she said further of this list of numerals that "it is
clearly some kind of Salish, but if it could be more closely identified it would
help in determining the takeover of a Salish-speaking group by a Nootkan-
speaking group." The first part of her statement is correct, but the second is not.
In this paper I will show that these numerals are (mostly) clearly Salishan, and
that they are in fact some kind of Quinault, or a dialect closely related to
Quinault. Haas apparently expected these numerals to correspond to numerals
in Straits Salish, Klallam, or Halkomelem, which are the Salish languages
nearest to the area now occupied by the Nitinaht, and it is known that the
Nootkan[1] language did replace Salish in Sheshaht territory near Port Alberni (as
evidenced by numerous place names of Salish origin included in the vocabulary
in Sapir and Swadesh 1939).

To position the languages and families involved, it should be
remembered that Nitinaht is a member of the Nootkan branch of the Wakashan
language family, and is located on Vancouver Island some 70 miles (110

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[1] I use Nootkan here rather than the currently preferred Nuuchahnulth because the latter
name includes Nitinaht, and I need to distinguish the two languages. Language
abbreviations used are Be = Bella Coola, Ch = Upper Chehalis, Cm = Moses-Columbian,
Cr = Coeur d'Alene, Cx = Comox, Cz = Cowlitz, Fl = Flathead, Hl = Halkomelem, IS =
Interior Salish, Ka = Kalispel, Kl = Klallam, Ld = Lushootseed, Li = Lillooet, Lo =
Lower Chehalis, Nk = Nooksack, NLd = Northern Lushootseed, Ok = Okanagan, ONit =
"old" Nitinaht, PN = Proto-Nootkan, PS = Proto-Salish, Pt = Pentlatch, Qn = Quinault,
Se = Sechelt, Sh = Shuswap, Sl = Sliammon, SLd = Southern Lushootseed, So = Sooke,
Sp = Spokane, Sq = Squamish, St = Straits, Th = Thompson, Ti = Tillamook, Tw =
Twana.

kilometers) west of Victoria, B.C. Quinault is a member of the Tsamosan branch of the Salish language family, and is located on the Washington coast some 95 miles (150 kilometers) to the south of Nitinaht. There are two other languages between Nitinaht and Quinault on the west side of the Olympic Peninsula in Washington State. These are Makah, another member of the Nootkan branch of Wakashan, and Quileute, which together with Chemakum (formerly spoken around present-day Port Townsend on the north-eastern corner of the Olympic Peninsula) form the Chimakuan language family. Speakers of Nitinaht and Quinault (as well as Makah and Quileute) lived along the Pacific Ocean or rivers and inlets draining into it.

The "old" Nitinaht numerals as Haas sent them to the Thompsons are given in (1).

(1)
1.	pe·w'a	6.	ča?upa
2.	če·?da *or* če·d'a	7.	hitačak
3.	če?e·ɬa	8.	čawi·s
4.	ku·da	9.	čabu·s
5.	čidaka	10.	palakaš

The Thompsons sent me a copy of this list of numerals, and then sent a lengthy reply to Haas including both their and my evaluations of them. The Thompsons and I reached much the same conclusions about them, and I will present both our findings here, although I have changed my mind in at least one case.[2]

First I give the equivalent Nitinaht numerals (from Thomas and Hess 1981), to make it clear that we are not dealing with some sort of variant of Nitinaht forms. These are given in (2).

(2)
1.	c'awa·?k	6.	č'i·x̌pa·ɬ
2.	?aƛ	7.	?aƛpu·
3.	qakac'	8.	?aƛasib
4.	bu·	9.	c'awa·sib
5.	šuč'	10.	ƛax̌ʷ

Nootka numerals (Sapir and Swadesh 1939) are generally cognate with Nitinaht. Exceptions are Nootka 6 *n'opo* and 10 *ḥayo*; 8 and 9 use the same roots, but have a different suffix. Powell (1991:217) gives Nuuchahnulth numerals in five dialects, and the forms are virtually identical. Makah numerals are again cognate to the Nitinaht ones, except 3 *wi·* (Jacobsen 1999 and Swan 1870). ONit numerals are certainly not the usual numerals in Southern Wakashan, nor do they correspond to anything in Northern Wakashan. There is one possible exception to this generalization, which I will deal with later at the appropriate place in the numerical sequence.[3]

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[2] I thank Thom Hess for urging me to write up the earlier notes on this numeral system.
[3] For the record, I also looked at numerals in Quileute (Jensen and McLaren 1975), Chemakum (Swadesh 1955), and Kwak'wala (Boas 1947), and found nothing of use to the discussion here.

It will become clear that Qn numerals are fairly consistently the most likely source.[4] I will include in footnotes my April 1969 remarks to the Thompsons about these numerals, followed by the Thompsons' May 1969 remarks to Haas about these developments.[5] There was apparently also an earlier letter from the Thompsons accompanying their first transmission of the ONit numerals to me, but I do not now have immediate access to that letter. My current thinking about these numbers is the subject of this paper.[6]

Before showing the Salish origin of the ONit numerals, other facts about them should be pointed out, namely that they appear not to have been well remembered, and there is likelihood that some have been affected by analogical reshaping. The latter would not be surprising. Analogy is known to have affected numeral systems in other languages; note the initial consonants of English *four* / *five*, and *six/seven*, as well as their German cognates *vier* / *fünf* and *sechs* / *sieben*, as contrasted with the French cognates of the first pair *quatre* / *cinq*. This probably helps explain the initial *č* in ONit 'two', 'three', 'five', 'six', 'eight', and 'nine', which developed from Salish words beginning with *c*, *c'*, *č*, and possibly *t*.[7] Analogy may also play a role in the endings of 'five', 'seven', and 'ten' and in the first vowel of 'one', 'two', and 'three' (where *a* would be expected in at least 'one' and 'three').[8] Further, the fact that numbers 'one' through 'six' all end in the vowel *-a* is probably partly due to analogy.

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[4] A list of the Qn numerals one to ten is delayed until (3) below.

[5] My comments will be preceded by the initial K, those by the Thompsons by T. Quotations from the letters are not in the order found in the original letters, but are rearranged into numerical order. "Olympic" in these earlier letters is now "Tsamosan", and "Puget" or "Puget Sound" is now "Lushootseed". The Thompson letter is quoted with the permission of M. Terry Thompson.

[6] K: "I think that all but 4 may be from Quinault or an extinct dialect closely related to it." T: "I think that I agree with him that it probably represents a borrowing from Quinault or a language (perhaps now extinct) very much like it. I should explain that there are some features of Quinault that set it apart from Upper and Lower Chehalis—particularly the retention of Proto-Salish *k in cluster before s, but not rather generally (as in Cowlitz). In the other Olympic languages *k appears as č. This is diagnostic in both the forms for 5 and 10." And further T: "On the other hand, there is another feature of Quinault that seems either contradictory or simply unrepresented here: Quinault has phonemes /y w/, each of which has a stop allophone before vowels—[ǰ gʷ] respectively. The only form in the ONit counting system in which this comes into play, so far as I can see, is the one for 8, and that may simply have some other origin than Olympic '9'; the other possibility, of course, is that this development may be quite late (I've suspected that it probably is, partly because it's still subphonemic), after the period of borrowing."

[7] K: "Given faulty memories for such a thing as this, and some apparent analogy of initial č, the main problems are vowels in 1, 2, 3 (I don't think we can do anything about the vowel lengths here) and your suggested l to n and n to l shifts."

[8] T: "Another feature of Quinault may explain some of the multiple correspondences of č in your ONit forms: I remember that Jim Gibson was troubled when he did his phonology of Quinault with a complementation between c [tˢ] and s; I don't have his thesis here, so can't check.... Anyway, as I recall, Jim found c- before vowels, s elsewhere, and concluded that one had to do with a single phoneme. This could explain the initial for 2 in ONit without invoking analogy."

Evidence that these numerals may not have been well remembered is that the order of each of the pairs 'six' / 'seven' and 'eight' / 'nine' has been reversed from their Salish originals. In addition, 'eight' may have a mixed origin.

2 The numerals

In the next sections I will discuss each of the ten numerals in turn, showing what the nearest Salish form is, pointing out what changes occurred, and suggesting how these changes might have arisen.

1. One. ONit *pe·w'a* is clearly closest to Qn *páw* or Lo *páw'* (the Qn form might also end in *w'*; Qn data available to me are occasionally not entirely phonetically reliable). These are the only Salish languages with a form like this for 'one', although cognates do occur elsewhere: Li *péleʔ*, Th *péyeʔ*, Se *pála*, Cx-Sl *páʔa*, Ti *higʷíʔ*. The Ti developments of *p* to *h*, and of *w* to *gʷ* are regular as are the vowels in Li and Th, and Th *l* to *y*. Cx-Sl *l* to *ʔ* is the usual development of **l'* between low vowels.[9] The Ti vowels are not expected. The explanation for *l* (and it's cognates) in the north vs. *w* in Lo and Qn (and its cognate in Ti) is found in the Tw word for 'one-hundred' *čt-pal'áw=ələs* (=*ələs* is a lexical suffix) (this is my transcription from Irene Teio; Thompson 1979:81 gives *čtpálʔawʔləs*). Tw preserves both the *l* and the *w*, whereas all the other languages with a cognate of this form lose one or the other. I suspect that the *-aw-* is a lexical linking suffix (like the more common *-al-* or *-ay-*) that occurs primarily with the bound stems of numerals. In most languages this suffix is restricted to another stem for 'one', and has simply become part of the stem, as in SLd *dəč'uʔ*, So *nə́c'əʔ*, Ka *nkʷ'úʔ*, Cr *nékʷ'eʔ*, etc. However, *nač'-* in Ch, and *nak'-* in Cz, can occur with or without *-aw-*, showing that it is a suffix. For example, in Ch *nač'-áw-* occurs before lexical suffixes, as in *nač'-áw'-stq* 'one fire', while *nač'-* generally occurs in compounds, as in *nač'-x̌ʷúqʷ-ɬ* 'together,

be with' (√*x̌ʷúqʷi-* 'gather'). Its presence on the first form for 'one' discussed here might be analogical, as it is on the Ch bound form of 'three'. The first vowel of ONit does not correspond to the first vowel of the Qn form, and must be analogical to the first vowels of the words for 'two' and 'three'.

Two stems for 'one' can be reconstructed to Proto-Salish, although they are in complementary distribution as to which modern language has each. The stem PS **nak'-áw'-* has reflexes in Sq, Hl, St, Kl, Nk, Ld, Ch, Cz, Sh, Ok, Cm, and Sp-Ka-Fl. The stem PS **pal-áw'-* (or **paláw'-*) has reflexes in Cx-Sl, Se, Tw, Qn, Lo, Ti, Li, and Th. Neither is the basic stem for 'one' in Tw, Ch, Cz, or Cm, although each of these languages has words derived from one or the other of these stems. Li *péleʔ* and Th *péyeʔ* might be borrowed from Se, but the distribution of cognates of these forms suggests that this is an old word in Salish.

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[9] I thank Susan Blake for clarification of this and other developments of **l* in Sliammon.

The developments of PS *pal-áw'- are more complex in Sliammon than the summary above would indicate. Classificatory numerals, that is, numerals with lexical suffixes used for counting various categories of objects, show reflexes of *l' in 'one' (and 'two') as yʔ and wʔ as well as ʔ (Watanabe 2000:324-326). The general Sliammon reflex of PS *l is y. However, before a labial it is w, as in pawʔ=us 'one dollar' and paw'=kʷum 'one root'. There are still exceptions to these generalizations, such as payʔ=an'a 'one bundle of uncleaned roots' (where ʔ would be predicted between low vowels), and pawʔ=iqʷan 'one bundle of cleaned roots' (where yʔ would be expected).

2. Two. The origin of če·ʔda 'two' is one of the more difficult ONit numerals to trace. It resembles neither Nitinaht (or Nootka or Makah) ʔaƛ 'two' nor Quinault sáli 'two'. The latter derives from PS *y'əsáliʔ, and every Salish language uses a reflex of this form as its basic word for 'two' except Se, Sq, Li, and Cm, and Cm has it as the first part of a compound for 'twenty', salxə́ƛ'xəƛ't.

It is not impossible to get from Qn sáli to ON če·ʔda, but it requires a replacement of every segment and the addition of one. The initial s to č could be by analogy with 'three' (as well as 'five', 'six', 'eight', and 'nine'). The e· is analogical to vowels in 'one' and 'two', or all may simply be the reflex of stressed á in Quinault (although this does not correspond to the treatment of the same vowel in at least 'nine' and 'ten'). The d would come from n, and this may be an instance of a shift of l to n like that in 'five'. The final a would be analogical to the final vowel of the first six numerals. This leaves the glottalization unaccounted for. This explanation works, more or less, but does seem extreme, and cannot be considered entirely convincing.

Another potential source that should be considered is the bound form for 'two' (used, for example, in words for 'twenty') which occurs widely in Central Salish and Tsamosan languages, and derives from a root *cam-. However, this cannot be reconstructed to PS because it occurs only in these two branches of the family. Nor can it correspond to ONit če·ʔda. The initial č could reflect the initial c of Salish by analogy with the first consonant of other numerals, but the d should reflect n or l, and the vowels do not correspond to Salish (although here again analogy could play a role). However, the bound form for 'three' goes back to *kanáxʷ- in the same two branches of Salish and Ti (appearing in Ti, all four Tsamosan languages, Tw, Sq, Se, and Cx-Sl). A change of this to ONit če·ʔda would only require a loss of the final xʷ, glottalization of the middle consonant, and an analogical change of the first vowel. A change from 'three' to 'two' is not inconceivable in light of the switching of the sequences 'six' and 'seven' and of 'eight' and 'nine', to be discussed below. A further, and probably most important, argument about this bound form as a source of ONit če·ʔda is that it is unlikely that any bound form from Salish became the free form in ONit.

The numeral 'two' clearly remains one of the two or three problematic ONit numerals.[10]

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[10] K: "In 2, the č may be by analogy to 3, and the d from n from l; but I don't know why the glottalization." T: "One other thing about the form for 2: several languages have a

3. Three. ONit *če²e·ła* 'three' is certainly from Salish. Reflexes of PS *ka²łás* 'three' appear in all IS and all Tsamosan languages, and in Se. Cx-Sl probably also has a reflex, but there the lateral is *l* rather than *ł*.[11] The final *s* of the Salish form is retained in IS and Se (and Cx-Sl), but not in Tsamosan. Ch and Cz have the final vowel as *i*, and Lo lacks this vowel entirely. In Qn the word for 'three' is *čá²ła*, and this differs from the ONit form only in the first vowel. This leaves the first vowel unexplained. Again, it may be analogical, but with what? I have said above that the first vowels of 'one' and 'two' were analogical, but there has to be something they can be analogical to. 'One' and 'three' clearly come from Salish, but the source 'two' has been seen to be problematical. If a first vowel *e* is needed in 'two', then a Salish origin becomes less evident.[12]

4. Four. ONit *ku·da* is the most mysterious of all of these numerals. All Salish languages except Pt, Sq, Hl, and Li have a regular reflex of PS *mús* (it is reduplicated in Tw as *búsas* and in Cm as *músəs*). This Salish root, along with *mu·* (or *bu·*) in Wakashan as well as Quileute *bá²yas* and Chemakum *mi²i·s*, is the basis for Sapir's name Mosan, which he applied to his proposed genetic grouping of these three language families. Since Nitinaht *d* derives from *n*, and since *n* and *l* are sometimes interchanged in these ONit numerals, the second consonant could derive from either *n* or *l*. However, none of these

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syllable (presumably originally regularly unstressed) before the s- which appears in Qn initial position: Halkomelem (recorded by Wayne Suttles) has ²isé²lə, or something of that sort, and, as I recall, Kalispel has something like ²əséli² (in which the writing e represents [æ] or something of the sort); Reichard gives the number with basic á'sEl (i.e., [²ǽsəl]); Tillamook has [s²əsǽli²] 'two people', beside [də sǽli²] 'two' (with the demonstrative). It seems possible that this could allow for a PS *(²)yəsáli², which would account for the Straits forms for 2 as cognate, rather than innovations—e.g., Clallam čə́sa; Straits languages seem to have shifted stresses back to word initial position in a large number of cases, and Straits *č* - is the regular development of PS *y before a vowel. I doubt that this Straits development has a bearing on the ONit form of 2, although superficially it would seem to help explain the *č* -; on the other hand, if there were this sort of influence in the system, one would expect other signs of it, and I don't see any."

[11] The rest of Central Salish replaced this stem with *łx^w*, although this is found in Sq only as the root of 'thirty', and in Pt as the derived word for 'three', *łx^wáli*. Tw has an isolated form, *č'ú²us*.

[12] K: "3 looks OK, with an intruded vowel after the glottal stop, but this could be from an echo vowel." T: "...3, probably reconstructable (*sic*) as something like *ka²łás—incidentally, I suspect the Qn form might better be written či²álə, perhaps čə²álə; another interesting thing about it is that many languages have a very similar form, but with n instead of ł; there are a few other cases of apparent correspondences of this sort, but we don't have any regular evidence; as I recall, Comox even has some counting forms with ł, others with n)." I consider the form referred to here with *n* as a separate root.

possible variants make *ku·da* correspond to any word for 'four' on the Northwest Coast, and I can offer no speculation about its origin.[13]

   5. Five. Three ONit numerals have what is surely a remnant of the Proto-Salish lexical suffix for 'hand' (*-*akist*): 'five', 'seven', and 'ten'. However, the suffix is different in each case: *-aka, -ak,* and *-akaš*. They are not always the same in Salish languages, either, and Qn uses a different variant in 'six' than in 'five' and 'ten' (although that does not help explain the differences in ONit 'five' and 'ten'). ONit *čidaka* must be from something like Qn *cíl-aks* (i.e. Quinault or a Quinault-like dialect or language). The change of the initial consonant is analogical with all the other numerals beginning with *č*. The second consonant has been changed from *l* to *n*, and then undergone the general change of nasal to oral stop common to Nitinaht and Makah. Qn is the only non-Interior Salish language that did not palatalize the *k* in this suffix in number words. Cognates for PS **cil-ákis(t)* occur in Cx-Sl, Se, Sq, Ld, and all Tsamosan and IS languages.[14],[15]

   6. Six. No Salish word for 'six' resembles ONit *ča?upa* 'six', and no Salish word for 'seven' resembles ONit *hitačak* 'seven'. However, correspondences can be found for ONit 'six' in Salish 'seven', and for ONit 'seven' in Salish 'six', showing that the ONit system has inverted these two numerals. Corresponding to ONit 'six' there is Qn (and Ch) *c'o·ps* 'seven' (and very similar forms exist in Lo and Cz). The initial consonant has again been changed to *č* by analogy with other numerals, *a?* is innovated (but perhaps *c'* > *ča?*), and *-a* has been added. This Tsamosan word for 'seven' corresponds to Central Salish words developed from **c'u?k(ʷ)is* (note the glottal stop); *k* is indicated by Cx-Sl, Pt, and Se, whereas Hl, St, Kl, Nk, and Ld have *kʷ*.[16],[17]

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[13] K: "4 is queer; Boas gives a Lower Chinook form for five qui'nəm, but that is the best I can do." T: "I know of nothing in Salish that can help with 4; all I can say is that, given the rest of the material, the source was a "č" language (i.e., it had č from PS *k, as, witness 3, ... then 4 would have to have kʷ-."

[14] A second stem for 'five' may be reconstructible in Salish: PS **c'ixʷós*. Reflexes occur as Be *c'ixʷ*, Tw *c'xʷós*, and Ti *c'xʷós*.

[15] K: "5 works with the initial analogy, d from n from l, and lost final s." T: "What is most disturbing is the treatment of the ends of the words, and the inconsistency involved. 5 and 10 each have the same Salishan suffix 'hand', which I reconstruct now *-akist, but probably with some ablaut variants in Proto-Salishan. It simply is not explicable why this should be treated as -aka in 5, but as -akaš in 10. Similarly puzzling is the end of 6 (apparently modeled on Salishan 7). And 7 would seem to have the opposite kind of problem—why this -k?" Further relevant to 'five', T: "Finally, I should say specifically that in the two cases where ONit d corresponds to Qn l there is no indication of any n in Salishan; both these forms clearly go back to PS *l." See also note 6.

[16] Separate from this etymology are Tw *tkʷús* and Sq *takʷusáč*.

[17] K: "6 could easily come from Qn 7, with a breakup of the glottalized c (which might have been a cluster earlier anyway...) and a final s lost again." T: "One other thing should be mentioned in connection with the form for 6: in Puget Sound, Straits and some other languages farther north (on the coast) there is a form which looks like c'úkʷs or something related; I suspect this is closer to PS, and that Olympic p has developed from

7. Seven. Only one Salish language has a word resembling ONit *hitačak* 'seven', and that is Qn *sitáča?* 'six' (the only cognate of the latter in Salish is Lo *si?ətič*). The correspondence of the initial consonants is not expected. Both have reflexes of the Salish lexical suffix for 'hand', but in this case Qn has palatalized the *k* to *č*, but ONit has *k*, either from an earlier period of Salish or by analogy with the same suffix in 'five' and 'ten'. The usual words for 'six' elsewhere in Tsamosan and in most Central Salish languages have developed from **t'əx̌əm* (which is not Proto-Salish).[18]

8. Eight. The ONit words for 'eight' and 'nine' are also reversed. This is not clear from 'eight', which is problematic in any case, but 'nine' is clearly Salish. 'Eight' is *čawi·s*, and is another of the ONit numerals that is difficult to trace. Several languages in Central Salish and Tsamosan Salish have reflexes of **təwix̌ʷ* (not Proto-Salish) for 'nine', and I had earlier thought that might be a source for ONit *čawi·s* 'eight'. The transition requires several changes not found in other numerals, however. It would mean that *t* was also palatalized to *č*, along with *c* and *c'*, and that the final consonant shifted to *s*. The Qn form of 'nine' is *təgʷix̌ʷ*, which introduces yet another complication. Even though Qn *gʷ* is only a phonetic variant of *w* in this case, the word would have to have been borrowed before this phonetic alternation developed.[19]

PS **kʷ*. Anyway, the *?* is important in this consideration, because otherwise, if I'm right about the development of PS labiovelars, this **kʷ* would have become p in most languages, *č* in Straits (the usual pattern). And the same *?* is interesting in connection with the ONit form."

[18] K: "6 and 7 may have gotten turned around. 7 looks very much like Qn 6, with initial h for s and an added final k." T: "The h- in the form for 7, if it does correspond to Qn s-, is not so surprising. First of all, the s- may be the Salishan nominalizing s-, or perhaps a cognate for a demonstrative we have in Clallam meaning something like 'a particular one'; and following any consonant an h usually disappears in most Salishan languages."

[19] K: "8 and 9 may again be reversed. 8 could come from Qn 9, if you again allow the initial analogy; the Qn *gʷ* comes from w (as it is in Ch), and the s for final *x̌ʷ* isn't too unreasonable, especially if you would accept analogy again (with 9)." T: "The ONit 8 is the other most troublesome form (after 4); it does seem somewhat similar to Olympic 9, but the *č* : t and s : *x̌ʷ* have no apparent explanation; if possibly your informant simply reversed the forms, remembering 9 for 8 and vice versa, then the *č*- could logically be analogical, but the -s is still problematic. It's true that the system has no rounded velars, but that's accidental, and if the sounds are related, I'd expect rather -š; I suppose it could be dissimilation after *č*-. As I said earlier, if the form is related, then it has to be from a Qn-like dialect which did not have prevocalic [gʷ] for /w/. Incidentally, the form has a wider distribution in coast Salishan—Straits *təǩʷx̌ʷ*, Halkomelem *túuxʷ*. Of course, actually the *č*- here is really not any worse representation than it is at the beginning of 6, where it seems to represent c'-.) ... Oh, yes, one unlikely thing that I meant to mention about *čawi·s*: it's startling because it looks like what one might expect in Tillamook if the word for 8 were formed in the same way as in Olympic—i.e., wis is one of the forms for 4 (the more common one is *wə́ws*, but some strange shifts from u to i following original rounded velars occur in Tillamook—a kind of dissimilation, perhaps?). I don't believe this does anything to explain this form, but mention it as a curiosity."

Another possibility is that *čawi·s* is a mixed form, with its source in Tsamosan with at least some of the changes just discussed, but then modified by analogy to modern Nitinaht *c'awa·sib* 'eight'. Development from this Nitinaht form would require the same palatalization of the initial consonant, plus loss of the final consonant, and replacement of *a·* with *i·*.

9. Nine. ONit *čabu·s* 'nine' clearly comes from Tsamosan Salish *cámus* 'eight' (its shape in Qn, Ch, and Cz; it is *cá?mus* in Lo). This is the only part of Salish that expresses 'eight' in this way. The word is an old compound of *cam-* 'two' (its bound form) and *mús* 'four', with a reduction of the two *m*'s to one. The initial consonant has been palatalized by analogy to the initials of several other ONit numerals, and the *m* has been denasalised to *b*. It seems unlikely that *čabu·s* is simply a distortion of Nitinaht *c'awa·sib*, however; otherwise the modern Nitinaht form itself would have been used.[20]

10. Ten. ONit *palakaš* 'ten' also has its most likely origin in Qn. All Salish languages except Be, Pt, NLd, Li, and Cm use a reflex of PS *?upán-akis(t)* for 'ten'. Only SLd and Tw within Central Salish have retained the suffix, and there in reduced form. The Tsamosan languages have it, but only Qn has *k* in it (*pán-aks*). Only Tsamosan languages and SLd have lost the initial glottal stop and vowel. As noted earlier, ONit has a different form of the suffix in 'ten' from that found in the words for 'five' and 'seven' for unknown reasons. The change from *n* to *l* is also of interest, in that it shows the opposite change from the one in 'five', which went from *l* to *n* (and then on to *d*).[21]

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[20] K: "9 indeed looks like Ch 8, to say nothing of Qn 8; just the initial analogy, and a familiar b from m." T: "To explain the source for 9 in a similar manner, one would have to assume that the PS stress was on the second syllable, which is conceivable, although the Qn form is typical for Olympic, and so far as I know that is the only place where this form for 8 (which would have to be the model) is found. (The form, incidentally is cam-, combining form for 2, plus 4, i.e., 'twice four'.)"

[21] K: "Then 10 is easy with l from n, and a modified final consonant." T: "The vowels are troublesome in a number of ways. In 1, 2, 3 ON[it] e· seems to correspond to Qn a(·) in what I imagine are the stressed syllables, but in 9, 10 the correspondences are rather a : a(·). I can imagine a possible historical reason in 10: the PS form was perhaps something like *?úpanakist, although there are indications that rather *?upánakist is to be reconstructed. (Stress is a problem, and we are only beginning to get some inklings as to what was going on.) Anyway, if the first reconstruction is correct, then the Quinault-like language that the Nitinat old-timers borrowed from may have fronted and raised PS *a to e, probably through æ), a change which has occurred in many of the languages…. I just realized that I skipped a step: one would, then, assume that in this language (like Quinault) unstressed *a was retained as such; there are, of course, some other indications that such is the case—thus the a in the forms for 5, 7 are OK, and perhaps also that in 6, although that has some other problems." Further T: "A puzzling thing (and the reason I mentioned the ł : n business in connection with 3) is the d in 2, 5 corresponding to Qn l, but l corresponding to Qn n. I tried to relate this to the Nootka lack of l, where, as I recall, PN *l has become n, but that doesn't help with this business; this form for 10 is practically pan-Salishan, although different languages have kept different parts of the form; Puget Sound is the only language I can think of now that has (in northern dialects)

3 Summary

By way of summing up, it will be helpful to give the Quinault numerals 'one' to 'ten' (3).

(3)   1. páw   6. sítača?

           2. sáli; cəm-   7. c'ó·ps

           3. čá?ɬa; čánaš- 8. cámus

           4. mús   9. tə́gʷixʷ

           5. cíl-aks   10. pán-aks

These are obviously not identical to the ONit numerals, but seven (by my count) are close enough to deduce that the ONit numerals derive from a Qn dialect or a language very much like Qn (and Lo cannot be that language). That they have been distorted over the years is not surprising. There is, of course, no way of knowing when or how the Nitinahts learned them, but there must have been some sort of social situation that made it possible: slaving, trading, intermarriage, fishing or whaling encounters, or possibly potlatching—but not the sort of evidence Haas was looking for to determine a takeover of one group by another.[22] We are fortunate that these numerals were remembered long enough to provide us with this indication of intertribal contact in the Northwest, and to provide us with the puzzle of determining their origin.

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an unrelated form, so that the Skagit material we sent you earlier would have had ?úlub—an unexplained innovation; southern dialects have pádəč." Four other languages have replaced the PS word for 'ten': Cm has *xə́λ 'xəλ't*; Li has *q 'ə́m'p*; Pt has *ɬqʷúya*; and Be has *c'klakt*.

[22] K: "What other evidence is there for the 'takeover of a Salish-speaking group by a Nootkan-speaking group'? I would expect something more than 10 numbers to be retained. If this is all there is, I would rather suppose that these came from one of three sources: traders picking up some foreign words; slaves brought in from Salish-speaking areas; intermarriage with Salish-speaking women. A set of numbers this way could be retained for a long period of time and fairly accurately.... The idea of a take-over is an interesting one, though. If this were the case, and if that group were a member of the Olympic branch, it would imply either a much wider spread for Olympic Salish earlier, or that possibly the Olympic branch was pushed successively further southward, first by these Nootkas, then further by the Quileute coming over from the other side of the Peninsula." T: "I think that [the] notion about trade borrowing is a very reasonable one; I agree that if the ancestors of the Nitinat and the Quinault had been in close contact geographically there ought to be other borrowings beside the numerals...."

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