1. In the summer of 1972 I spent ten weeks in the village of Klemtu, B.C., where I studied the Heiltsuk language. During this period I collected a vocabulary of over 4000 words. My main informant was Mr. William Freeman. The investigation was financed by the Netherlands Organization for the Advancement of Pure Research (Z.W.O.).

The Heiltsuk language, which belongs to the Northern (Kwakiutlic) branch of the Wakashan language family, is spoken in two exclusively Indian villages, Bella Bella and Klemtu, situated on islands opposite the Canadian Pacific coast. These villages came into being at the end of the 19th century, when the surviving members of the Heiltsuk (Héylzàq°) tribes gathered together. Today, various dialects of their language (Héylzàq°lä) can still be distinguished. Part of the Klemtu population is Tsimshian.

The structure of the Heiltsuk language is largely similar to that of Kwakiutl. Though the language has been innovating in some respects, it also seems to have preserved a number of ancient characteristics. In this communication I shall discuss a few striking features of Heiltsuk phonetics.

2. Heiltsuk occlusives are plain \( b, d, λ, z, g, g°, ̃g, ̃g° \), aspirated \( p, t, ̃λ, ̃c, ̃k, ̃k°, q, q° \), or glottalized \( ̃p, ̃t, ̃λ', ̃c, ̃k, ̃k°, q, q° \). Both plain and, more rarely, glottalized occlusives have voiced allophones, but the voiceless variants are more frequent. Word-initially, glottalized occlusives are more frequent than aspirated ones, and aspirated occlusives are more frequent than plain ones. Laterals and velars are particularly frequent. The fricatives \( l, s, x, x°, ̃x, ̃x° \) are voiceless. There is no labial fricative, cf. the old loan word \( sdùp \) from English \( stove \). Palatals and velars are plain \( g, k, ̃k, ̃x, ̃g, q, ̃q, ̃x \) or labialized \( g°, k°, ̃k°, x°, ̃g°, q°, ̃q°, ̃x° \). The labialized phonemes are distinct from clusters of plain phonemes and \( w \), cf. e.g. \( ̃x°isīg°dålà \) 'the other side of the river', \( g°ásīg°dålà \) 'this side of the river'.
Imigwałå '1 person (walking outside)', skágwałå '5 persons (walking outside)', mígwałå '4 persons (walking outside)', yítwałå '3 persons (walking outside)', éykwa 'to win', qwåyú 'knife for scraping the inner bark of a tree'. The affricates (z, c, č) are distinct from clusters of occlusive and fricative, cf. e.g. tsá 'to push', tsõlt 'to push away', tćá 'to warm oneself at the stove'. The lateral occlusives are distinct from clusters of occlusive and l, cf. e.g. málä 'to fly', málä 'to wave one’s hand', máñlä 'to lead a person by the hand'. Heiltsuk resonants are plain (m, n, l, y, w) or glottalic (m, ĕ, l, y, w). Apparently, glottalic resonants are not opposed to clusters of glottal stop and resonant. I write 7 for the glottal stop except before word-initial vowel, where it is automatic.

In contradistinction to Kwakiutl, where no consonant clusters occur at the beginning of a word, initial clusters are frequent in Heiltsuk, cf. e.g. t'ísjyåldawí 'to pull a boat up a rocky shore', tsą 'octopus', tsõánh 'human being', t'õtñi 'owl', ttxsiú 'bulging eyes', qxň 'to have sexual intercourse', qkľá 'not fit', kõłá 'to be amazed', lõňõqõcvá 'brains', tõxsxľágá 'to jump over s.th.' These clusters have apparently come into existence by the loss of short vowels. This loss has also led to the existence of vowelless words, cf. e.g. lõň 'native crab apple', lõñõ 'snout', l'nl 'dead', lõnx 'cross-piece of a canoe'. The latter word is lõnx in the neighbouring Haisla language. For the Klemtu word qǥqqs 'eye' most Bella Bella speakers have qqs. Instead of the Bella Bella word tpeq̓ 'flash-light' Klemtu speakers use sbayú, cf. spá 'to flash', tpa 'to press'. (Cf. also sgayú 'spear' from ská 'to spear'.) The suffix -k is a passive nominalizing formative. Medial clusters are also frequent, cf. e.g. x'úqyā 'bald hair', dwxõlxľãxõlślá 'to pack s.th. on one’s back and carry it up to the woods'. Lateral clusters are characteristic of this language, cf. e.g. máñlä 'to lead a person by the hand', máñlä 'to swim', máñlä 'to stir', lľuyá 'still-born'. For word-final clusters cf. e.g. tõqxõ 'sundried berries', lõqxõ 'brave', diqxõ 'deadfall', nikxõ 'night'. (Such forms are frequent because -xõ is an alternant of the suffix -kõ, cf. lqá 'to spread berries on a surface', diqõ 'to make a deadfall'.)

3. The most salient feature of Heiltsuk phonetics is the presence of phonemic pitch. Vowels and syllabic resonants are high (') or low ('). Stress is automatic and falls on the first high-pitched syllable of a word, if any. The large majority of words contain at least one high-pitched syllable, but this is not necessarily so, cf. e.g. txbilänug 'I pretend'. The tone of a suffix depends not only on the suffix itself but also on the preceding stem, and, what is more, not only on the pitch contour of the preceding stem. The verbs wâxwałxă 'to smoke', mismisâ 'to eat meat', and
myáxmyákä² ‘to eat salmon’ are on the surface identical formations. But they have a different influence on the tone of the personal suffixes: wáxwáxánug°ä ‘I smoke’ and mismisánug°ä ‘I eat meat’ versus myáxmyákäánug°ä ‘I eat salmon’. The future tense suffix -ä-, which precedes the personal suffixes, lowers the tone of the preceding syllable: wáxwáxánug°ä ‘I shall smoke’ and mismisánug°ä ‘I shall eat meat’ versus myáxmyákäánug°ä ‘I shall eat salmon’. Cf. also wáxwáxãnä ‘we (incl.) shall smoke’ and mismisãnä ‘we (incl.) shall eat meat’ versus myáxmyákãnä ‘we (incl.) shall eat salmon’. Another example of pitch lowering before the suffix -ä- is ēyxbiλänug°ä ‘I shall pretend to be good’, as opposed to ēyxbiλänug°ä ‘I pretend to be good’ (cf. ēyür ‘good’). On the other hand, the pitch of a suffix also depends on the suffix itself: dúq°lä ‘to see, look’ versus dúq°ä ‘to see, visit’.

The interrelation between the pitch contour of a word and the phonemic shape of its constituent parts is clearly observable in the case of numerals. Heiltsuk, like other languages of the North-West Pacific Coast, uses different sets of numerals in counting objects of different kinds, at least in counting from one to six. There are also corresponding forms for ‘many’. I have registered 42 sets of numerals. The number is expressed by the stem, and the kind of object counted by the suffix, e.g. mnča²ⁿ, māc²ⁿ, yūdūc²ⁿ, mūc²ⁿ, qēynâm ča²ⁿ ‘1, 2, 3, 4, many (sticks, trees, logs, bottles, cigarettes, fishing nets)’, mnčlā, māl7āxlā, yūtx°lā, mūwīx°lā, qēynâm lā ‘1, 2, 3, 4, many (dishes, pots, cups, glasses)’, mnčsā, mālxsā, yūtx°sā, mūwīxsā, qēynâmxsā ‘1, 2, 3, 4, many (flat objects, halibuts, sheets of paper)’. The stem of 1’ is mn- (22 x) or u- (18 x), depending on the suffix, with a preference for mn- in counting objects and for u- in counting events. The proper tone of the stem is revealed by the forms containing the vowelless suffix -xs: mnǐxs, mlāxs, yūtx°s, mūx°s, skāxs, qāl’aksi ‘1, 2, 3, 4, 5, 6 persons (in a boat)’. The stem ‘4’ lowers the tone of all following syllables, cf. e.g. úpını́x°ls, mālpcióníx°ls, yūtx°píníx°ls, mūpını́x°ls ‘1, 2, 3, 4 days’, úpını́lāxlā, māl Dönālāxlā, yūtx°pını́lāxlā, mūpını́lāxlā ‘1st, 2nd, 3rd, 4th day of the month’, mncăqłā, māčqłā, yūdūćqłā, mūćqłā ‘1, 2, 3, 4 boats (travelling)’, úpını́qśtwā, māl Dönı́qśtwā, yūtx°pını́qśtwā, mūpını́qśtwā ‘1, 2, 3, 4 trips (in the mountains)’. Some suffixes have the same tone as the stem, with the exception of the low pitch after ‘4’: mnśgm, māsım, yūtx°sım, mūsım ‘1, 2, 3, 4 houses’, úpınx, mālınx, yūtx°pınx, mūpınx ‘1, 2, 3, 4 fathoms’, úpınx, mālınx, yūtx°pınx, mūpınx ‘1st, 2nd, 3rd, 4th day of the month (i.e., Monday, Tuesday, Wednesday, Thursday)’. Other suffixes are marked by a tone opposite to that of the stem: mnx7nāx, māł7nāx, yūtx°7nāx, mūx°7nāx ‘1, 2, 3, 4 years’, mnśgm,
måsm, yútxsn, músgm '1, 2, 3, 4, dollars', mniklb, málklb, yútxlb, múklb, qékylb '1, 2, 3, 4, many cloths'. Some suffixes change the tone of '1' into low pitch, like -śl and -xs above, whereas others change the tone of '2' into high pitch, cf. målwàl '2 persons (walking outside)'. The latter suffix has low pitch after '1', '2', '3', '4', but high pitch after '5' and '6': skágwál, qàłqágwál.

As is clear from the foregoing examples, the phonemic shape of a word form is not always predictable on the basis of its constituent morphemes, cf. e.g. målʔaʔl '2 -śl' versus målš '2 -š' mentioned above. Moreover, the quality of the vowels may depend on their pitch. High ey and aw often correspond to low i and u, respectively: mlklbl, målkblýl, yútxblýl, múklbl, qékylbl '1, 2, 3, 4, many blankets', úpñštëys, målpbkstëys, yútxpbnkstëys, múpñkstis, målţwsñkstëys, yútxówspñkstis '1, 2, 3, 4, 7, 8 hundred', úpñštâwt, målpñštâwt, yútxpñštâwt, múpñštâut, qëynámñştâut '1, 2, 3, 4, many times setting a fish net', mnxsłál, målţxslál, yútxtsxl '1, 2, 3, 4 times a glass or cup', úpñsxlëys, målpñsxlëys, yútxpñsxlëys, múpñsxlís, qëynámñpsxlís '1, 2, 3, 4, many trips (behind the village)'. However, this is not always so, cf. ey in mnqeyl, måqeyl, yudöqeyl, múqeyl '1, 2, 3, 4 o'clock'. Cf. also i next to éy in mnqil, måfil, yudàwil, múwil, skâlýl, qàlqàlýl, qâlqálýl '1, 2, 3, 4, 5, 6, many persons (in the house)'.

4. The non-automatic alternations in the tone pattern and the absence of tone in the neighbouring non-Wakashan languages (Tsimshian and Bella Coola) suggest that Heiltsuk pitch goes back to the proto-Wakashan period and has been lost in the other languages of the family. I have noted the absence of distinctive tone in the dialect of Rivers Inlet, which is transitional between Bella Bella and Kwakiutl and very close to Haisla. These observations show that typological and genealogical generalizations are unwarranted before the material of the surviving dialects has been properly investigated.

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