A Trio of Phonetic Details in Homalco

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

1   Introduction

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

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

2   First history

The first field notes that I've been able to obtain are from Franz Boas, written onto file slips around 1887. Boas worked with the Island Comox dialect and not with one of the three Mainland Comox dialects. These slips are in the Smithsonian Anthropological Archives as Document 711–b. Although this document gives much phonetic data, fine phonetic detail is not discernable. For

example, although the letter *ç* uniquely represents the sound [θ], the letter *q* represents any one of the three sounds [çʷ], [χ], [χʷ].

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

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

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

3   One source of Sapir's "rearticulated vowels"

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

Phonemic	Phonetic	Written for learners	Gloss
/pəq sčaǰən/	[pʌq sčéʌǰɪn]	peq schîajen	'weasel'
/čalas/	[čéʌlʌs]	chîalas	'three'
/čagay/	[čéʌgʌy]	ch'îagay	'old time wooden spoon'

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

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

(1)   /čaṁ/   [čʸɛmʔ]   chiam'
       'how, why'

(2)   /xʷaʔ čaṁas/   [çʷʊ čéʌmʌs]   whe chîamas
       'nohow, noway, can't, won't'

(3) /θamšaʔ/   [θamšʸɛʔ] ~ [θamšíʌʔ]   thamshia' ~ thamshîa'
    'twenty'

These examples illustrate the pedagogical orthography that I am using to transcribe my field notes and the texts which have been told to me.

Parallel with the offglide from a palatal stop being heard before an /a/, most instances of a palatal stop followed by the vowel /u/ also have an audible offglide — an exception is the word for 'child' /čuy̓/ [čuyʔ]. Some examples of the audible offglide are:

(4) /č'umən/   [č'íumɨn]   ch'îumen
    'a screw'

(5) /čuʔułqinəm/   [číuʔołqɛnəm]   chîu'olhqinem
    'stealing food'

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

(6) /kʷamnač/   [kʷámnʌč] ~ [kúʌmnʌč]   kwamnach ~ kŵamnach
    'root'

The phenomenon of the offglides being pronounced separately from the neighboring phonemic vowel suggests that Homalco and its related dialects are mora timed rather than being syllable timed or stress timed.

They are also parallel with the normal, unemphatic pronunciation of the word "no" where the unvoiced segment is stressed and the neighboring voiced segment is unstressed.

(7) /xʷaʔ/   [çúʌʔ]   ŵha'
    'no'

Compare the emphatic pronunciation of 'no!'

(8) /xʷaʔ/   [çʷáʔᵃ]   wha'
    'no!'

Here the initial segment is pronounced not as its own syllable (or mora) but is phonetically a syllable initial consonant.

One instance of this emphatic denial came during a conversation with Tommy Paul, when I asked him what sasquatch *may'al'alh* [mayʔʌlʔʌɬ] eats. His response was *"Tam qigath, tam majath"* [tam qegʌθ, tam mʌǰʌθ] 'any kind of deer, any kind of meat' — then when I asked *"pileq ?"* [pɛləq] 'mushrooms' his answer was an emphatic "NO!"

4   Stød as another source of Sapir's "rearticulated vowels"

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

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

The Comox word for 'mussel' which Jimi told Jim is /sam̓a/ [saʌmʌ] or [saᵃmʌ] (alternative notations for the same phenomenon) with creaky voice. In his 1915 publication, Edward Sapir wrote the word for 'mussel' as sāᵃ'ba' (p. 30). This pronunciation of [b] for /m/ is not unexpected. For example, Noel George Harry sometimes said /majaθ/ as [bʌjʌθ] 'meat' and /jənəs/ as [jɪdɪs] 'tooth' in allegro speech.

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

(9)   /čanəw/   [čéʌno]   ch'îano
       'dog'

(10)   /čanaguł/   [čéʌnagʊł]   ch'îanagolh
       'puppy'

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

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

(11) /ɬawˀ/   [ɬawʔ]   lhaw'
       'escape'

(12) /ɬagit̓/ (or /ɬaʔgit̓/) [ɬaᵃgit] / [ɬaʌgit] ~ [ɬaʔgit]   lha'git
       'he got away'

with /w/ ⇒ /g/ before a vowel.
       A second example of this alternation is

(13) /təwˀ/   [tuʔ]   tew'
     'freeze'

(14) /tagit/   [taᵃgit] / [taʌgit] ~ [taʔgit]   ta'git
     'frozen'

The negation of the word for 'good' /ʔəyˀ/ [ʔiːʔ] illustrates the alternation of /y/ ⇒ /ǰ/ before a vowel.

(15) /xʷaʔ ʔaǰas/   [çʷʊ ʔaᵃǰʸɛs] ~ [çʷʊ ʔaʔǰʸɛs]   whe 'a'jas
     'not good'

To restate, Wikipedia states that stød is represented by the symbol for a glottal stop. When the glottal stop is not realized, Sapir's rearticulated vowel is heard. However, during the 1970s the speakers who pronounced the rearticulated vowel also had creaky voice.
      Another example of stød before a laryngealized resonant is:

(16) /ʔalˀas/   [ʔaᵃlʌs] / [ʔaʌlʌs] not recorded as [ʔaʔlʌs]
     'sea cucumber'

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

5   Studies of Other Languages

Sonya Bird of the University of Victoria has done extensive analysis of laryngealized resonants in St'at'imcets, most recently in 2011. In that publication, Bird states, "[one] way in which [laryngealized resonants] exhibit substantial variability is in the realization of the laryngeal gesture: from a complete stop to a small dip in fundamental frequency." This statement is reminiscent of the description of stød as given in Wikipedia.
      There have also been studies of laryngealized vowels in Otomanguean (Mazatec, Mixtec) and Hokan (Oaxaca Chontal) and Panoan (Capanhua) languages. Some of these studies are listed in the reference list of this paper. The laryngealization of vowels in Comox is not an isolated phenomenon.

6   Another source of laryngealized vowels in Homalco

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

(17) /tˀin/   [tˀɛn]   t'in
     'barbecued fish'

(18) /ʔapˀukʷ/   [ʔapˀokʷ]   'ap'ok'w
     'maggot'

(19) /pʼuχʷ/   [p̓oχʷ]   p'oxw
    'stink, bad smell'

Here the stops are not ejective as pronounced by Bill Galligos and Noel George Harry, but are laryngealized, and the vowels are creaky voice.

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

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

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

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

7   Another source of Sapir's "rearticulated vowels"

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

(20) /səpʼiqʷatas/   [sʌp̓ɛˀqʷatʌs]   sep'iqwatas
    'he hit him in the head'

(21) /tʼəšiqʷ/   [tɪ̓šɛˀqʷ]   t'eshiqw
    'snot'

8   Similar timing in the enunciation of consonants

In their 2008 editorial *The phonetics of North American languages*, McDonough and Whalen write that "Salishan languages have long sequences of consonants, uninterrupted by vowels … that violate theoretical notions of syllable structure and phonetic salience."

In his 1978 paper, Syllabification in Northwest Indian languages, James Hoard describes how such sequences of consonants are actually pronounced here in the Northwest. In this paper, Hoard distinguishes between tautosyllabic and heterosyllabic consonant clusters. All the consonants in a tautosyllabic consonant cluster are pronounced together as a unit. By contrast, in heterosyllabic consonant clusters, the consonants are pronounced separately or in pairs. A Comox illustration of a heterosyllabic consonant cluster is:

(22) /t̓ut^θštas/   [t̓ót^θ.š.tʌs]   t'oz'shtas
    '(S)he shot him/her in the foot/lower leg'

Each of the three consonants in the sequence -z'sht- [t^θšt] is enunciated separately and clearly. Here I am adopting James Hoard's convention of using a period on the line to show the separation of one mora from another.

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

(23) /t̓ut^θšən čan/   [t̓ót^θ.šin č^yɛn]   t'oz'shen chian
    'I was/am shot in the foot/lower leg'

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

(24) /ʔasx^w/   [ʔa.sç^w]   'aswh
    'fur seal'

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

(25) /ʔax^w/   [ʔa.ç^w]   'awh
    'falling snow' ; 'snowflake'

(26) /x^waʔ/   [ç^w.ʌʔ]   ŵha'
    'no'

Similarly, I usually heard the following word pronounced bimoraically:

(27) /qawθ/   [qa.wθ] or [qa.uθ]   qawth
    'potato'

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

The bimoraic pronuncian of /qawθ/ 'potato' sheds light on the following reduplicated forms:

(28) /qin̓qin/ [qɛ.n.qɛn] qi'nqin
  'mallard'

(29) /tol̓tol/ [to.l.tol] to'ltol

Noel George Harry described *to'ltol* as a spear throwing game or contest, where a stone wheel with a hole in its center was rolled across the ground and the players or contestants tried to throw a spear through the hole as the wheel rolls.

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

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

9   A mora-timed language

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

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

10   A possible language change

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

(30) /ǰaǰa/ [ǰíʌǰʸɛ] jîajia

to be just two syllables

(31) /ǰaǰa/ [ǰʸɛǰʸɛ] jiajia

so that now it seems to follow the rhythm pattern of English.

11   An areal phenomenon

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

12   Afterword

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

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

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