

The  
Collected Works  
of  
Edward Sapir

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of  
Edward Sapir

VI

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Edward Sapir

VI

American Indian Languages

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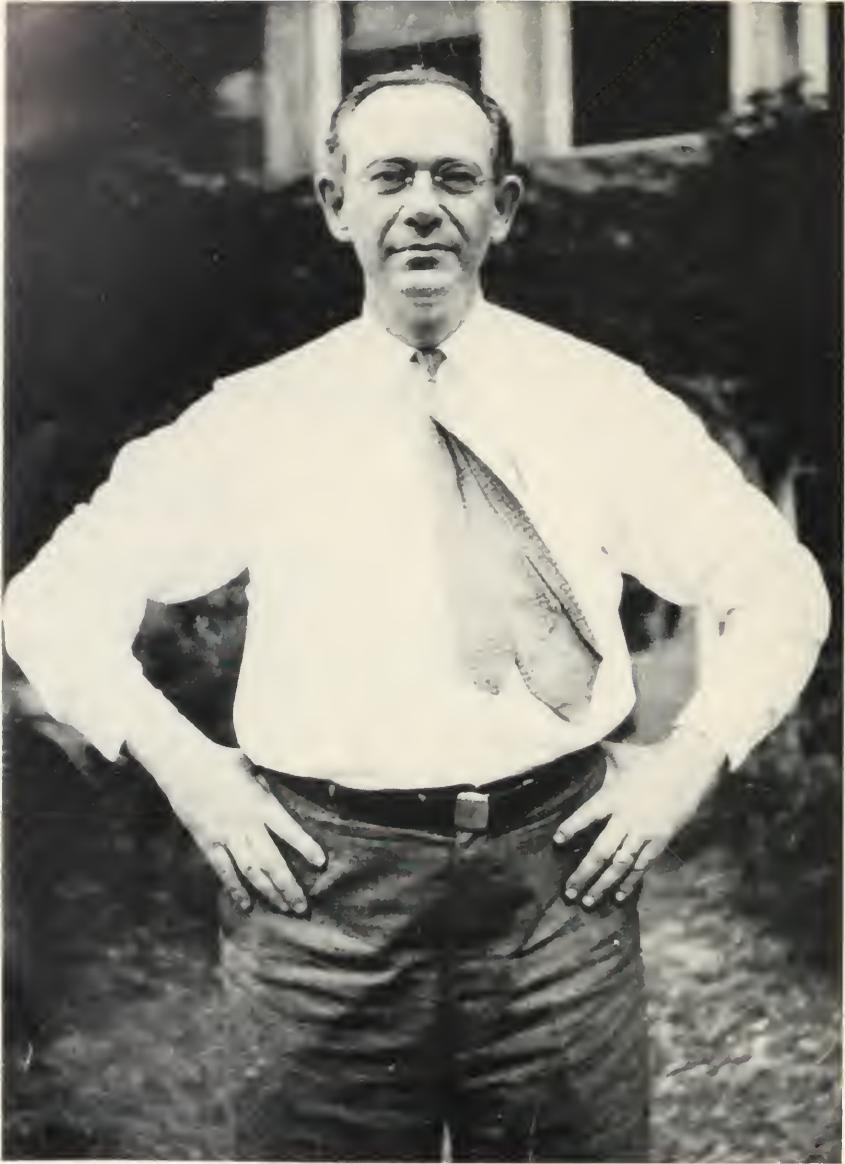
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*Edward Sapir, 1937*

University of Michigan, Ann Arbor, Michigan,  
taken by Kenneth Pike

*(Courtesy of Sapir family)*

Edward Sapir (1884-1939) has been referred to as “one of the most brilliant scholars in linguistics and anthropology in our country” (Franz Boas) and as “one of the greatest figures in American humanistic scholarship” (Franklin Edgerton). His classic book, *Language* (1921), is still in use, and many of his papers in general linguistics, such as “Sound Patterns in Language” and “The Psychological Reality of Phonemes,” stand also as classics. The development of the American descriptive school of structural linguistics, including the adoption of phonemic principles in the study of non-literary languages, was primarily due to him.

The large body of work he carried out on Native American languages has been called “ground-breaking” and “monumental” and includes descriptive, historical, and comparative studies. They are of continuing importance and relevance to today’s scholars.

Not to be ignored are his studies in Indo-European, Semitic, and African languages, which have been characterized as “masterpieces of brilliant association” (Zellig Harris). Further, he is recognized as a forefather of ethnolinguistic and sociolinguistic studies.

In anthropology Sapir contributed the classic statement on the theory and methodology of the American school of Franz Boas in his monograph, “Time Perspective in Aboriginal American Culture” (1916). His major contribution, however, was as a pioneer and proponent for studies on the interrelation of culture and personality, of society and the individual, providing the theoretical basis for what is known today as humanistic anthropology.

He was, in addition, a poet, and contributed papers on aesthetics, literature, music, and social criticism.

## Note to the Reader

Throughout *The Collected Works of Edward Sapir*, those publications whose typographic complexity would have made new typesetting and proofreading difficult have been photographically reproduced. All other material has been newly typeset. When possible, the editors have worked from Sapir's personal copies of his published work, incorporating his corrections and additions into the reset text. Such emendations are acknowledged in the endnotes. Where the editors themselves have corrected an obvious typographical error, this is noted by brackets around the corrected form.

The page numbers of the original publication are retained in the photographically reproduced material; in reset material, the original publication's pagination appears as bracketed numbers within the text at the point where the original page break occurred. To avoid confusion and to conform to the existing literature, the page numbers cited in introductions and editorial notes are those of the original publications.

Footnotes which appeared in the original publications appear here as footnotes. Editorial notes appear as endnotes. The first endnote for each work contains the citation of the original publication and, where appropriate, an acknowledgment of permission to reprint the work here.

All citations of Sapir's works in the editorial matter throughout these volumes conform to the master bibliography that appears in Volume XVI; since not all works will be cited in any given volume, the letters following the dates are discontinuous within a single volume's references. In volumes where unpublished materials by Sapir have been cited, a list of the items cited and the archives holding them is appended to the References.

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## Preface

Volumes V and VI of *The Collected Works of Edward Sapir* are devoted to shorter works on American Indian languages (mainly of North America), including some previously unpublished material. Volume V, edited by William Bright, contains papers of a general nature on typology, classification, and phonetic notation, followed by work on Hokan languages, on the Uto-Aztecan family, and on the relationship of Algonkian, Wiyot, and Yurok. Volume VI, edited by Victor Golla, contains articles on Athabaskan and Na-Dene languages, on Penutian, and on the Wakashan and Salishan families, plus two short papers on languages of other groups. Appendices in both volumes contain papers written by other authors which were discussed in papers by Sapir. A combined index to Volumes V and VI appears in the latter.

The editors of these two volumes have worked together in planning the entire sequence. Two possible ways of organizing the material were considered. One would be purely chronological, without considering topic; the other, adopted here, separates the articles into topical divisions and then arranges them chronologically within each division. This has the advantage, we believe, of making it easier for the reader to consult related papers in close proximity.

In addition to the articles contained in these two volumes, a number of articles which discuss one or more specific American Indian languages appear in Volumes I through IV of *The Collected Works*. These are listed below, organized by language or language group. The volume in which a paper is to be found is indicated by the appropriate roman numeral in brackets.

*Athabaskan Languages*: 1923c, A Note on Sarcee Pottery [IV]; 1924d, Personal Names among the Sarcee Indians [IV]; 1933c, La réalité psychologique des phonèmes [I]; 1935b, A Navaho Sand Painting Blanket [IV]; 1936e, Hupa Tattooing [IV]; 1936h, Kutchin Relationship Terms [IV]; 1930, A Note on Navaho Pottery (with Albert G. Sandoval) [IV].

*Comox*: 1939e, Songs for a Comox Dance Mask (edited by Leslie Spier) [IV].

*Nootka*: 1913b, A Girls' Puberty Ceremony among the Nootka Indians [IV]; 1915h, The Social Organization of the West Coast Tribes [IV]; 1919e, A Flood Legend of the Nootka Indians of Vancouver Island [IV]; 1933c, La réalité psychologique des phonèmes [I].

*Southern Paiute*: 1910d, Song Recitative in Paiute Mythology [IV]; 1933c, La réalité psychologique des phonèmes [I].

*Takelma*: 1907b, Notes on the Takelma Indians of Southwestern Oregon [IV]; 1907d, Religious Ideas of the Takelma Indians of Southwestern Oregon [IV].

*Tsimshian*: 1915g, A Sketch of the Social Organization of the Nass River Indians [IV]; 1920c, Nass River Terms of Relationship [IV]; 1921c, A Haida Kinship Term among the Tsimshian [IV].

*Yana*: 1908a, Luck-Stones among the Yana [IV]; 1916g, Terms of Relationship and the Levirate [IV]; 1918j, Yana Terms of Relationship [IV]; 1922d, The Fundamental Elements of Northern Yana [IX]; 1923m, Text Analyses of Three Yana Dialects [IX]; 1928j, The Unconscious Patterning of Behavior in Society [III].

Volumes VII-XV, which contain Sapir's work of monographic scope on American Indian languages and cultures, also include some shorter, closely related articles containing lexical inventories and textual analyses. Note that Sapir's *Language: An Introduction to the Study of Speech* (Volume II) cites some thirty American Indian languages, and his 1916 monograph, *Time Perspective in Aboriginal American Culture* (Volume IV), one-third of which is devoted to "evidence from linguistics," cites dozens of American Indian languages or language groups. It should also be noted that all references to specific languages in each article are listed in the indices of each individual volume, as well as in the comprehensive index in Volume XVI.

Preparation of this volume was supported in part by grants from the Phillips Fund of the American Philosophical Society, the National Science Foundation (grant no. BNS-8609411), and the Andrew W. Mellon Foundation.

The editor also acknowledges the contributions to the preparation of this volume by Jane McGary and the help of Dr. Marie-Louise Liebe-Harkort, editor in chief of Mouton de Gruyter.

## Introduction to Volumes V and VI

It has often been said that Franz Boas is to be considered the father of anthropological linguistics in North America, and in particular the initiator of serious research on American Indian languages. But surely Edward Sapir, who began his career as a student of Boas, became the most influential scholar of the twentieth century in both these fields. Consider the diversity of the Native American languages on which Sapir did original research — Chinook, Takelma, Yana, Southern Paiute, Nootka, Sarcee, Navajo, and others; or the language families in which he did ground-breaking comparative work — Hokan, Uto-Aztecan, Algonkian, Athabaskan, and Penutian; or the types of studies he carried out — descriptive, historical, comparative, ethnolinguistic, and what would now be called sociolinguistic. Even before his untimely death, Sapir's achievements were monumental; after 1939, his stature as an Americanist only grew, as many of the materials he left in manuscript were edited and published by his students. His stature grows yet more in subsequent volumes of these *Collected Works*, with the publication of several major collections of texts (Sarcee, Kutchin, and Hupa) and other important longer manuscripts, now edited by students of his students.

It is possible to attempt some general comments about the overall course of Sapir's work on North American Indian languages as it is reflected in the present pair of volumes. Publications from the period 1906-1910 are primarily descriptive, including the first results of field work on Wishram Chinook, Takelma, and Yana. In 1911, typological interest emerges in "The Problem of Noun Incorporation in American Languages" (1911c) and is pursued most notably in the two reviews (1917k, 1917l) of works by Uhlenbeck. Comparative linguistic research, aimed at establishing relatively remote linguistic relationships on the basis of both lexical and grammatical comparisons, comes to the fore in 1913 with "Southern Paiute and Nahuatl, a Study in Uto-Aztecan" (1913f, 1915i) and "Wiyot and Yurok, Algonkian Languages of California" (1913h). During the following half dozen years, Sapir's enthusiasm for tracing remoter relationships is manifest in such papers as "The Na-Dene Languages" (1915d), "The Hokan and Coahuiltecan Languages" (1920b, written in 1915), and "A Characteristic Penutian Form of Stem" (1921b, written in 1918). This interest reached its culmination in a drastic proposal to reduce 58 North American "stocks" (as formulated by John Wesley Powell in 1891) to just six "great groups." This classification, based on grammatical and typological rather than lexical correspondences, was presented in a lecture at Chicago in 1920 (the notes for which are published here in "Materials Relating to Sapir's Classification of North American Indian Languages"). With little change, this formed the core for Sapir's influential *Encyclopaedia Britannica* article on "Central and North

American Languages" (not published until 1929, 1929a). After the early 1920s, Sapir's interest in these problems seems to have cooled; however, his last major work in this genre, "The Hokan Affinity of Subtiaba in Nicaragua" (1925b), argues for a Central American extension of the far-flung Hokan (-Coahuiltecan) group, and presents what is perhaps Sapir's most detailed argument for the importance of "submerged" structural features in recognizing remote linguistic relationship.

Sapir's sixfold classification and the methodology supporting it constituted, during his lifetime, the most controversial part of his work on North American languages (it was never accepted, for instance, by his onetime teacher Boas). It should be remarked, however, that what Campbell and Mithun (1979: 26) have called the "reductionist zeal" of this classification was not unique to Sapir. Large-scale genetic regrouping of North American languages was initiated by Alfred L. Kroeber and Roland B. Dixon, who, in a series of papers beginning in 1913, proposed assigning most of the Powellian language families of California to one or the other of two new "stocks," Penutian and Hokan (Dixon and Kroeber 1913, 1919). Sapir joined in this work only after the groundwork had been laid, and at Kroeber's urging (Golla 1986: 178). Sapir brought to the task a thorough familiarity with the methods and data of Indo-European comparative philology, and — after a brief period of skepticism — he became convinced that a rigorous application of philological principles to American languages would yield important new insights. He moved from one bold synthesis to another, and his comprehensive classification of 1920 must be regarded as little more than a report on work in progress. It is noteworthy, however, that Sapir did relatively little after 1920 either to support or to revise that classification. His 1925 paper on Subtiaba, while introducing some new structural arguments for Hokan, is based on essentially the same group of cognate sets as in his earlier work, and it refers only briefly to the larger Hokan-Siouan grouping introduced in his 1920 lecture.

In contrast with the wide-ranging comparative work that had absorbed him during the preceding decade, Sapir's research during much of the 1920s focused narrowly and intensively on one group of languages: the "Na-Dene" stock of his 1920 classification (comprising Tlingit, Haida, and the widespread Athabaskan family). As early as 1906 he had worked briefly, during his Takelma field work, with a speaker of Chasta Costa, an Oregon Athabaskan language; in preparing this material for publication (1914c), he saw Athabaskan as a family having the diversity and the relatively good documentation to make it a match for his skills as a comparativist. He was soon embroiled in controversy with older Athabaskan scholars (e.g., Father Morice, 1915c, see Volume VI and Appendix to Volume VI); this was exacerbated by his 1915 proposal (1915d) of a genetic relationship among Athabaskan, Tlingit, and Haida. Sapir concluded that only through extensive field work of his own could he hope to accumulate the evi-

dence necessary to convince his critics. His feeling about the necessity of such work became even stronger when, around 1920, he came to suspect that an intercontinental genetic connection between Na-Dene and Sino-Tibetan was a distinct possibility.

Sapir's plan for Na-Dene field research was extraordinarily ambitious, and it was never completed. Except for a foray into Haida phonetics (1923d), his field work was entirely devoted to Athabaskan, involving four major investigations: Sarcee, in 1922; Kutchin and Ingalik, in 1923; Hupa, in 1927; and Navajo, principally in 1929. Only the Sarcee work is significantly represented in Sapir's bibliography; even here the major published study was prepared in collaboration with his student Li Fang-Kuei (Li 1930, see Volume XIII). A good deal of the material collected by Sapir has been published posthumously, but the definitive grammar of Navajo which Sapir planned (and was working on even during his last illness) will never be written. Of his comparative insights into Athabaskan, Na-Dene, and Sino-Dene, we have only fragmentary notes.

Sapir's active research career extended from 1905 to 1938, or 33 years. During the first two decades of this period—until his move from Ottawa to a teaching post at the University of Chicago—he was engaged almost exclusively in American Indian research, the bulk of it descriptive linguistics. After 1925 his interests began to turn toward other types of study, particularly the psychology of culture; and his linguistic field research virtually came to an end when he moved from Chicago to Yale in 1931. He remained, nonetheless, a central figure in American Indian linguistics, second only to Boas in status and pre-eminent in intellectual influence. Nearly all his important students took up the study of American Indian languages. It was left to them, and to their scholarly progeny in turn, to continue the many facets of his research. We will do no more here than mention the names of Harry Hoijer, Morris Swadesh, George Trager, Stanley Newman, Li Fang-Kuei, Benjamin L. Whorf, Charles F. Voegelin, and our own teacher, Mary Haas. All these scholars have transmitted to their own students not only an enthusiasm for American Indian linguistics, but, even more important, Sapir's commitment to the study of language within the broadest context of human understanding.

WILLIAM BRIGHT  
VICTOR GOLLA



Section Six:  
Athabaskan and Na-Dene Languages



## Introduction

While Sapir began his involvement with Hokan and Penutian languages as a field linguist, turning to comparative and classificatory studies only after completing several major descriptive works, with Athabaskan the reverse was the case. Except for some unsystematic notes on Chasta Costa collected during his Takelma field work in 1906 (published as 1914c; see below), Sapir had had no first-hand experience with Athabaskan languages when he launched what came to be the most absorbing of his historical hypotheses: the genetic relationship of Athabaskan, Tlingit, and Haida, and the deep connection of this "Na-Dene" family to the Sino-Tibetan stock.

Neither the Na-Dene hypothesis nor the possibility of connections with Asiatic languages were, strictly speaking, original to Sapir (see the discussion of earlier speculation in Krauss 1973), but there is little doubt that Sapir was the first to explore these questions in the light of modern comparative linguistics. The evidence from Sapir's correspondence and manuscripts is that he probably took up this work late in 1912 or early in 1913, shortly after completing a detailed study of Uto-Aztecán (Sapir to Kroeber, 23 December 1912, in Golla 1984: 71). In the ensuing months he apparently read through all the extant material both on comparative Athabaskan and on Tlingit and Haida. In the spring of 1913 we find him complaining in a letter to Robert Lowie that Pliny Earle Goddard, a leading student of comparative Athabaskan, was over-cautious:

He does not . . . seem to me to get very much beyond descriptive Athabascan sketches cast in parallel grooves. The unifying reconstructive spirit, the elimination of secondary features and the emphasis on essential ones, seem to be lacking, on the whole. It seems to me that with all the experience that Goddard has had with Athabascan he would have felt irresistably drawn by this time to a serious consideration of Haida and Tlingit as possibly genetically related, though remotely, to Athabascan. This may not seem eventually as far-fetched as it does now. But I am afraid that Goddard is rather timid in these matters. (Sapir to Lowie, March 1913.)

Three months later he wrote to A. L. Kroeber:

À propos of larger linguistic units, which seem to be somewhat in favor just now, I may say that I have been occupying myself of late with Athabaskan, Tlingit, and Haida, and that I have collected enough evidence to convince myself at least of the genetic relationship of these three. (Sapir to Kroeber, 30 May 1913, in Golla 1984: 104)

It was during this period that he went back to his Chasta Costa notes and worked them up into a short monograph with a distinctly comparative emphasis, *Notes on Chasta Costa Phonology and Morphology* (1914c). The publication of this work immediately brought him into the small circle of serious Athabaskanists, of whom the most established and productive was the French-Canadian Oblate priest, A. G. Morice. Father Morice reviewed Sapir's Chasta Costa monograph in glowing terms (Morice 1915a), but followed his review with a more critical

appraisal, "Chasta Costa and the Déné Languages of the North" (Morice 1915b). Sapir replied to Morice's strictures in "Corrigenda to Father Morice's 'Chasta Costa and the Déné Languages of the North'" (1915c), to which Morice gave rejoinder in "Misconceptions Concerning Déné Morphology: Remarks on Dr. Sapir's Would-be Corrigenda" (Morice 1917). Morice's review and papers are reprinted in the Appendix to this volume. In the assessment of at least one scholar, "in the long run . . . the interaction between Morice and Sapir turned out to be productive," with the two showing "grudging respect for each other" (Krauss 1986: 153-154). The relationship, stormy or not, was essentially between two generations of scholars, and between a man thoroughly familiar with the concrete details of several Canadian Athabaskan dialects and a comparativist primarily interested in historical reconstruction. As the nature of his Athabaskan work shifted in the 1920s and 1930s from comparative to descriptive, Sapir's appreciation of Morice's extensive knowledge of Athabaskan structure grew, as is evidenced by his short but appreciative review (1935c) of Morice's massive grammar and dictionary of Carrier (1932).

Between 1913 and 1915 Sapir continued to devote much of his research time to the Na-Dene project, combing the published documentation of Northern, Pacific Coast, and Southwestern Athabaskan languages for material to be compared with Swanton's descriptions of Haida and Tlingit. By 1915 he had amassed about 300 lexical comparisons and had begun writing a "systematic presentation" of the material (Sapir to Radin, 17 July 1918, quoted in Krauss 1986: 156; see Dallaire 1984: 169, letter no. 263). At this point, at Goddard's request, he prepared the shorter paper reprinted here, "The Na-Dene Languages, a Preliminary Report" (1915d), for publication in the *American Anthropologist*. The manuscript of the full study has unfortunately been lost, although the ledgers in which Sapir entered his Na-Dene lexical comparisons have survived (manuscript 497.3 B63c Na20a.3, vols. 1, 3, and 4, American Philosophical Society Library).

Even after the publication of Sapir's evidence Boas and Goddard remained skeptical about Na-Dene, and Boas challenged Sapir's methods in a heated exchange at the annual meeting of the American Anthropological Association the following December. The strength of Boas's opposition (which reached print in 1920 in a scathing attack on the misuse of genetic classification), together with the appearance of Boas's own descriptive study of Tlingit (Boas 1917), seems to have taken the wind out of Sapir's sails, at least temporarily. He devoted hardly any time to Athabaskan or Na-Dene from 1916 through 1920, which was in general a period during which he was more occupied with literary and artistic matters than with linguistic research.

Late in 1920, as he was completing his general book *Language* (1921d), Sapir experienced what he described to Kroeber as a "considerable recrudescence of interest in linguistics" (Golla 1984: 347), particularly in classificatory work. On the one hand, this led to Sapir's working out of a general classificatory scheme for all North American languages, grouping most of them into six "great

stocks" (1921a). But it also led him to reconsider Na-Dene. As he put it to Kroeber:

I am just now interested in another big linguistic possibility. I tremble to speak of it, though I've carried the germinal idea with me for years. I do *not* feel that Na-dene belongs to the other American languages. I feel it as a great intrusive band that has perhaps ruptured an old Eskimo-Wakashan-Algonkin continuity. . . . In short, do not think me an ass if I am seriously entertaining the notion of an old Indo-Chinese offshoot into N.W. America. . . . I have already carefully gone over two Tibetan grammars (Jäschke and Foucaux) and find in Tibetan pretty much the kind of base from which a generalized Na-dene could have developed, also some very tempting material points of resemblance. (Sapir to Kroeber, 4 October 1920, in Golla 1984: 350; reprinted in volume V: 81-83).

In the ensuing months Sapir delved deeply into Chinese and Sino-Tibetan linguistics, working to some extent under the guidance of the anthropologist and orientalist Berthold Laufer. By the end of the summer of 1921 Sapir had developed the outlines of his "Sino-Dene" hypothesis, and he discussed the matter at some length in a letter to Kroeber (a copy of which was also sent to Laufer), dated October 1, 1921, and printed here almost in its entirety as "The Sino-Dene Hypothesis." The complete text of this and a short follow-up letter can be found in Golla (1984: 374-384).

More pressing than the need to acquaint himself thoroughly with the Asiatic side of the relationship, however, was the need Sapir felt for a more complete and accurate documentation of Athabaskan, Tlingit, and Haida. Seeing them now through a Sino-Dene lens, it was clear to Sapir that many important aspects of Na-Dene phonology and grammar had been missed by previous investigators. Late in 1921, he drew together extensive comparative evidence on the morphophonology of relativization in Athabaskan. This paper, "A Type of Athabaskan Relative" (1923n), calls attention to the distinctive clause-like nature of Athabaskan polysynthetic structure and, as Sapir wrote to Kroeber, "insidiously prepares for far bigger things than its ostensible theme" (Sapir to Kroeber, 24 November 1921, in Golla 1984: 386).

Especially important in Sapir's eyes was accurate information on the presence of tonal systems, which the Sino-Dene connection made him certain was fundamental throughout Na-Dene. A pitch accent had been reported for Tlingit by Boas (1917), and Sapir himself, working briefly with a speaker of Haida in March 1920, had noted tonal and other phenomena of potential historical importance in Haida, later described in "The Phonetics of Haida" (1923d). Tone had not, however, been definitely reported in Athabaskan, and Sapir was certain that this was an oversight. To his delight, the first Athabaskan language he had the opportunity to work on, Sarcee, turned out to have a well developed system of pitch accent. In an immediate announcement in the *American Anthropologist*, "Athabaskan Tone" (1922a), he flatly stated that in the light of his Sarcee observations "it is well nigh inconceivable that [tone] should be absent in any other Athabaskan dialect." This view was reiterated in Sapir's full analysis, "Pitch Accent in Sarcee, an Athabaskan Language" (1925f), which is less a descriptive study than a general theory of Athabaskan tone illustrated with Sarcee data. The paper, moreover,

ends with a list of questions that Sapir felt could be answered satisfactorily only from the standpoint of Na-Dene (1925f: 204-205).

His wife's declining health forced a postponement of Sapir's planned visit to the Hupa in 1923, but he was able to spend much of the summer of that year doing productive field work with two young Alaskan Athabaskans, speakers of Ingalik (Anvik) and Kutchin, who were working at a camp in Pennsylvania. In the turmoil following his wife's death early in 1924, and his subsequent move from Ottawa to Chicago in 1925, Sapir carried out little Athabaskan work during the next two years. That the Sino-Dene hypothesis still strongly attracted him, however, is shown by an interview he gave to *Science* shortly after arriving at the University of Chicago, printed under the title "The Similarity of Chinese and Indian Languages" (1925o).

From the beginning of his teaching at Chicago until his death 14 years later, Sapir's Sino-Dene research had to vie for time with his many other involvements. The evidence of his manuscripts is that he did little further with the larger historical questions, although he continued the serious study of Tibetan and Chinese. Certainly his publications after 1925 show little direct concern with the Sino-Dene relationship, or even with Na-Dene, except insofar as the stock was represented in his general classification of Central and North American languages (1929a). The major area in which he continued his comparative research was Athabaskan. "A Summary Report of Field Work among the Hupa, Summer of 1927" (1928i) and the Athabaskan portions of "The Concept of Phonetic Law as Tested in Primitive Languages by Leonard Bloomfield" (1931b) give brief glimpses of Sapir's progress in working out the intricate details of comparative Athabaskan phonology in the late 1920s. (In the latter paper, written in 1928-29, Sapir equates his Athabaskan work with Bloomfield's Algonquian in a methodological discussion.) Even here, however, his work slowed considerably in the following decade. He offered a course in Comparative Athabaskan twice during his teaching at Yale (in 1931-32 and again in 1936), and from the students' notes that survive there is little evidence that Sapir's views had evolved much after 1930. A short survey of "Problems in Athapaskan Linguistics" found among Sapir's papers, apparently dating from about 1932 and published here for the first time, contains little not found in his earlier published work. The statement of "Linguistic Classification within the Northern Athapaskan Area" (1936i), which Sapir provided Cornelius Osgood for inclusion in his ethnographic survey of the Northern Athabaskan Indians, is also unremarkable.

From a brief foray into Chasta Costa in 1906 through major field work on Navajo beginning in 1929, Sapir collected a very large corpus of descriptive data on several Athabaskan languages. It was the analysis of this material that came more and more to occupy Sapir's attention after 1925, much of it done in collaboration with his students, Fang-Kuei Li and Harry Hoijer (also, more briefly, Mary Haas), and with his Navajoist colleague, Father Berard Haile. Only fragments of this work saw print during Sapir's lifetime, and some has remained unpublished to the present day.

The materials from Sapir's Sarcee field work in the summer of 1922, his first extensive synchronic study of an Athabaskan language, have been more fully published than most later materials. Sapir himself, in addition to preparing a largely comparative paper on the Sarcee tone system (1925f, see above), had nearly completed a volume of Sarcee texts when he left Ottawa in 1925. This manuscript is being published for the first time in Volume XIII of *The Collected Works*. Also in that volume are reprinted two studies based on Sapir's materials: Fang-Kuei Li's "A Study of Sarcee Verb-Stems" (1930), originally written as a master's thesis at the University of Chicago under Sapir's direction, and Harry Hoijer and Janet Joël's "Sarsi Nouns" (1963). Sapir also wrote two short papers on ethnographic aspects of his Sarcee work, "A Note on Sarcee Pottery" (1923c) and "Personal Names among the Sarcee" (1924d); both are found in Volume IV.

Sapir's Kutchin materials, collected from John Fredson at Camp Red Cloud, Pennsylvania, during the summer of 1923, are much more poorly represented in his published work. Sapir extracted the kinship terms for inclusion in Cornelius Osgood's *Ethnography of the Kutchin* (Sapir 1936h, printed in Volume IV), but otherwise published nothing of his Kutchin data. As with Sarcee, he had begun preparing a volume of Kutchin texts while still at Ottawa, and during the 1930s Mary Haas, as his research assistant, worked on a Kutchin stem list. In 1961-62 Victor Golla completed a preliminary stem list but did not publish it. The texts and a stem list are being published in Volume XIII of *The Collected Works*.

The Anvik (Ingalik) notes that Sapir obtained from Thomas Reed, also at Camp Red Cloud in 1923, are far less extensive than his Kutchin materials. Essentially a wordlist, of no great descriptive or comparative interest, the material was never utilized by Sapir and is not published in *The Collected Works*.

Sapir collected extensive Hupa data during a northwestern California field trip in the summer of 1927, during which he also worked more briefly on Yurok and Chimariko. He was accompanied by his Chicago student, Fang-Kuei Li, who carried out his own work on Mattole and Wailaki. (For Sapir's lively description of this trip see Volume IV [1927b].) Other than a short "summary report" of his linguistic findings (1928i)—containing, *inter alia*, the (to Sapir) distressing information that Hupa lacks a tonal system—and the Hupa data incorporated into papers on the comparative method in American Indian linguistics (1931b) and on the northern origin of the Navajo (1936f, see below), Sapir published only one paper based on his Hupa work, a largely ethnographic study of Hupa tattooing (1936e) written for A. L. Kroeber's *Festschrift*. Sometime during the 1930s he began work on a volume of Hupa texts, with extensive ethnographic notes, but it was far from complete at the time of his death. The texts and notes, edited by Victor Golla, are being published in Volume XIV of *The Collected Works*, together with a lexical index to Sapir's data.

Sapir regarded his Navajo work, begun with a native speaker in Chicago in 1926 but largely carried out in the field in 1929 and in later collaboration with Father Berard Haile, as "by far the most extensive and important linguistic

research" he ever accomplished (Sapir to Boas, 12 April 1938, quoted in Krauss 1986: 166). The data he collected, particularly lexical and paradigmatic material, was extraordinarily rich, and his relationship with his principal consultant, Albert G. (Chic) Sandoval, was especially close. Sapir prepared a large collection of texts for publication, and his correspondence indicates that he was planning to write a full Navajo grammar. In the years immediately preceding his death, he was actively working with Father Haile, a Franciscan missionary and scholar (see Sapir's review of Haile's earlier work [1926f]), in preparing literacy and language teaching materials for Navajo (Krauss 1986: 164-166). Despite all of this activity, at the time of his death in 1939 Sapir had in fact published hardly anything based on his Navajo work. A short paper, "Two Navaho Puns" (1932d), and a comparative-historical tour de force, "Internal Linguistic Evidence Suggestive of the Northern Origin of the Navaho" (1936f), nearly exhaust the list, except for two brief ethnographic notes, "A Navaho Sand Painting Blanket" (1935b) and "A Note on Navaho Pottery" (with A. G. Sandoval, 1930), and a newspaper article describing the circumstances of the 1929 field trip (1929c). A volume of Sapir's Navajo texts was seen through the press in 1942 by Harry Hoijer, Sapir's principal Athabaskanist student, who much later published a Navajo grammar based on Sapir's materials as *The Phonology and Morphology of the Navajo Language* (Sapir and Hoijer 1967). These two publications are reprinted in Volume XV of *The Collected Works*, together with extracts from the voluminous correspondence on Navajo linguistics that Sapir and Father Haile carried on between 1929 and 1938 (Berard Haile Collection, University of Arizona Archives, Tucson). Besides work directly attributed to Sapir, the influence of Sapir's materials and interpretation is strong in at least two other publications: Father Haile's *Learning Navaho* (1941-48), the first volume of which incorporates many of Sapir's insights into Navajo phonology; and Harry Hoijer's *A Navajo Lexicon* (1974), which faithfully reproduces the organization of Sapir's lexical files.

# NOTES ON CHASTA COSTA PHONOLOGY AND MORPHOLOGY.

## INTRODUCTION.

In a large part of southwestern Oregon and contiguous territory in northwestern California were spoken a number of apparently quite distinct Athabascan dialects. The territory covered by tribes or groups of villages speaking these dialects embraced not only a considerable strip of Pacific coast<sup>1</sup> but also much of the interior to the east (Upper Umpqua and Upper Coquille rivers, lower Rogue river, Chetco creek and Smith river); some of the tribes (such as Tolowa and Chetco) were strictly coast people, others (such as Galice Creek and Umpqua or Aḱwa<sup>2</sup>) were confined to the interior. While some of the Athabascan dialects spoken south of the Klamath in California, particularly Hupa and Kato, have been made well known to students of American linguistics, practically nothing of linguistic interest has as yet been published on any of the dialects of the Oregon-California branch of Pacific Athabascan. It is hoped that the following imperfect and fragmentary notes on one of these dialects may prove of at least some value in a preliminary way.<sup>3</sup>

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<sup>1</sup> Outside of a few points in southern and southeastern Alaska (Cook Inlet, mouth of Copper river, Portland Canal) this is the only region in which Athabascan tribes have found their way to the Pacific.

<sup>2</sup> My <sup>˘</sup> denotes nasalization.

<sup>3</sup> The material for these notes was secured in a very incidental manner. While the writer was at work on Takelma in the latter part of the summer of 1906, he was living with Mr. Wolverton Orton, a full-blood Chasta Costa Indian. At odd moments Mr. Orton and the writer whiled away the time with Chasta Costa.

The Chasta Costa (or *Cis/ta q!wAs/ta*) Indians, now gathered in Siletz Reservation in western Oregon, formerly occupied part of lower Rogue river; between them and the coast were other Athabascan tribes or villages of practically identical speech, above them to the east were the unrelated Takelma.<sup>4</sup> Among these tribes of nearly or quite identical speech were the *Yú"/gwī* or Euchre Creek people, the *Tcê'/mê dA/ne* or "Joshuas" of the mouth of Rogue river, the *Dū/t'ú dA/nī*, the *Mī/k!u/nū" dA/nī*, and the *GwA/sá*. All these formed a linguistic unit as contrasted with the coast people (*ā/γōs/ta* "lower tribes") or, as they are now commonly called by the Indians of Siletz, "Sol Chuck" Indians, a Chinook Jargon term meaning "salt water, coast" people; the dialect of these coast tribes was probably identical to all intents and purposes with Chetco. While Chasta Costa and Coast Athabascan are thus more or less distinct, they seem to have been mutually intelligible without very much difficulty, the coast dialect sounding merely somewhat "strange" and "drawn out" to a speaker of Chasta Costa. At least three other Athabascan dialects of this region, however, seem to have differed so much from Chasta Costa as to be but partly understood, if at all, by speakers of the latter; these are Upper Umpqua, Upper Coquille, and Galice Creek.

<sup>4</sup> It has already been pointed out (*American Anthropologist*, N. S., 9, p. 253, note 2) that there is reason to believe that J. O. Dorsey was incorrect in assigning the Chasta Costa villages above those of the Takelma (see his map in *Journal of American Folk-Lore*, III, p. 228). On p. 234 Dorsey gives a list of Chasta Costa villages.

## PHONOLOGY.

## VOWELS.

The vowels of Chasta Costa are *a*, *ā*, *e* (open as in English *met*), *ê* (long and open), *o* (close as in German *Sohn*), *ō*, *u* (apparently variant of *o*), *ū*, *i* (generally open), *ī*, and *ɛ* (like *u* of English *but*); *ô* (short and open as in German *voll*) sometimes occurs after velars as variant of *o* (*sxô/lâ* "five," cf. Hupa<sup>5</sup> *tcwō/la*), *ä* (as in English *hat*) occurs after velars as variant of *e* (*tsxâ/xe* "child," cf. Carrier<sup>6</sup> *æzkhéhkhe* "children").

Vocalic quantity is of considerable importance in Chasta Costa, not so much etymologically as phonetically. On the whole, long and short vowels interchange on regular mechanical principles; open syllables (that is, syllables ending in a vowel) with long vowel regularly shorten this vowel when the suffixing of one or more consonants to the vowel makes the syllable closed. Examples of *a* thus varying with *ā* are:

*dō/yác/t!a* "I won't fly;" *dō/yát/t!a* "we won't fly" (cf. *dō/yá/t!a* "he won't fly")

*dáθ/dā* "he is sitting down" (cf. *dā/θAθ/dā* "I am sitting down")

*tc!ásL/se* "he cries;" *tc!ácL/se/t'e* "I shall cry" (cf. *tc!ā/θil/se* "you cry")

*tc!a/γásL/se* "they cry" (cf. *tc!a/γá/θil/se* "we cry")

*nac/t!ô* "I swim" (cf. *nâ/tc!ī/t!ô* "you bathe")

<sup>5</sup> Hupa examples are taken from P. E. Goddard, "The Morphology of the Hupa Language," Univ. of Cal. Publ. Amer. Arch. and Ethn., 3.

<sup>6</sup> Carrier examples are taken from Rev. A. G. Morice, "The Déné Languages," Transactions of the Canadian Institute, I, pp. 170-212.

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An example of  $\hat{e}$  shortened to  $e$  is:

*nés/ts!Át/ī* "I am seen" (cf. *né'/ts!Át/ī* "he is seen")

Original long vowels may lose their quantity even in an open syllable, provided they are immediately followed or preceded by a syllable with relatively strong accent. Such are *tc!a-*, *na-*, and *ne-* in:

*tc!a/γǎ/θil/se* "we cry;" *tc!a/γásL/se* "they cry"

*ne/nǒ/ts!Át/ī* "we are seen"

*lá na/dit/t!ō* "don't bathe;" (*na/dit/t!ō* is phonetically enclitic to strongly accented *lá*; contrast *nā/dít/t!ō/t'e* "you will bathe")

In general, however, stress accent cannot be said to be particularly well marked in Chasta Costa.<sup>7</sup> Each syllable is a fairly well-defined phonetic unit tending to hold its own against others, so that an approximately level accentual flow with but few peaks results. Such writings as *nā/dít/t!ō* and *tc!ā/θil/se*, with apparent accent preceded by long vowels, are doubtless but imperfect renderings of forms with level stress on first and second syllables (they might perhaps better be written *nā/dít/t!ō* and *tc!ǎ/θil/se* with secondary accent on second syllable). It does not seem that every vowel in an open syllable is organically long; thus  $e$  in future *-t'e* and in *-de* of *t'wī/de* "everything" is regularly short. Many such cases are, however, probably only apparent, the short vowel being followed by a glottal stop; thus plural *ya-* of *ya/dÁt/nī* "they make a sound" should doubtless be *ya'*.

Short  $a$  of closed syllables is regularly reduced from long  $\bar{a}$ ; original short  $a$  becomes  $\Lambda$  in a closed syllable. Examples of  $\Lambda$  thus dulled from original  $a$  are:

*t'Ac/yAc/t'e* "I shall go" (cf. *t'e/θíc/ya* "I go;"  $-yAc =$   
Hupa  $-yauw$ )

<sup>7</sup> Weak stress accent seems characteristic of Athabaskan generally. Father Morice goes so far as to say, "there is no accent in Déné" (*op. cit.*, p. 173).

*nā/xÁn/dō* "eight, two less" (*nā/xA-* = Kato<sup>8</sup> *nqk/ka*<sup>ε</sup>  
"two")

*dō/na/γÁct/xwī* "I do not vomit" (cf. *na/γá/θAθl/xwī*<sup>9</sup>  
"I vomit")

*t'Ál/dAc* "he runs" (*-dAc* = Hupa *-dauw*)

*γAn/na/'Ác* "he will bring" (*'Ác* = Hupa *-auw*)

*t'é/An/γit/lat* "we are sinking" (cf. *t'e/nít/lat* "we drown;"  
Hupa *-lat, -la* "to float")

Not to be etymologically confused with this *A* is inorganic *A*. Whenever a consonant is not followed by a definitely determined vowel and yet, for some reason or other, is not phonetically appended to the preceding syllable, it must begin its own syllable and takes an inorganic, in other words etymologically meaningless, *A*-vowel after it. This syllable may either be completed by a consonant of etymological value (such as first person singular *c*, verb class signs *t*, *t*, *l*) never followed by a definite vowel or, if it is immediately followed by a syllable beginning with a consonant, this consonant is borrowed to complete the inorganic syllable (*-t* closes inorganic syllables preceding *d-*, *t!-*, *dj-*, *tc!-*, *ts!-*, *tθ!-*, *tc'-*, *L!-*), so that a doubled consonant results of which the first half is of no etymologic significance. In some cases, however, as before *γ-*, and in rapid speech generally, this inorganic consonant is not always distinctly heard; yet in syllabifying words Mr. Orton completed such inorganic syllables with a consonant with mechanical regularity. These syllables with inorganic vowel and consonant are characteristic not only of Chasta Costa but also of Hupa and Kato and doubtless other Athabaskan dialects as well. The general phonetic tendency to speak in definite syllables and the further tendency to limit short vowels to closed syllables explain these characteristic Athabaskan

<sup>8</sup> Kato examples are taken from P. E. Goddard, "Kato Texts," Univ. Cal. Publ. Amer. Arch. and Ethn., 5, 65-238; and "Elements of the Kato Language," *ibid.*, 11, 1-176.

<sup>9</sup> *-ā-* may be secondarily lengthened from *-a-*.

developments. The quality of the inorganic vowel varies for different Athabaskan dialects; it is *A*(*ú*) in Kato as well as in Chasta Costa, *i* (*u* before voiced or voiceless *w*, *ú* or *e* before post-palatal *k*-sounds) in Hupa, apparently *e* in Galice Creek, *æ* (probably identical with our *A*) in Carrier. Chasta Costa *xAt/t'Al/lał* "they sleep" is etymologically equivalent to *x/t'/lał*; *x-*, third person plural prefix, cannot stand alone and is therefore followed by *A* and *t* borrowed from *-t'*, while *-t'* (verb prefix *t'*- reduced from *t'e-*, therefore not capable of combining with *x-* into *xAt'-*) in turn needs a syllabifying *A* followed by *l* borrowed from *-lał*. Other examples of inorganic *A*, with and without following inorganic consonant, are:

- t'Ac/yAc/t'e* "I shall go" (*t'A-* = *t'*- reduced from *t'e-*)  
*dō/yā/xAt/t!a* "they won't fly" (*xAt-* = *x-*)  
*nā/xAt/dAl/nic* "they work" (*xAt/dA-* = *x/d-*, *d-* reduced from *de-*)  
*dā/xAn/nAt/t'Ac* "they go to bed" (*xAn/nAt-* = *x/n-*)  
*t'é/An/γAl/lał* "he is sinking" (*γAl-* = *γ-*)

Many syllables with final consonant and *A*- vowel must be considered as radical or at least unanalyzable elements. In not all such cases is *A* a reduced form of *a*; where *A* seems a primary vowel, as shown by comparison with other Athabaskan dialects, it seems best to consider it an organic element in the syllable, though it remains plausible that at last analysis it is but a reduced form of some fuller vowel. Thus, while *-yAc* has been shown to represent an original *-yac* (Hupa *-yauw*), *-t'Ac* contains a primary *A*, as shown by comparison with Hupa *-tūw* "to lie down" (ultimately *-t'Ac* is doubtless *-t'*, reduced from *-t'e*, and suffix *-c*).

Inorganic *A* sometimes becomes palatalized to *i*, though there is not enough material available to make it certain just when this change takes place. Examples of this secondary *i* have been found before *c* (but not before its developments *s* and *θ*) and *s* derived from *tc* (but not before original *s* or its

development) when itself preceded by *m*, *n*, or *θ* (preceding *γ*, however, tends to preserve *A*). Examples are:

- mís/ki*<sup>10</sup> "gull" (cf. Kato *bûtc/k'ai*)  
*níc/ya* "I come" (*nic-* = cessative *n-* and first person singular *c*)  
*níc/dac* "I dance"  
*t'e/níc/lat* "I drown"  
*t'e/θíc/ya* "I go" (*θic-* = durative *θ-* and pronominal *c*;  
 cf. *t'éθ/ya* "he goes" without vowel after *θ*)  
*tc!Aγ/γe/θíc/ya* "I eat"  
*γe/θíc/ī* "I saw him" (cf. *c/γíθ/ī* "he saw me")  
*θíct/sī* "I let him"

With *-θic-* contrast *-θAθ-* (both from original *\*-sac-*) in *dā/θAθ/dā* "I am sitting;" with *-θíct-* contrast *-sAst-* (from original *\*-sact-* and *\*-sacI-* respectively) in *tc!ā/sAst/se* "I am crying." *-γíc-* was heard in *yā/γíc/t!a* "I fly," but as this is an isolated example (contrast *-γAc-* in *ná/da/γAct/t!ō* "I bathe" and *-γAct-* in *γAct/Áz* "I sneezed"), it seems possible that this form was misheard for *yā/γÁc/t!a*. Besides *-nic-* also *-nAc-* is met with: *dā/nAc/t'Ac* "I go to bed" and *nā/nÁc/An* "I stop him;" it is probable that in these forms *-nA-* is a reduced form of *ne-* (cf. Hupa *tcin/ne/tūw* "she goes to bed") and thus not directly comparable with *-ni-* of *-nic-*. Unaccented *A*, itself reduced from *a*, has in one case (*-yAc* "to go") been found further palatalized to *i*: *dō/t'Ác/yic* "I'll not go," *tá/t'ī/yic* "don't go!" (cf. *t'Ac/yÁc/t'e* "I shall go"); this *-yic* contracts with directly preceding *t'A-* into *-t'Ac*: *dō/t'Ác* "he won't go."<sup>11</sup>

Original Athabaskan *ai* has in Chasta Costa become monophthongized to *ī*. Examples are:

- t/gī* "white" (cf. Kato *L/gai*)

<sup>10</sup> Should probably be *mískli*'.

<sup>11</sup> With this *-t'Ac* Kato *ta/cac* in *dō/ta/cō<sup>h</sup> ta/cac* "not anywhere I went" (P. E. Goddard, "Kato Texts," Univ. Cal. Publ. Amer. Arch. and Ethn., 5, No. 3, p. 182, l. 17) is in striking agreement.

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*mis*, *k'i*<sup>12</sup> "gull" (cf. Kato *bútc/k'ai*)  
*hī*<sup>13</sup> demonstrative "that" (cf. Hupa *hai*)

*au* as organic diphthong seems to occur but rarely in Athabascan. If *dō* "no!" (cf. Hupa *dau*) may be regarded as distinct from adverbial *dō* "not" (cf. Hupa *dō*), we would have an example of the parallel development of *au* to *ō* in Chasta Costa. Certain contractions that take place between *i* of first person plural *-it-* and second person plural *-ō-* with preceding vowels will be spoken of in discussing the pronominal prefixes.

One of the most striking phonological characteristics of Chasta Costa is the disappearance of an original  $\eta$ <sup>14</sup> or of its representative, nasalization of preceding vowel. Its former presence can always be proved by comparison with other Athabascan dialects that, like Hupa, still preserve it. In the case of all vowels but inorganic *a* nasalization has left no trace whatever, original  $\bar{a}$  (from  $\bar{a}\eta$ ),  $\hat{e}$  (from  $\hat{e}\eta$ ), and  $\bar{i}$  (from  $\bar{i}\eta$ ) being reduced to  $\bar{a}$ ,  $\hat{e}$ , and  $\bar{i}$ ; originally short vowels, on losing their nasalization and thus coming to stand in an open syllable, become lengthened, while originally long vowels in a closed syllable not only lose their nasalization but are shortened. Thus, a syllable *sī* may represent an original *sī̄* (or *sī̄η*) or *sī̇* (or *sī̇η*), while *sil* may go back as well to *sī̄l* as to *sī̇l*. Examples of the absolute disappearance of an original  $\eta$  are:

*nā/xē* "you paddle" (*nā-* = *\*nq-*, cf. Hupa *nūñ/ya* "you are about")  
*dō/yă/t/a* "you won't fly" (*yā-* = *\*yq-*, cf. Hupa *yûm/mas* assimilated from *\*yûñ/mas* "you are rolling over")  
*tc!ál/se/t'e* "you will cry" (*tc!al-* = *\*tc!q-l-*; cf. *tc!áct/se/t'e* "I shall cry" with *-c-* "I" morphologically parallel to *-c-* "you")

<sup>12</sup>  $\bar{i}$  is here shortened to *i* because of following glottal stop.

<sup>13</sup>  $\bar{i}$ <sup>4</sup> denotes long  $\bar{i}$  with weakly rearticulated parasitic *i*. Such "pseudo-diphthongs" sporadically occur in Chasta Costa in lieu of ordinary long vowels.

<sup>14</sup> i. e., *ng* of English *sing*.

- lá/na/γat/xwī* "don't vomit!" (*γat-* = \**γqt-*, cf. *γā-* from \**γq-* in *na/γá/θit/xwī* "you are vomiting")  
*nét/ī* "you are looking at him" (*nét-* = \**nɛt-*; *-ī* = *-'i*, cf. Kato *-iñ'* "to see")  
*tī* "dog" (original Athabaskan \**tī*, \**liŋ*; cf. Hupa *Liñ*, Montagnais *l'iŋ*, Hare *tl'iŋ*, Loucheux *l'éŋ*, Carrier *tī*, old form *læ'n*<sup>15</sup>)

Nasalized inorganic *A* seems to have acquired a palatal coloring *i*; this *i* then regularly developed to *ī* in open, *i* in closed syllables. It thus often seems as though Chasta Costa *ī*, *i* is the morphologic equivalent, for instance in second person singular forms, of Athabaskan *η*, an equivalence, as has just been shown, due to secondary phonetic developments. Examples of *ī* < *i* < *A* are:

- t'e/θi/ya* "you go" (*θī-* = \**sA-*; cf. Hupa *na/siñ/ya* "you are going about")  
*nī/dac* "you dance" (*nī-* = \**nA-*; cf. Hupa *niñ/yauw* "go!")  
*yā/wīs dī/nī* "you whistle" (*dī-* = \**dA-*; cf. Hupa *da/din/La* "run!" assimilated from \**da/diñ/La*)  
*nā/tc!ī/t!ō* "you swim" (*tc!ī-* = \**kʷ!A-*;<sup>16</sup> cf. Hupa *na/kiñ/-yūñ* "come eat!")  
*yā/γī/t!a* "you fly" (*γī-* = \**γA-*; cf. Hupa *ye/wiñ/ya* "you are going in")  
*yā/γī/t!a* "it flies" (*γī-* = \**γA-*; cf. Hupa *na/win/tau* "it will settle down" assimilated from \**na/wiñ/tau*)  
*t'i/lat* "you are sleeping" (*t'ī-* = \**t'A-*; cf. Hupa *tiñ/xauw/ne* "you take along")  
 verb stem *-sī* "to make" (cf. Hupa *-tcwiñ*)

<sup>15</sup> Morice, *op. cit.*, p. 210. Carrier has evidently undergone a development parallel to that of Chasta Costa. All northern Athabaskan forms except Carrier (and Chipewyan) are taken from R. P. E. Petitot, "Dictionnaire de la langue Dènè-Dindjié."

<sup>16</sup> *kʷ!* is "fortis" palatal *k*, Hupa *k<sub>1</sub>*, Morice's *q*.

Examples, in closed syllables, of  $i < \dot{i} < A$  are:

*tc!ā/θil/se* "you cry" (*θil-* = \**s<sub>A</sub>-l-*; cf. Hupa *na/dū/we/-sil/en*<sup>17</sup>)

*nā/dit/t!ō/t'e* "you will bathe" (*dit-* = \**d<sub>A</sub>-t-*; cf. third person *nā/dAt/t!ō/t'e*)

*t'ā/γit/nā* "you drink" (*γit* = \**γ<sub>A</sub>-t-*; cf. third person *t'ā/γAt/nā*)

*yā/γil/gAθ* "you climb" (*γil-* = \**γ<sub>A</sub>-l-*; cf. third person *yā/γAl/gAθ*)

*t'il/xwAθ* "you cough" (*t'il-* = \**t'<sub>A</sub>-l-*; cf. third person *t'Al/xwAθ*)

*ne/cit/ī* "look at me!" (*cit-* = \**c<sub>A</sub>-l-*)

Hupa *-ñ* (that is, our  $\eta$ ) seems at times to correspond to Chasta Costa *-n*, but comparison with northern Athabascan dialects indicates that in such cases we are dealing with original *-n*. Thus, *nAn* "you," despite Hupa *niñ*, is shown to have original *-n* by Montagnais *nen* and Loucheux *nan*; *dAn/tc!i* "four," Hupa *diñk* (= *din<sup>y</sup>k!*), does not go back to original \**d<sub>A</sub>/k<sup>y</sup>!i* but to \**dAn/k<sup>y</sup>!i* or \**dAη/k<sup>y</sup>!i* ( $\eta$  assimilated from *n*), as evidenced by Loucheux *tan*; *ta/cAn* "black" corresponds to Loucheux *del-zen*; similarly, *dAn* "in, at" must have original *-n* despite Hupa *diñ* and Kato *dúñ* (original \**d<sub>A</sub>* would have given Chasta Costa \**dī*).

#### CONSONANTS.

The consonantal system of Chasta Costa, like that of most Athabascan dialects, is characterized by a lack of labial stops, though *m* is common; *b* has been found in *bō/θi* "cat," a loanword from English *pussy*, but seems not to occur in native words (yet cf. *tCA/pā/yu* "flower"). The consonants of Chasta Costa are: the labial nasal *m*; the dental stops *t'*, *d*, *t!*, and dental nasal *n*; the back stops *g*, *q'* (or *qx*), *q!*, voiceless spirant

<sup>17</sup> In Hupa *ñ* (or nasalization) disappears in closed syllables. In such forms Chasta Costa is etymologically more transparent than Hupa insofar as *-i-* is a reflex of original *-A-*, whereas Hupa *-i-* is the normal inorganic vowel.

*x* (as in German *Bach*), and voiced spirant  $\gamma$  (as in North German *Wagen*); the labialized back stops *k'w*, *ɣw*, *q'w*, and spirant *xw* (sometimes weakened to *hw*); the sibilants *s*, *c* (as in English *ship*), *θ* (as in English *thin*), and *z* (voiceless lenis, intermediate between *s* and English *z*, heard in -AZ "to sneeze"); the affricative palatal consonants *tc'*, *dj*, and *tc'*; the affricative alveolar consonants *ts*, *ts'*, and affricative dental consonant *tθ'*; the laterals *l*, *l'* (voiceless spirantal *l*, with *L*, dorsal *t* followed by *l*, as variant), and *L'*; the glottal stop ('); the aspirate *h* (' at the close of a syllable); and the semivowels *y* and *w*.

Of these *t'*, *q'*, *k'w*, and *tc'* (English *ch*) are aspirated surds (*k'* is not found, *k'w* has been found but once and may be considered of doubtful occurrence); (*b*), *d*, *g*, *ɣw*, and *dj* are voiceless but lenis, intermediate acoustically between surds and sonants<sup>18</sup> (*dj* is intermediate between English *ch* and *j*); *t'*, *q'*, *tc'*, *ts'*, *tθ'*, and *L'* are so-called "fortis" consonants, in other words, they are pronounced with simultaneous closure of glottis but are released before the release of the glottal chords. *q'*, *q'*, *ɣw*, and *q'w* (*ɣ* has not been found, but very likely exists) are velar consonants; *k'* has not been found,<sup>19</sup> its place being taken by *q'*.<sup>20</sup> Of secondary origin are syllabically final *t* and *k*, which may be considered as voiceless stops differing from *t'* and *k'* in their lack of aspiration; they are etymologically equivalent to *d* and *g*. It is highly probable that also *w*, which does not frequently occur, is but a secondary development or acoustic variant of  $\gamma$  after *o*-vowels;<sup>21</sup> after *o*-vowels  $\gamma$  becomes labialized to  $\gamma^w$ , in which both  $\gamma$  and *w* elements are so weak that one is constantly in doubt as to whether he hears

<sup>18</sup> It is possible that these "intermediate" stops are sonant at their moment of release.

<sup>19</sup> Unless, as seems possible, *k* of *mís/ki* "gull" was misheard for *k'*.

<sup>20</sup> *q'* corresponds to Hupa *k*<sub>3</sub>, *g* is Hupa *k*<sub>2</sub>. *q'* is by no means as forcible a sound as is, e. g., Chinookan *q'*. There is something decidedly illusive about it; the velar stop element seems to be reduced to a minimum, the glottal catch element is very strongly marked, and a weak *x* seems at times to precede the velar stop (e. g., <sup>x</sup>*q'ā/xAθ* "arrow"). Despite my familiarity with Chinookan *q'*, I did not often succeed in pronouncing Chasta Costa *q'* so as to satisfy Mr. Orton's ear. It may well be that *q'* is really "fortis" or glottalized *x* (*xl*); cf. Tlingit *sl*.

<sup>21</sup> In Hupa  $\gamma$  has become *w* in every case.

$\gamma$  or  $w$  (thus  $d\bar{o}/\gamma e-$  becomes  $d\bar{o}/\gamma^we-$ ,  $d\bar{o}/\gamma^we-$ ; similarly, what was heard as  $d\bar{o}/wa-$  may really be  $d\bar{o}/\gamma^wa-$ ). However,  $w$  occurs also in  $s\bar{a}'/wAs/ts!é$  "sandhill crane;"  $wAs/xé$  "good."

This consonant system is only in part a faithful representative of the original Athabascan system. Some consonants have become merged with others, while other consonants have kept distinct but have been changed in regard to place of articulation. Chasta Costa  $m$ ,  $t'$ ,  $d$ ,  $t!$ ,  $n$ ,  $g$ ,  $q!$  ( $k!$ ),  $q!w$ ,  $\gamma$ ,  $l$ ,  $l'$ ,  $l!$ ,  $'$ ,  $h$ , and  $y$  seem in practically every case to correspond to these same Athabascan sounds.

Athabascan  $k'$ , as also in Hupa, has become  $x$  in Chasta Costa:

- $x\bar{a}'/tc'u$  "goose"<sup>22</sup> (cf. Hupa  $xa$ <sup>23</sup>; Applegate Creek  $k'á'/-tc'u$ ; Kato  $k'a'$ )  
 $n\bar{a}'/xi$  "two" (cf. Hupa  $nax$ ; Montagnais  $nak'é$ <sup>24</sup>)  
 $ts!á/xé$  "woman" (cf. Carrier  $t\check{s}\grave{e}kh\grave{e}$ <sup>25</sup>)  
 $tsx\bar{a}'/xe$  "child" (cf. Carrier  $\check{a}zkh\acute{e}hkhe$ )

Analogously to this change of  $k'$  to  $x$ , original Athabascan  $k'w$  has become  $xw$  (sometimes heard as  $hw$ ) in Chasta Costa. This sound is preserved as such in Kato ( $k'w$ ) and Chasta Costa ( $xw$ ), but seems generally to have fallen together in other dialects with original  $k'$ . Examples are:

- $hw\bar{a}$  "foot" (cf. Kato  $kwe'$ ; Carrier  $ne-khé$ ; Loucheux  $\check{a}kp\grave{e}$ )  
 $na/\gamma\acute{a}/\theta A\theta t/xw\acute{i}$  "I vomit" (cf. Carrier  $khu$  "vomiting")

It seems, however, to persist as  $k'w$  in:

- $k'wAs/t'á/ne$  "six" (cf. Hupa  $x\bar{o}s/tan$ )

Etymologically but not phonetically distinct, both in Hupa and Chasta Costa, from these secondary  $x$  and  $xw$  are

<sup>22</sup>  $-tc'u$  is augmentative.

<sup>23</sup> See Goddard, "Kato Texts," note 32.

<sup>24</sup> Petitot's  $'$  represents aspiration.

<sup>25</sup> Father Morice represents "fortis" stops by means of points below characters.

original Athabaskan *x* and *xw*. A good example of the latter is:

-*xwAθ* "to cough" (cf. Carrier *xwæs* "cough," as noun)

Athabaskan sibilants and sibilant affricatives (*ts* and *tc* sounds) have undergone various modifications in Chasta Costa. Original *s* has regularly become *θ*:

*θA/γÁt* "grizzly bear" (cf. Carrier *sæs-cʷæt* "brown bear")

*t'e/θíc/ya* "I go" (cf. Hupa *te/sē/ya/te* "I am going away")

*t'éθ/ya* "he goes" (cf. Hupa *tes/ya/te* "it is about to come")

-*gAθ* "to climb" (cf. Hupa *-k<sub>2</sub><sup>a</sup>s*)

-*xwAθ* "to cough" (cf. Carrier *xwæs*)

Before *t* (or its variant *L*), however, *s* is regularly retained:

*ts!ā/sÁsL/se*<sup>26</sup> "I cry;" *tc!ásL/se* "he cries;" *tc!a/γásL/se*  
"they cry" (with these forms contrast *tc!ā/θíl/se*  
"you cry")

*na/yésL/sī* "he tells" (contrast *nā/θíl/sī* "you tell")

*cÁst/sī* "he lets me" (contrast *θícl/sī* "I let him")

*cAsl/t'át* "he kicks me" (contrast *θícl/t'át* "I kicked him")

*q!wÁt/dasL/ná* "it was lying on it"

Athabaskan *ts* would, by analogy, have been expected to develop into *tθ* (as in Chipewyan), but *θ* seems to be regularly found instead:

*θī* "head" (cf. Carrier *n-tsi* "your head;" Montagnais  
*-thi*;<sup>27</sup> Hare *-kfw*i; Loucheux *-tchi*<sup>28</sup>. Kato *-sī<sup>ε</sup>* "head"  
seems to indicate that in Kato also, at least initially,  
*s* and *ts* fell together.

*θA/γá* "hair of head" (cf. Montagnais *éthi-pá*<sup>29</sup>)

<sup>26</sup> *-sAsL-* is assimilated from *\*-sACL-*, *-s-* being here prevented from becoming *-θ-* because of following *-s-* (before *L*) of same syllable.

<sup>27</sup> i. e., *-θi*. Petitot's *th* is *tθ*. In Hare *ts* (or its reflex *tθ*) developed into what Petitot writes *kfw*, perhaps to be understood as *kφ*, i. e., *k* plus bilabial *f*.

<sup>28</sup> Petitot's *tch* is our *tc*.

<sup>29</sup> Petitot's *ρ* is *γ*.

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*t/θo* "yellow, green" (cf. Montagnais *del-thop* "yellow;" Hare *dé-kfwoy* "yellow," Hupa *Lit-tso* "green;" Kato *L-tso* "blue")

In some cases *ts* seems to have become *s*:

*sê* "stone" (cf. Kato *se*; Hupa *tse*; Montagnais *thè*; Hare *kfwè*; Loucheux *tchi*; Carrier *tsé*)

As might be expected, Athabascan *ts!* has regularly become *tθ!* in Chasta Costa:

*dā/de/θíl/tθ!i* "we are sitting" (cf. Hupa *na/ya/del/tse*, i. e., *-ts!e*, "they lived as before")  
*tθ!Aθ/dā* "story"

Athabascan *c* is normally preserved as such (e. g., *cī* "I"). However, it is assimilated to *s* before *s* and *ts!*:

*s/ts!i/dè* "my sickness" (*c-* "my")  
*nés/ts!Ał/ī* "I am seen (*-c-* "I")  
*As/sé/t'e* "I shall cry" (from *\*Ac-*)  
*s/ts!An/na/'Ac* "he will bring it to me" (*c-* "me")

Assimilation of *\*sAc* to *sAs* has taken place in:

*tc!ā/sAsL/se* "I cry" (cf. *tc!ácL/se/t'e* "I shall cry")

Original *\*sAc* > *\*sic*, however, regularly developed to *θic*:

*tc!Aγ/γe/θic/ya* "I eat"

Original *\*sAc*, after being assimilated to *\*sAs*, regularly shifted to *θAθ*, unless, as we have seen, it was protected by immediately following *t*:

*dā/θAθ/dā* "I am sitting" (from *\*dā/sAc/dā*)  
*t'e/θAθ/lał* "I have been sleeping" (from *\*t'e/sAc/lał*)  
*tc!eθ/t!ó* "I swim across" (probably misheard for *tc!e/θAθ/t!ó*)

Original *s*, when immediately following *c*, also causes it to assimilate; *ss*, which thus results, is then regularly shifted to *θθ*:

*yā/γAθ/θeł* "I threw" (from *\*yā/γAc/set*)

Athabaskan *tc* (sometimes *tcw*?) is not retained in Chasta Costa, but appears regularly as *s*:

*t/sak* "red" (cf. Kato *L/tcīk*; Loucheux *dītssig*)<sup>30</sup>

*mīs/k(!)i(')* "gull" (cf. Kato *būt/c/k'ai*<sup>ε</sup>)

*sā'/wAs/ts!é* "sandhill crane" (cf. Applegate Creek *tcā'/-wác/tc(!)e*)

*-sī* "to make" (cf. Hupa *-tcwiñ*; Kato *-tcī*; Chipewyan *-tsī*<sup>31</sup>)

*-se* "to cry" (cf. Chetco *-swe*; Hupa *-tcwen*; Kato *-tce*<sup>ε</sup>; Carrier *-ssá*)

Chasta Costa *sx* is found in:

*sxô/lá* "five" (cf. Hupa *tcwô/la*; Chipewyan *sa/sô/la/yai*<sup>ε</sup>)

Athabaskan *tc!* remains, *tc!* often being shifted, however, to *ts!* (or *s*<sup>32</sup>):

*tc!e-* verb prefix "across the water" (cf. Hupa *tce-*, i. e., *tc!e-*, "down to the beach, out of the house;" Kato *tc'e-*; Chipewyan *ts'e-* "to a body of water")

*-ts!An* "toward, to" (cf. Hupa *-tciñ*, i. e., *-tc!iñ*; Kato *-tc'ûñ*<sup>ε</sup>; Chipewyan *-ts'ûn*)

*ts!i/de* "sickness" (cf. Loucheux *tssik*, i. e., *ts!ik*)

*-s'at* "to be hurt" (cf. Hupa *-tcat*, i. e., *-tc!at*, "to be sick, to become ill")

There is still another set of sibilants in Chasta Costa, which go back to original palatalized (anterior palatal) *k*-sounds (*gʷ*, *kʷ*, *kʷ!*). In Kato, Navaho, Apache, Chipewyan, and other Athabaskan dialects, as in Chasta Costa, these have become affricative sibilants, without, however, falling together, as a rule, with the original Athabaskan *tc-* consonants. In Chasta Costa, *kʷ* has become *tc'*, *kʷ!* has become *tc!* (this *tc!*

<sup>30</sup> Petitot's *tss* is our *ts!*.

<sup>31</sup> Chipewyan forms are taken from P. E. Goddard, "Analysis of Cold Lake Dialect, Chipewyan," *Anthr. Papers Amer. Mus. Nat. Hist.*, vol. X, pt. II. Chipewyan forms taken from Petitot are referred to as *Montagnais*.

<sup>32</sup> It is quite likely that *tc!* and *ts!* are here merely auditory variants of *ts!* (*s* is midway between *s* and *c*). In Kato *tc'*, *ts'* and *s'* also interchange.

does not vary, apparently, with *ts!*); for *gʷ* I have no examples. Chasta Costa and Chipewyan are largely parallel in their development of Athabascan *ts*, *tc*, and *kʷ* sounds:

Athabascan	Hupa	Chasta Costa	Chipewyan
<i>dz</i>			<i>dʒ, ʒ</i>
<i>ts</i>	<i>ts</i>	<i>θ</i>	<i>tθ, θ</i>
<i>ts!</i>	<i>ts!</i>	<i>tθ!</i>	<i>tθ!, θ'</i>
<i>dj</i>	<i>dj</i>		<i>dz</i>
<i>tc</i>	<i>tc(w)</i>	<i>s</i>	<i>ts</i>
<i>tc!</i>	<i>tc!</i>	<i>tʃ!, ts!</i>	<i>ts!</i>
<i>gʷ</i>	<i>gʷ</i>		<i>dj</i>
<i>kʷ</i>	<i>kʷ</i>	<i>tc</i>	<i>tc</i>
<i>kʷ!</i>	<i>kʷ!</i>	<i>tc!</i>	<i>tc!</i>

There are thus three distinct series of sibilant affricatives (and of sibilants) in Chasta Costa and Chipewyan, none of which is in direct accord with the original Athabascan sounds; Hupa, it is highly important to note, reflects the original sounds almost exactly.<sup>33</sup> Carrier, it would seem, has also preserved the *kʷ*-series.

Examples of Chasta Costa *tc'* from original *kʷ* are:

*áL, tcā/γì* "big thing" (cf. Hupa *-kya/ō* "large;" Kato *-tcaʷ, -tca'* "to be large")

<sup>33</sup> In his "Analysis of Cold Lake Dialect, Chipewyan," Goddard treats Chipewyan *ts* and *tc* as though they were one sound corresponding to Jicarilla and Navaho *tc* (p. 86). Examination of the various illustrative forms scattered throughout the paper, however, soon convinces one that Chipewyan *ts*, *dz*, and *ts!* correspond respectively to Hupa, Jicarilla, and Navaho *tc(w)*, *dj*, and *tc!*; whereas Chipewyan *tc*, *dj*, and *tc!* correspond respectively to Southern Athabascan *ts*, *dz*, and *ts!* and to Hupa *kʷ*, *gʷ*, and *kʷ!*. Thus, the Southern Athabascan *ts*- sounds represent both original *ts*- sounds and *kʷ*- sounds; perhaps there is a phonetic difference that does not come out clearly in the orthography.

As for Kato, Goddard finds no difference between *tc*- sounds that go back to original *tc*- sounds and those that correspond to Hupa *kʷ*- sounds ("Elements of the Kato Language," pp. 16, 51). However, deictic *tc'*-, corresponding to Hupa *tc!*-, varies with *ts'* and *s'*, thus suggesting *tʃ!* as the true sound; on the other hand, *tc'*- (to indicate indefinite third personal object) corresponding to Hupa *kʷ!*- occurs consistently as *tc'* (contrast examples of *tc'*-, *ts'*-, *s'*- on p. 50 with those of *tc'*- on p. 51). It seems plausible, then, that in Chipewyan, Chasta Costa, and Kato original *kʷ*- sounds became true *tc*- sounds, while original *tc* sounds were shifted to *tʃ*- sounds (which are apt to be heard as either *ts*- or *tc*- sounds).

-*tc'u* augmentative suffix (e. g., *tš'i/tc'ù* "horse," literally "big dog") (cf. Hupa *-kyō*; Kato *-tcō*)

Examples of *tc!* going back to Athabaskan *kʷ!* are:

*dAn/tc!i* "four" (cf. Hupa *diñk*, i. e., *diñkʷ!*)

*stc!At/dé* "seven" (cf. Hupa *xō/kit*, i. e., *-kʷ!it*)

*tc!ásL/se* "he cries" (cf. Hupa *kya/teL/tcwū* "it cried, i. e., *kʷ!a-*)

*tc!-* verb prefix indicating indefinite object (cf. Hupa *k-*, *ky-*, i. e., *kʷ!-*; Kato *tc'-*)

Athabaskan possessed sonant sibilants (*z*, *j*) and sibilant affricatives (*dz*, *dj*). Of these sounds *z* has been found in Chasta Costa *-AZ* "to sneeze;" *dj* is illustrated in several forms, but, as we shall see in a moment, does not in these go back to Athabaskan *dj*. *dz* has not been found, though it may exist. *j*, as in Kato and Hupa, has become *c*:

*la/cAn* "black" (cf. Hupa *Lū/hw̄in* < \**-cin*; Kato *L/cûn*<sup>ε</sup>; Jicarilla *Lī/zī*; Nav. *Lī/jin*; Chipewyan *del/zûn*; Loucheux *del-zen*)

Chasta Costa *dj* results from *t* (unaspirated) plus *y*:

*q!wAt/tc!At/dja* "table" (< \**q!wAt/tc!At/ya* "whereon one eats;" *-ya* "to eat")

*ya/da/γít/dja* "we are ashamed" (< \**ya/da/γít/ya*; cf. *yAc* in *ya/dAct/yAc* "I am ashamed")

Of the lateral consonants, only three (*l*, *t*, and *L!*) have been found in Chasta Costa. Original *dl* may have been preserved also, but Athabaskan *dlō* was heard rather as *t* (unaspirated) plus *lō*:

*γAct/lō* "I laugh" (cf. Chipewyan *-dlō*, *-dlōk'* "to laugh")  
*-t-* is very probably third modal *-t-* here; while *-dlō* really appears as *-lō*. After *c* and *s*, *l* becomes *t*:

*nā/dAct/nic* "I work" (cf. *nā/dAl/nic* "he works")

*nā/xwAct/ye* "I play" (cf. *nā/xwAl/ye* "he plays")

*q!wAt/dasL/nā* "it was lying on it"

## MORPHOLOGY.

## PRONOUNS.

Independent personal pronouns:

<i>cī</i> "I"	<i>nê</i> "we" (probably contracted from * <i>ne/he</i> ; cf. Hupa <i>ne/he</i> )
<i>nan</i> "you"	<i>nó/nè</i> "you" (plur.)
<i>yū</i> "he, that one" (really demonstrative)	<i>yū/nè, yún/nè</i> "they, those" (really demonstrative)

Examples of possessive pronouns are:

<i>cíc/la</i> "my hand" ( <i>cíc</i> is independent <i>cī</i> combined with possessive prefix <i>c-</i> ; literally, "I my-hand")
<i>nAn/la</i> "your hand" (that is, <i>nan n-</i> , "you your-hand")
<i>hī la</i> "his hand" ( <i>hī</i> is demonstrative)
<i>c/na/γā</i> "my eyes"
<i>s/ts!ī/dè</i> "my sickness, I am sick"
<i>n/ts!ī/dé</i> "you are sick"
<i>nō/ts!ī/dé</i> "our sickness, we are sick"
<i>nō/ts!ī/dé/ha</i> "your (pl.) sickness? are you (pl.) sick?" (- <i>ha</i> is interrogative)
<i>xó/ts!ī/dè</i> "their sickness, they are sick"

Many nouns, when limited by preceding possessive pronouns, suffix *-e*, as regularly in Athabaskan. Thus, from *MAN* "house:"

<i>cíc/MANè</i> "my house"
<i>nAn/MANe</i> "your house"

A noun followed by another with suffixed *-e* is to be understood as genitively related to it. Examples are:

<i>dANé' lī/tc!e</i> "person's dog" ( <i>lī/tc!e</i> from <i>lī</i> "dog," with
---

voicing of *t-* to *l-*; cf. Hupa *Liñ* "dog," *xō/liñ/ke*, i. e., *xō/liñ/kʷle* "his dog")

*tAkAc*<sup>34</sup> *L!ōʷ/le* "bowstring" (literally, "bow's string;" cf.

Chipewyan *L'ūL* "rope," possessed form *L'u/le*)

*gā/you ts!i/de* "baby's sickness, baby is sick"

As reflexive possessive is used *xā/dAt-* (with *-ā/dAt-* cf. Hupa *a/d-*; Carrier *ædæd-*):

*xā/dAt/lī/tc!é* "his own dog" (used reflexively)

Of demonstrative pronouns there have been found:

*hī* "that, he" (cf. Hupa *hai*, indefinite demonstrative and article); *hī/t!i* "that thing"

*yū* "that one" (cf. Hupa *yō* "that")

*yū/ne*, *yún/ne* "those, they"

*m-* "it" (cf. Hupa *m-*; Kato *b-*): *mAt* "with it"

*de* seems to be used as relative in:

*dé ucl/t'e* "what I want"

This element is perhaps demonstrative in force and related to Hupa *de* in *ded* "this," *hai/de* "this."

Totality is expressed by *t'wī* "all, everything" (cf. Hupa *a/tiñ* "all"). Compounded with this element are:

*t'wī/dé* "everything" (*-de* is very likely related to Hupa *di-* in *dī/hwō* "something," *dī/hwē/e* "nothing")

*dō/t'wī/dè* "not everything"

*t'wī/dAn* "everywhere" (literally, "all-at;" cf. Hupa *a/tin/-diñ* "every place")

## NOUNS.

Primitive non-descriptive nouns, as in all Athabaskan dialects, are relatively frequent in Chasta Costa. Monosyllabic nouns are:

### BODY PARTS.

*la* "hand" (cf. Hupa *-la*; Kato *-la'*)

<sup>34</sup> Probably to be understood as *i'ak/gAc*.

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- hwä* "foot" (cf. Kato *-kwe*<sup>ε</sup>; Chipewyan *-ke*)  
*θī* "head" (cf. Kato *-sī*<sup>ε</sup>; Chipewyan *-θī, -tθī*)  
*-γα* "hair" (in *θAγá* "head-hair;" cf. Kato *-ga*<sup>ε</sup> "hair;"  
 Chipewyan *-ca*, i. e., *-γα*)

## ANIMALS.

- tc!ac* "bird"  
*tī* "dog" (cf. Hupa *Liñ*; Chipewyan *Lī*)

## NATURAL OBJECTS.

- sê* "stone" (cf. Hupa *tse*; Kato *se*)  
*cā* "sun" (cf. Hupa *hwa*; Kato *ca*)  
*!at* "smoke" (cf. Hupa *Lit*; Kato *Lūt*)

## CULTURE OBJECTS.

- man* "house" (cf. Hupa diminutive *min-tc* "hut")  
*L!et* "matches" (originally doubtless "fire-drill;" cf. Chipewyan *L'eL* "fire-drill")  
*gōθ* "camass" (cf. Hupa *kos* "bulbs")  
*L!ō<sup>u</sup>l-è* "(its) string" (cf. Hupa *LōL* "strap;" Chipewyan *L'ūL* "rope")

Primitive, at any rate not easily analyzed, nouns of more than one syllable are:

## PERSONS.

- dan/né, danê'* "person, man" (cf. Chipewyan *de/ne, dūn/ne*;  
 Carrier *tæne*)  
*ts!á/xé* "woman" (cf. Carrier *tšèkhè*; Kato *tc'ek*)  
*dis/nê'* "male" (with *-nê* cf. probably *-nê* of *danê'*)  
*sâ/sAs* "white man"  
*tsxá/xé* "child" (cf. Carrier *ázhkhékhhe*; Kato *skī-k* "boys,  
 children")  
*két/'è* "boy" (perhaps misheard for *k!ét/'è*; cf. Kato  
*k'il/lek* "boy")  
*gá/yu* "baby"

## BODY PART.

- na/γá* "eye" (cf. Hupa *-na*; Kato *-na*<sup>ε</sup>; Chipewyan *-na/Ga,*  
*-na/Ge*)

## ANIMALS.

- θAγAt* "grizzly bear" (cf. Carrier *sæs-eʷæt* "brown or cross bear")  
*mís/k(!)i(')* "gull" (cf. Kato *bûtc/k'ai*<sup>35</sup>)  
*dís/L!ac* "fawn"  
*dA/mel'/ké* "pelican"<sup>35</sup>  
*nat/qʷí* "duck" (cf. Kato *nâ<sup>a</sup>/q'i*<sup>36</sup>)  
*mī/tc'á/ts!Al/nī* "deer"  
*t'e/q!ô/lèc/l'e* "mink"  
*sā/wAs/ts!é* "sandhill crane" (cf. Applegate Creek *tcā'/-wác/tc(!)e*)  
*tc!at/tc!ús/dje* "ruffled grouse, 'pheasant' "  
*θá/gi* "kingfisher"  
*dAs/nAt* "red-shafted flicker"  
*tθ!Aθ/nā/yat/tθ!óθ* "hummingbird"  
*gīc/tc!é* "bluejay"  
*nā/ts!ô!le* "horned lark"  
*sô's/ga/ga* "robin"  
*ts!ā/ts!úk* "wren"  
*kAsís* "barn swallow"  
*ga/tat/'é* "crow"

Many of these animal names, as well as some of those that follow, are probably descriptive verb forms that have become stereotyped.

## PLANTS.

- tcA/pá/yu* "flower"<sup>37</sup>  
*mī/t!al/tθAθ* "arrow-wood"  
*L!ô'/dé* "tar-weed" (probably compounded with Athabaskan *L!ô'* "grass;" cf. Hupa *Lô/da-itc* "an herb")  
*tc!At/γat/ts!é* "sunflower(?)"

<sup>35</sup> This word is humorously used to refer to Democrats, Democrat and *dA/mel'/ké* exhibiting some similarity in sound.

<sup>36</sup> This form was obtained independently.

<sup>37</sup> This word is remarkable as containing *p*, a sound that is normally absent in Athabaskan.

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*dAl/si* "pine" (cf. Kato *dûl/tcîk* "yellow pine," from *-tcîk* "red")

*nâ/L!e* "pine-nut"

*dA/nAc* "manzanita" (cf. Hupa *din/nûw*; Kato *tûn/nûc* "manzanita berries;" Galice Creek *dé/rec*)

*mAt/tc!í* "cat-tail"

*cAc/dâ'* "oak"

#### CULTURE OBJECTS.

*xAnAθ* "canoe"

*át/tca* "pipe"

*tc!A/θA/gAl* "sandstone arrow-shaft scraper"

*tA/kAc* "bow" (probably *t'Ak/gAc*; cf. Kato *gac* "yew")

*\*q!â/xAθ* "arrow"

*det/t!é* "arrow-point"

#### ABSTRACT.

*tθ!Aθ/dâ* "story"

*yâ/wîs* "whistling" (cf. Carrier *yuyuz* "whistling," as noun)

*ts!î/dé* "sickness" (used with possessive pronouns to indicate "to be sick")

Several animals are designated by words ending in *-tc'u*, an augmentative suffix, "big" (cf. Hupa and Kato animal and plant names in *-kyō* and *-tcō* respectively). Such are:

*tî/tc'û* "horse" (literally, "big dog;" cf. Chipewyan *Lîn/tcō*)

*xâ/tc'ú* "goose" (cf. Applegate Creek *k'q'/tc'u*. These words are formed from Athabascan *xa*: Chipewyan *xa* "goose;" Kato *ka'*)

*dAc/tc'ú*, *des/tc'ú* "grouse" (cf. Kato *dûc/tcō*, *dûs/tcō* "grouse")

*t'ét/mō/tc'u* "pigeon"

*cu/dê'/tc'u* "bald eagle"

*θAθ/dA/lî/tc'u* "owl"

*tî/tc!ê/tc'u* "red-headed woodpecker"

*ga/sâ'/tc'u* "raven"

Nouns ending in *-t!ī* or *-t!īni* denote "one who has so and so." *-ni* is, likely enough, related to *-ne* of *dAn/né* "person;" *-ne* or *-n* is found in many Athabaskan dialects as suffix denoting "person." Examples of *-t!ī(ni)* are:

*t!t!t!ī/nì* "dog-owner"

*dō/at/t!ī/ni*, *dō/at/t!ī* "bachelor" (literally, "not-wife-having-person." *dō-* "not;" *at-*, i. e., *at!* "wife," cf. Hupa *ūt* "wife," Kato *at* "sister")

Examples of noun compounds consisting of two noun stems are:

*θA/γá* "head-hair" (shortened from *θī* "head" and *-γo* "hair." Cf. Chipewyan *θī/ga*)

*ga/tat ǵwá/γu* "red-winged blackbird" (literally, "crow('s) brother-in-law." With this cf. Chipewyan *da/tsa/-tcel/le* "a small crow," literally, "crow younger-brother"<sup>38</sup>).

An example of a compound noun consisting of verb and noun is:

*Al/Az dAn/ne* "sneezer" (literally, "he-sneezes person")

An example of a compound noun consisting of noun and adjective is:

*tclac t!θó/ē* "bluebird" (literally, "bird blue")

A characteristic type of noun in Athabaskan is formed by verbs which, while remaining strictly verbal in form, are used to refer to objects, in other words, are logically nouns. As has been already noted, several nouns of more than one syllable listed above as unanalyzable are doubtless, strictly speaking, verb forms. Quite clearly verbal in form are:

*nāθ/L!ō* "paper" (cf. *nal/L!ō* "he writes")

*q!wAt/daθt/gAc* "table-cloth" (literally, "it lies or is thrown

<sup>38</sup> Goddard, *op. cit.*, p. 110.

down on top;" cf. Hupa *-k<sub>2</sub>as*, i. e., *-gas*, "to throw," and *wes/kas* "it lay"<sup>39</sup>)  
*q!wAt/tc!At/djâ* "table" (literally, "thereon it is eaten")  
*mAt/t'é/tc!At/ts!Al/lec* "smoking materials" (literally, "there-with it is smoked")

## NUMERALS.

1. *ta*, *lâ<sup>a</sup>/ca* (cf. Hupa *La*; Kato *La/ha<sup>ε</sup>*)
2. *nâ/xi* (cf. Hupa *nax*; Kato *nqk/ka<sup>ε</sup>*); *nâ/xi la* "two hands"
3. *t'â/γi* (cf. Hupa *tak*, i.e. *t'ak!*; Kato *tak'*; Chipewyan *ta*, *ta/Ge*)
4. *dAn/tc!i* (cf. Hupa *diñk*, i. e. *diñkʷ!*; Chipewyan *dī/cī*)
5. *sxô/lâ* (cf. Hupa *tcwō/la*; Chipewyan *sa/sō/la/Gai<sup>ε</sup>*)
6. *k'was/t'â/ne* (cf. Hupa *xōs/tan*)
7. *stc!At/dé* (cf. Hupa *xō/kit*, i. e. *-kʷ!it*)
8. *nā/xAn/dō* (= "it lacks two, two less")
9. *lân/dō* (= "it lacks one, one less")
10. *hwê'/θe*

Of numeral adverbs there were recorded:

*lát/dAn* "once" (cf. Hupa *na/diñ* "twice," *min/Lûn/diñ* "ten times")  
*ta/mé/q!e/ca* "in one time"

## ADJECTIVES.

Of adjectives, or verb stems with adjectival significance, there have been found:

*was/xé*, *was/xâ* "good;" *was/xé tī* "dog is good"  
*txAS/xé/la* "rich" (*-la* is verbal suffix)  
*dû/AN/dê* "bad" (evidently verbal in form. *dû-*, *dô-* is negative; *-dê* probably misheard for *-t!ê* "to be, exist;" cf. Hupa *ûn/te*, i. e. *An/t!e* "there is")

<sup>39</sup> Goddard, *op. cit.*, p. 281.

*AL/tcā/γī* "big thing" (cf. Hupa *-kya/ō* "large;" Kato  
*-tcaG*)

*l/gī* "white" (cf. Hupa *-L/kai*; Kato *-L/gai*)

*la/cAn* "black" (cf. Kato *-L/cân*; Chipewyan *del/zûn*)

*l/sAk* "red" (cf. Kato *-L/tcīk*)

*l/θo* "yellow, green" (cf. Hupa *lit/tsō* "green;" Kato  
*-L/tsō* "blue")

"White," "black," "red," and "yellow, green" are characterized by prefixed *l(a)-*, which is common as adjectival prefix also in other Athabaskan dialects.

#### ADVERBS.

Adverbs of place are:

*xun* "there" (cf. Hupa third personal pronoun *xōñ*?):

*xún t'e/θi/ya* "there you go"

*hī xún t'eθ/ya* "there he goes"

*txún/la* "where?":

*txún/la t'e/θi/ya* "where are you going?"

*dō/dAt* "nowhere" (cf. Hupa *-dit-* in *hai/dai/dit/diñ*  
"where;" *dō-* is negative)

*dAk/gé* "up" (cf. Hare *tègè*):

*dAk/gé θict/t'āt* "I kicked him up"

*mā<sup>a</sup>/dAn* "on edge" (*-dAn* is postposition "at;" *mā<sup>a</sup>-*  
*\*mq- < \*maŋ-*; cf. Hupa *niL/man* "each side")

Adverbs of time are:

*xat* "then" (cf. Hupa *xat* "yet, right")

*xā* "quickly" (cf. Hupa *xa* "yet")

*xun/dé* "tomorrow" (cf. Hupa *yis/xûn/de* "tomorrow"):

*xun/dé dō/wa/γAc/ī* "I'll see him tomorrow"

*xún/dè tθ!Aθ/dā nAt náct/sī* "tomorrow story to-  
you I-shall-tell"

*xun/dé t'Ac/yAc* "tomorrow I'll go")

*t'wí/dAN* "always" (literally, "all-at"):

*t'wí/dAN t'Al/dAc* "he always runs"

*t'wí/dAN AS/se* "I always cry"

*xAL/ts!t/dAN* "this evening" (doubtless misheard for *xAL!/-*;  
-*dAN* is postposition "at." Cf. Hupa *xû/Le* "in the  
night"):

*xAL/ts!t/dAN dō/wan/γAc/ī* "I'll see you this  
evening"

Modal adverbs are:

*dō* negative (cf. Hupa *dō*):

*dō/t'Ac* "he won't go"

*dō/t'Ac/yic* "I'll not go"

*dō/yá/t!a* "he won't fly"

*dō/AS/se* "I'm not crying"

*dō/ná/dACL/nic* "I'm not working"

*dō/γAc/ī* "I didn't see him"

*dō/néct/ī* "I'm not looking at him"

*dō/ucL/t'e* "I do not want"

*dō/na/γAct/xwī* "I do not vomit"

*la* prohibitive:

*lá* "don't!"

*lá/t'ī/yic* "don't go!"

*la/γī/ī* "don't see him!"

*lá/nā/xwil/ye* "don't play!"

*lá/na/dit/t!ō* "don't bathe!"

*lá/na/γat/xwī* "don't vomit!"

*dō/dā/q!e* "unable"

*dō/LAN* "not much" (cf. Hupa *Lan* "much," *dō/LAN* "little")

*dō/wī/la* "of course" (cf. Hupa *dōñ* "it is," *he/dōñ* "at  
least")

*dō/lā* emphatic negative (really verbal in form, "to cease;"  
cf. Hupa *-lan*, *-lūñ* with negative prefix *dō-* "to quit,  
leave, desist"):

*dō/lā c/γī/i* "you didn't see me"

- cō*<sup>u</sup>/*djī* "all right" (cf. Hupa *nū/hwōñ*<sup>u</sup>*x* "properly"?)  
*cAt/q!we* "to be accustomed to":  
     *cAt/q!wé na/dAct/t!ō* "I'm used to bathing"  
*t!ī*/*xun* "to keep on:"  
     *t!ī/xún ne/cAt/ī* "he keeps looking at me"  
*θAk/gwe* "in fragments"  
*hō* future prefix (more properly intentive):  
     *hō/yā/γíc/t!a* "I'll fly"  
     *hō/tc!AsL/se* "he wants to cry"  
     *hō/il/ī γit/lō* "stop laughing!"  
*dō/wa* future prefix (probably with dubitative coloring):  
     *dō/wa/c/γī/ī/t'e* "you'll see me"  
     *s/ts!ī/dé dō/wa/Al/lé'* "I'll get sick" (literally,  
     "my-sickness will-become")  
     *dō/wa/nā/yan/nAt* "he will upset them"  
     *dō/wa/tt'át/nAt* "they will go to pieces"

#### POSTPOSITIONS.

Athabaskan is characterized, among other features, by the use of a considerable number of postpositional elements of chiefly local force. They are appended to nouns or pronominal, numeral, or adverbial stems; less often to verb forms, in which case they have subordinating force. Chasta Costa examples are:

- dAn* "at" (cf. Hupa *-diñ*):  
     *xAL(!)/ts!t/dAn* "this evening"  
     *t'wī/dAn* "everywhere" (literally, "all-at")  
     *lát/dAn* "once" (cf. *la-* "one")  
     *má<sup>a</sup>/dAn* "on edge"  
     *a!/dAC/nī/dAn* "when I tell him" (literally, "I-tell-him at")<sup>40</sup>

<sup>40</sup> Similarly in Hupa *-mīL* "when," as verb suffix, is doubtless simply pronominal *-mī-* plus postposition *-l* "with."

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- t* "with, to" (cf. Hupa -*L*; Kato -*L*):  
*xANaθ/t náč/xé* "I paddle canoe" (literally, "canoe-with I-paddle")  
*tθ!Aθ/dā náč/sī* "I tell you story" (literally, "story you-with I-make")  
*tθ!Aθ/dā cáč ná/yésL/sī* "he tells me story" (literally, "story me-with he-makes")  
*mAt/t'é/tc!At/ts!Al/lec* "wherewith it-is-smoked, materials for smoking" (*MA-t-* "therewith;" cf. Kato *bŭL* "with it;" Hupa *mīL* "with, in")

This same -*t* is probably also found attached to verbal prefix *a-* (used in verbs of saying):

- ač/dAc/nĭ/dAn* "when I tell him" (cf. Hupa *aL/-tcit/den/ne* "he talked to")  
*-ts!An* "toward" (cf. Hupa *-tcinĭ* "toward;" Kato *-tc'ŭñ'* "to, toward"):  
*s/ts!An/na/'Ac* "to-me he-will-bring-it"  
*-me* "in" (cf. Hupa *-me* "in;" Kato *-bī'* "in"):  
*mAN/mé* "in house"  
*-me/q!e* "in, around in" (compounded of *-me* and *-q!e*; cf. Chipewyan *-k'e* "on"):  
*mAN/mé/q!e* "around in house"  
*ła/mé/q!e/ca* "all in one time" (cf. *ła, łā'*/*ca* "one")

#### VERBS.

As in other Athabascan dialects, the typical Chasta Costa verb consists of one or more adverbial prefixes, which may be followed in order by a deictic or third personal element, a first modal prefix, a second modal element, a first or second person subjective element, and a third modal element or "class" sign; these, not all of which need of course be present, are then followed by the verb stem itself. The stem often ends the verb form, but may be followed by one or more enclitic elements of modal or syntactic force. The verb form is fre-

quently preceded by an adverb or postposition which, while best considered as a non-integral part of the verb, forms a rather close syntactic unit with it. A pronominal object, if present, comes after an adverbial prefix but before a first modal element. Thus, the verb form *t'ā/γā/θōt/nā/hā* "do you (plur.) drink?" consists of seven elements: *t'ā-*, an adverbial prefix referring to water; *γā-*, a second adverbial element; *θ-*, a second modal element of durative significance; *-ō-*, second person plural subjective pronominal element; *-t-*, a third modal element, probably intransitive in force; *-nā*, verb stem "to drink;" and *-hā*, an enclitic interrogative element. The various elements that go to make up verb forms will be taken up in the order indicated.

ADVERBIAL PREFIXES. *ā-*, *a-*, 'A- used with verbs of saying, doing, and being (cf. Hupa and Kato *a-*):

*ā/djAn* "he says"

*at/dAc/nī/dAn* "when I tell him" (for *-t-*, see under Postpositions)

*dō/dAt 'An/tle* "there is not anywhere"

This *a-* is probably equivalent to an indefinite object, "something," indicating what is said or uttered without definitely referring to it. This comes out rather clearly on comparison with a form like *yā/wīs dAc/nī* "I whistle" (literally, "whistling I-utter"), where no indefinite object *a-* is required, what is uttered being specifically referred to by *yā/wīs* "whistling." That *a-* is somewhat in a class by itself as compared with other adverbial prefixes is indicated by its being followed in forms with indirect object by postpositive *-t-*.

*yā-*, *ya-* "up (in the air)" (cf. Hupa *ya-*; Kato *ya<sup>ε</sup>-*):

*yā/γAcł/gAθ* "I climb"

*yā/γAθ/θeł* "I threw"

*yā/γíc/t'a* "I fly"

It is not clear what significance is to be attached to *ya-* in:

*ya/dAcł/yAc* "I am ashamed"

*ya/da/γít/dja* "we are ashamed"

- ye-* "into enclosed space (including mouth)" (cf. Hupa *ye-*; Kato *ye'-*, *yī'-*)  
*ye/γát/ne/la* "he bit it"
- dā-*, *da-* "sitting or lying on something above ground"  
 (cf. Hupa and Kato *da-*):  
*dā/θAθ/dā* "I am sitting down"  
*dā/de/θíl/tθ'i* "we are sitting down"  
*dā/nAc/t'ác* "I go to bed"  
*q!wAt/daθt/gλc* "it lies thrown down on top,"  
 i. e. "table-cloth"  
*q!wAt/dasL/nà* "it was lying on it"
- t'e-* "in the water" (cf. Hupa *te-*; Kato *te'-*):  
*t'é/An/γAc/lAt* "I am sinking in the water"  
*t'e/níc/lat* "I drown"
- t'ā-* referring to water (cf. Hupa and Kato *ta-*):  
*t'ā/γAct/nā* "I drink"
- tc!e-* "across a stream" (cf. Hupa *tc-* "out of;" Kato *tc'e-* "out of;" Chipewyan *ts'e-* "used of approach to a body of water"):  
*tc!e/θít/t!ō* "I swim across"
- An-* implies disappearance or undoing (cf. Chipewyan 'a-, *an-* "away," implies "desertion or abandonment"):  
*t'é/An/γAc/lAt* "I am sinking in the water"  
*dō/wá/An/nā/yan/nAt* "he will upset them"
- an-* "back, hither" (cf. Chipewyan 'ā- 'an-, ai- "back, toward home"):  
*an/γí/at* "come here!"
- tc!ā-*, *tc!a-* of unknown significance (cf. Hupa *kya*<sup>41</sup>):  
*tc!ā/sAsL/se* "I cry" (cf. Hupa *kya/teL/tcwe* "she heard it cry")  
*tc!ásL/se* "he cries"
- se'-* used with verb of smiling:  
*se'/γAt/lō* "he smiles" (cf. *γAt/lō* "he laughs")

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<sup>41</sup> Goddard lists forms in *kya-*, i. e., *kʷla-*, under *ky-*; see *op. cit.*, p. 90. It seems better however, to keep them apart.

*tc!ō-* of unknown significance (cf. Hupa *kyō*<sup>42</sup>):

*tc!ō/γít/siL/la* "he pointed with his finger"

*né/tc!ūc/lec* "I'll bet you"<sup>43</sup>

*u-* of unknown significance (cf. Hupa verbs in *ō*<sup>44</sup>)

*dō/ucL/t'e* "I do not want"

*dé/ucL/t'e* "what I want"

*nā-*, *na-* indefinite movement on surface of ground or water; horizontality (cf. Hupa and Kato *na-*):

*nAn/náθ/yā/la* "he went around it"

*s/ts!An/na/'Ac* "he'll bring (it) to me"

*γAn/na/'Ac/t'e* "he will bring here"

*nā/ní/An* "stop him!"

*nā/γα* "is going about, living"

*l/t'í γAn/na/'à* "he brags" (literally, "high, important he-has")

*nā/xwACL/yè* "I play"

*nā/dACL/nic* "I work"

*dō/wa/nā/yan/nAt* "he will upset them"

*nāc/L!ò* "I write"

*xANAθ/t nác/xé* "I paddle canoe"

*nac/t!ò* "I swim, bathe"

*na/tc!íł/de* "you wash"

*nā/dAcł/dè* "I washed myself"

*nā/dAt/t!ō/t'e* "he'll bathe"

*nā/xAt/dAl/et* "they'll bathe"

*tθ!Aθ/dà cAt nā/θłl/sī* "story to-me you-told, caused"

*na-* "back again" (cf. Hupa and Kato *na-*), followed by third modal *-t-*:

*na/γá/θAθt/xwí* "I vomit"

*γAn-* of uncertain significance (cf. Hupa *wún-* "to pursue

<sup>42</sup> Goddard lists forms in *kyō*, i. e., *kʷlō-*, under *ky-*; see *op. cit.*, p. 90. Perhaps *kʷlō-* is compounded of *kʷl-* and *ō-*.

<sup>43</sup> This *tc!ū-* is probably better explained as deictic *tc!-* followed by future imperative *ū-*; see note 86.

<sup>44</sup> Goddard, *op. cit.*, p. 115.

or seek something; to attempt something by persistent effort"):

$\gamma An/na/\acute{A}c/t'e$  "he will bring here"

$l/t'i \gamma An/na/'\grave{a}$  "he brags" (perhaps "important he-seeks-to-have")

*ne-* of unknown significance:

$n\acute{e}c\grave{l}/\bar{i}$  "I'm looking at him" (cf.  $\gamma e/\theta\acute{i}c/\bar{i}$  "I saw him")

$n\acute{e}s/ts!A\acute{l}/\bar{i}$  "I am seen"

*xw(A)-* of unknown significance:

$n\acute{a}/xwACL/y\acute{e}$  "I play"

$xwACL/\bar{i}$  "I believe (it)"

$xwAn/n\acute{e}/\theta iL/ya$  "you win" (see under first modal *ne-*)

$\gamma\bar{a}- \gamma a-$ , ( $\gamma$ ) refers apparently to "mouth":

$ye/\gamma\acute{a}t/ne/la$  "he bit it" ( $\gamma\acute{a}t-$  may, however, have been misheard for  $\gamma\acute{a}t-$ , with second modal  $\gamma-$ ; see note 92)

$na/\gamma\acute{a}/\theta A\theta t/xw\bar{i}$  "I vomit"

$l\acute{a}/na/\gamma\acute{a}t/xw\bar{i}$  "don't vomit!"

$t'\bar{a}/\gamma\acute{a}/\theta it/n\bar{a}$  "we drink"

$t'\bar{a}/\gamma\acute{u}t/n\bar{a}$  "you drink" (or is  $\gamma-$  here second modal prefix?)

Verbal prefixes of local force which are doubtless primarily postpositions and which are prefixed to adverbial prefixes proper are:

*nAn-* "around" (cf. Hupa *-nat*; Kato *-na*):

$nAn/n\acute{a}\theta/y\bar{a}/la$  "he went around it"

*q!wAt-* "on, on top" (cf. Hupa *-k\acute{u}t* "on;" Kato *-k'w\acute{u}t* "on"):

$q!w\acute{A}t/tc!At/dja$  "whereon one eats, table"

$q!w\acute{A}t/da\theta t/g\acute{A}c$  "it lies thrown down on top, table-cloth"

$q!w\acute{A}t/dasL/n\acute{a}$  "it was lying on it"

DEICTIC PREFIXES. Under this head are grouped a small number of quasi-pronominal elements of third personal reference which regularly come after adverbial prefixes, if any of these are present. They cannot be grouped with first or second personal subjective elements, as their position is quite distinct from these; first and second modal prefixes may come between. Of deictic elements there have been found:

*tc!*- denotes lack or indefiniteness of object of transitive verb (cf. Hupa *k-*, *ky-*, i. e. *kʷ!*-; Kato *tc'*-):

*tc!Aγ/γe/θíc/ya* "I eat" (i. e. without specific object being designated; cf. Hupa *yik/kyū/-wiñ/yan* "it ate")

*q!wÁt/tc!At/dja* "whereon one eats, table"

*nǎ/tc!ił/Lō* "you write" (cf. Hupa *na/kis/Lōn*, i. e. *na/kʷ!is/Lōn* "she made baskets")

*nǎ/tc!ī/t!ō* "you swim, bathe"

*na/tc!íl/de* "you wash" (cf. Kato *te'/na/tc'ûs/dēc* "he washed it")

*tc!At/t'ít/θAł* "we wash ourselves" (cf. Hupa *wa/-kin/nin/seL* "it was heated through")

*mAł/t'é/tc!At/ts!Al/lec* "wherewith it is smoked" (somewhat doubtful, as *tc!*- here follows first modal prefix *t'e-*; but see note 77)

*tc!Ał/t!ō* "he sucks" (cf. Kato *tc'iL/t'ōt* "[make] it suck")

It is possible that in this last example *tc!*- is third personal subjective (cf. Hupa *tc-*, i. e. *tc!*-; Kato *tc'*-, *ts'*-, *s'*-), as suggested by *Act/t!ō* "I suck" with its lack of *tc!*- prefix. No other plausible case, however, of third personal subjective *tc!*- is available, so that its existence in Chasta Costa must be considered doubtful as yet.

Generally third person singular subjective forms are distinguished by the lack of any pronominal prefix, but in certain

cases deictic elements are found which are clearly third personal (subjective) in value. These are:

- dj-* (cf. Hupa *tc-*, i. e. *tc!-*; Kato *tc'-*, *ts'-*, *s'-*):  
*á/djAN* "he says" (verb-stem *-n*; cf. Hupa *aL/-*  
*tcit/den/ne* "he talked to them")  
*djAN/la* "he says" (cf. Hupa *tcin* "they say;"  
 Kato *tc'in*)

It is quite likely, however, that *djAN* is to be explained as from \**dyAN* (*dy*, as we have seen, becomes *dj*), in which *d-* is first modal prefix (cf. *dí/nī* "you make a sound") and \**yAN* is reduced from \**yen* (*ye-* as below; *-n* to say).

- ye-, ya-* (cf. Hupa *y-*, *yī-* referring to other than adult Hupa;  
 Kato *yī-*):

- nał na/yéL/sī* "to-you he-tells" (contrast *náct/sī*  
 "I tell")  
*cał na/yésL/sī* "to-me he-tells" (with second  
 modal prefix *s-*, *θ-*; contrast *nā/θit/sī* "you  
 tell")  
*ya/q!éθ/ya*<sup>46</sup> "he eats" (contrast *tc!Aγ/γe/θíc/ya*  
 "I eat")

*x-*:

- tc!é/xAθ/t!ō* "he swims across" (contrast *tc!e/-*  
*θit/t!ō* "you swim across")

This *x-* seems to have no parallel in Hupa or Kato (is it connected with third person objective *xō-* of Hupa, *kū-* of Kato?). Were it not that *-t!ō* "to swim, bathe" is used only of singular subjects, one might surmise that *x-* is really plural *xA-* (see below).

Among deictic elements are further to be reckoned certain prefixes that serve to indicate either plurality as such or more specifically third personal plurality. These are:

- ya-* (cf. Hupa *ya-*; Kato *ya<sup>ε-</sup>*):  
*yǎ/wīs ya/dil/nī* "we whistle" (contrast *yǎ/-*  
*wīs dAct/nī* "I whistle")

<sup>46</sup> *q!e-* was very likely misheard for *γe-*.

*yǎ/wī̄s ya/dAł/nī* "they whistle" (contrast *yǎ/wī̄s dAł/nī* "he whistles")

*γā-*, *γa-*:

*tc!a/γǎ/θil/se* "we cry" (contrast *tc!ā/sAsL/se* "I cry")

*tc!a/γásL/se* "they are crying" (contrast *tc!ásL/se* "he cries")

*tc!ā/γál/se/t'e* "you (pl.) will cry" (contrast *tc!ál/-se/t'e* "you (sing.) will cry")

*xA-* third person plural (apparently not found in either Hupa or Kato; but cf., without doubt, Chipewyan *he-* "used for dual or plural of verbs in third person"):

*yā/xAγ/γí/t!a* "they fly" (*yā/γí/t!a* "it flies")

*dō/yǎ/xAt/t!a* "they won't fly" (*dō/yǎ/t!a* "he won't fly")

*xAs/sé/t'e/ha* "will they cry?" (*As/sé/t'e/ha* "will he cry?")

*dō/xAs/se* "they're not crying" (*dō/As/se* "he's not crying")

*nā/xAt/dAl/nic* "they work" (*nā/dAl/nic* "he works")

*c/xA/γéθ/ī* "they saw me" (*c/γéθ/ī* "he saw me")

*na/xAt/da/γAl/el* "they are bathing"

*t'é/An/xAγ/γAl/lAł* "they sink in the water" (*t'é/An/γAl/lAł* "he sinks")

*xAt/t'Al/lAł* "they are sleeping" (*t'Al/lAł* "he is sleeping")

*dā/xAn/nAt/t'Ac* "they went to bed" (*dā/nAt/t'Ac* "he went to bed")

*xAt/t'Al/xwAθ* "they cough" (*t'Al/xwAθ* "he coughs")

*xA/Al/Az* "they sneeze" (*Al/Az* "he sneezes")

FIRST MODAL PREFIXES. Under this term are comprised a small number of rather frequently occurring elements which regularly come after both adverbial prefixes and deictic elements, but precede another set of modal elements (second

modal prefixes) which are to be taken up shortly. Their meaning is rather colorless. Besides their position they have this peculiarity in common, that they lose their vowel in indefinite tense forms (such as have no second modal prefixes:  $\theta$ -,  $\gamma$ -, or  $n$ -) and are thus reduced to single consonants. They are:

$t'e$ - (definite tenses),  $t'$ - (indefinite tenses) seems to indicate durative activity (cf. Hupa  $te$ -; Kato  $te$ -,  $t$ -):

$t'e/\theta'ic/ya$  "I go;" indefinite:  $d\bar{o}/t'\acute{a}c/yic$  "I'll not go;"  $t'\bar{i}/y\acute{a}c/t'e$  "you must go"

$t'\acute{a}cL/d\acute{a}c$  "I run" (indefinite)

$tc!At/t'\acute{o}/\theta At$  "you (pl.) wash yourselves" (indefinite)

$t'/\gamma\acute{i}/\bar{i}$  "he looks around" (indefinite; but see note 69)

$t'e/\theta A\theta/la\acute{t}/la$  "I've been sleeping;" indefinite:  $t'\acute{a}c/la\acute{t}$  "I'm sleeping"

$t'\acute{a}c\acute{t}/xwA\theta$  "I cough" (indefinite)

$ma\acute{t}/t'\acute{e}/tc!At/ts!Al/lec$  "wherewith it is smoked" (as following  $tc!$ - is deictic, it is more likely that  $t'e$ - here is adverbial prefix, not first modal; see note 77).

$de$ - (definite tenses;  $da$ - before  $\gamma$ -),  $d$ - (indefinite tenses) meaning unknown (cf. Hupa  $d$ -,  $d\bar{u}$ -; Kato  $de$ -,  $d$ -):

$at/d\acute{a}c/n\acute{i}/dAn$  "when I tell him" (indefinite)

$y\acute{u}/w\bar{i}s d\acute{a}c\acute{t}/n\bar{i}$  "I whistle" (indefinite)

$c/na/\gamma\acute{u} d\acute{i}/s'at$  "my-eyes hurt" (definite; cf. Hupa  $d\bar{u}/win/tcat$  "it got sick")

$n\acute{a}/da/\gamma Act/t!\acute{o}$  "I bathe;" indefinite:  $n\bar{a}/d\acute{a}c\acute{t}/t!\acute{o}'/t'\acute{e}$  "I'll bathe"

$na/da/\gamma\acute{i}l/\acute{e}t$  "we are bathing;" indefinite:  $n\bar{a}/d\acute{i}l/\acute{e}t$  "we'll bathe"

$n\bar{a}/d\acute{a}cL/nic$  "I work" (indefinite)

$n\acute{a}/d\acute{a}c\acute{t}/d\acute{e}$  "I washed myself" (indefinite)

$ya/d\acute{a}c\acute{t}/y\acute{a}c$  "I am ashamed" (indefinite)

$ya/da/\gamma\acute{i}t/dja$  "we are ashamed" (definite)

$d\bar{a}/de/\theta\acute{i}l/t\theta!i$  "we are sitting down" (definite)

- $\gamma e$ - (definite tenses),  $\gamma$ - (indefinite tenses) meaning unknown:  
*tc!A $\gamma$ / $\gamma e$ / $\theta i c$ / $\gamma a$*  "I eat"  
 *$\gamma a$ / $q' e \theta$ / $\gamma a$*  "he eats" ( $q' e$ - is probably misheard  
 for  $\gamma e$ -)  
 *$\gamma e$ / $\theta i$ / $\bar{i}$*  "you saw him;" indefinite:  *$d \bar{o}$ / $w a$ / $\gamma \bar{i}$ / $\bar{i}$ -  
 *$t' e$*  "you'll see him"  
 *$\gamma e \theta t$ / $l \bar{o}$*  "he breaks into laughter;" indefinite:  
 *$\gamma \bar{A} t$ / $l \bar{o}$*  "he laughs"  
 *$a n$ / $\gamma \bar{i}$ / $a t$*  "come on!"*

This  $\gamma e$ -,  $\gamma$ - should not be confused with second modal  $\gamma$ -, which will be taken up presently. Two first modal prefixes ( $t'$ - and  $\gamma$ -) occur in  $t'/\gamma \bar{i}/\bar{i}$  "he looks around;" that  $\gamma$ - is not second modal here is indicated by parallel definite forms with  $\gamma e$ - (see  $\gamma e/\theta i/\bar{i}$  above), further by weak form  $t'$ - of first prefix (definite tenses require  $t' e$ )<sup>47</sup>

- ne*- (definite tenses), *n*- (indefinite tenses) meaning unknown  
 (cf. Hupa *ne*-, *n*-; Kato *ne*-, *n*-; Chipewyan *ne*-, *nū*-):  
*xwAn/né/ $\theta i L$ / $\gamma a$*  "you win" (cf. Kato *kūn/ne/sīL/-  
 yan* "you win")  
*dā/nAc/t'Ac* "I go to bed" (indefinite; cf. Hupa  
 definite: *tcin/nes/ten* "he lay")  
*n/da* "it is, stays" (indefinite; cf. Kato definite:  
*tc'n/nes/dai* "he sat down")  
*nā/nAc/An* "I stop him;" *nā/nī/An* "stop him!"  
 (indefinite)  
*n/dō* "it is not" (indefinite; cf. Kato *n/dō<sup>e</sup>/ye*  
 "there is none")

This *ne*-, *n*- is not to be confused with second modal *n*-, which occurs only in definite tenses.

SECOND MODAL PREFIXES. These comprise three consonantal elements ( $\theta$ - or *s*-;  $\gamma$ -; and *n*-) which are used only in definite tenses and which have reference, as far as any definite

<sup>47</sup> Moreover, *t' e*- in definite tenses seems regularly followed by second modal  $\theta$ -, not  $\gamma$ -. Yet  $\bar{i}$ - of  $\gamma \bar{i}$ - causes difficulty; see note 69.

significance is ascertainable at all, to what may be termed range or span of activity, but not to tense as such.  $\theta$ - ( $s$ - in certain forms) is durative or continuative in force (cf. first modal  $t'e$ -, which is regularly followed by  $\theta$ -);  $n$ - is cessative, marking the end of an activity or marking an activity which is conceived as the end point of a previous activity (e. g., "to come" as contrasted with durative "to go");  $\gamma$ - is the most uncertain, being apparently inceptive or momentaneous in some cases, but clearly not so in others.<sup>48</sup> They are, it seems, mutually exclusive elements. In practice their use seems largely determined by the prefixes that precede.  $n$ - and  $\gamma$ - always begin their syllable, being completed either by  $\bar{i}$ - ( $< *i\eta$ -) or by subjective pronominal or by third modal elements, which are joined to them by means of  $-i$ - or inorganic  $-A$ -;  $\theta$ - ( $s$ -) is similarly joined to following subjective pronominal elements, if one is present, otherwise it forms part of the preceding syllable.

Examples illustrating  $\theta$ - ( $s$ - before  $\bar{i}$ ,  $L$ ) are:

$t'e/\theta\acute{i}c/ya$  "I go;"  $t'\acute{e}\theta/ya$  "he goes" (cf. Hupa  
 $te/s\bar{e}/yai$  "I went away")

$nAn/n\acute{a}\theta/y\bar{a}/la$  "he went around it"

$tc!A\gamma/\gamma e/\theta\acute{i}c/ya$  "I eat;"  $ya/q!\acute{e}\theta/ya$  "he eats"  
(contrast Hupa  $yik/ky\bar{u}/wi\bar{n}/yan$  "it ate"  
with  $w$ -)

$tc!e/\theta\acute{i}t/t!\bar{o}$  "you swim across" (contrast  $na/da/-$   
 $\gamma\acute{i}t/t!\bar{o}$  "you bathe")

$d\acute{a}\theta/d\bar{a}$  "he is sitting down" (cf. Hupa  $sit/dai$   
"he lived")

$d\bar{a}/de/\theta\acute{i}l/t\theta!i$  "we are sitting down" (cf. Hupa  
 $de/s\bar{o}L/tse/te$  "you will stay")

$tc!\bar{a}/\theta\acute{i}l/se$  "you (sing.) cry" (contrast Hupa  $win/-$   
 $tcw\bar{u}$  "you have cried")

<sup>48</sup> Goddard somewhat doubtfully assigns inceptive force to its Hupa cognate  $w$ -; in Kato its cognate  $g$ - seems clearly inceptive only in certain verbs; while in Chipewyan Goddard ascribes continuative value to  $g$ -. It would be worth while making a somewhat extended comparative study of the second modal prefixes of Athabaskan, which form one of the most difficult but at the same time important chapters of its grammar.

- $\gamma e/\theta ic/\bar{i}$  "I saw him" (cf. Hupa  $te/s\bar{u}w/i\bar{n}$  "I am going to look")
- $n\bar{a}/\theta i\bar{l}/s\bar{i}$  "you told story" (cf. Hupa  $na/seL/tcwen$  "I made")
- $t'e/\theta i/lat/la$  "you've been sleeping" (cf. Hupa  $nit/te/sil/lal/le$  "you would go to sleep")
- $\theta icl/t'\bar{a}l$  "I kicked him" (contrast Hupa  $ye/tc\bar{u}/wiL/taL$  "they landed" with  $w-$ )
- $na/\gamma\bar{a}/\theta it/xwi$  "you vomit"
- $\gamma e/\theta\Lambda\theta t/l\bar{o}$  "I break into laughter"
- $L\bar{a}\theta/\bar{a}/la$  one was (=  $L\bar{a}$  "one" plus  $\theta/'\bar{a}/la$ ; cf. Chipewyan  $\vartheta e/'\bar{a}$  "was there")
- $q!w\bar{A}t/da\theta t/g\bar{A}c$  "it lies thrown down on top, table-cloth" (cf. Hupa  $wes/kas$  "it lay")
- $q!w\bar{A}t/dasL/n\bar{a}$  "it was lying on it"
- $xw\bar{a}n/n\acute{e}/\theta iL/ya$  "you win" (cf. Kato  $k\bar{u}n/ne/s\bar{i}L/yan$  "I win")

Examples illustrating  $n-$  are:

- $n\acute{ic}/ya$  "I come" (cf. Hupa  $nei/yai$  "I came")
- $n\acute{ic}/dac$  "I dance" (cf. Kato  $n\acute{u}c/dac$  "I will dance")
- $t'e/n\acute{i}/lat$  "you drown" (cf. Kato  $tc'n/n\acute{u}l/lat$  "it floated there")

Examples illustrating  $\gamma-$  are:

- $\gamma\acute{i}/dac$  "he dances" (cf. Kato  $tc'/g\bar{u}n/dac/kwa\bar{n}$  "he had danced")
- $y\bar{a}/\gamma\bar{A}ct/g\bar{A}\theta$  "I climb" (cf. Hupa  $ya/wiL/kas$  "he threw up")
- $y\bar{a}/\gamma\acute{i}/t!a$  "it flies" (cf. Hupa  $na/win/t\bar{a}u$  "it will settle down")
- $n\acute{a}/da/\gamma\bar{A}ct/t!\bar{o}$  "I bathe"
- $na/da/\gamma\acute{u}l/\acute{e}t$  "we are bathing" (cf. Chipewyan  $n\bar{i}/\bar{i}/ginL/\bar{u}L$  "take through the water")

*t'é/AN/γAC/lAł* "I'm sinking in the water" (cf.  
 Hupa *da/na/wil/laL* "it was floating there")  
*γACL/ÁΣ* "I've been sneezing"  
*tc!ō/γít/siL/la* "he pointed with his finger"  
*ya/da/γít/dja* "we are ashamed"

**SUBJECTIVE PRONOMINAL PREFIXES.** There are three persons and two numbers (singular and plural), making six persons in all. The third persons, as we have seen, are indicated either by the absence of a pronominal element or by deictic prefixes which come between the adverbial prefixes and the first modal elements. There thus remain four persons (first person singular and plural, second person singular and plural) for treatment here. In the definite tenses the pronominal elements are appended to the second modal elements, with which they form a syllable, an inorganic *A* or *i*, if necessary, serving to connect them. In the indefinite tenses the pronominal elements are appended to whatever element (adverbial prefix, deictic element, or first modal prefix in reduced form) happens to precede them. They never begin their syllable except in the comparatively small number of cases in which the verb form, indefinite in tense, has nothing preceding the pronominal element or, in the case of the third person, nothing preceding the third modal prefix or verb-stem. When this happens, the second person singular and plural and the first person plural stand at the very beginning of the verb; the first and third persons singular, however, begin with an inorganic vowel *A*-.

*First Person Singular -c-* (cf. Hupa *-w-*; Kato *-c-*; Chipe-  
 wyan *-s-*):

*t'e/θíc/ya* "I go"  
*θícL/t'āł* "I kicked him"  
*níc/ya* "I come"  
*dā/nAC/t'āc* "I go to bed"  
*t'é/AN/γAC/lAł* "I am sinking in the water"  
*γAct/lō* "I laugh"

*yā/γÁcl/gAθ* "I climb"  
*t'ÁCL/dAC* "I run"  
*nac/t!ō* "I swim, bathe"  
*Acł/t!ō* "I suck"  
*ACL/Áz* "I sneeze"

In definite tenses with *θ-* or *n-* as prefix the inorganic vowel connecting these elements with *-c-* is regularly *i*; this is evidently due to the palatal quality of the *-c-*. In definite tenses with *γ-* as prefix, however, the normal inorganic vowel, *A*, is found, due, no doubt, to the velar position of the prefix. In the indefinite tenses the connecting vowel, if required, is always *A*. Where we have *nAC-* we are dealing with first modal *ne-*, reduced to *n-*, plus *-c-*, not with second modal *n-* plus *-c-*; contrast definite *níc/ya* with indefinite *dā/nAC/t'Ác*.

Before *s-* sibilants *-c-* is assimilated to *-s-*:

*dō/As/se* "I'm not crying" (< \**Ac/se*)

*θic-* goes back to original \**sic-* or \**sAC-*. When *-c-* came to stand before a dental consonant (*d, t, l*), it was assimilated to *-s-*, and the inorganic vowel preceding it assumed the form *A*; this \**sAS-* then regularly became *θAθ-*:

*dā/θÁθ/dā* "I am sitting"  
*γe/θÁθt/lō* "I break into laughter"  
*na/γā/θAθt/xwí* "I vomit"  
*t'e/θÁθ/lał/la* "I've been sleeping"

Before third modal *-l-*, *θic-* seems to be regularly retained (cf. *θícl/t'āł* above; *θícl/sī* "I make"). Secondary *sAS-*, not shifted to *θAθ-*, is found, however, before *l(L)* when this element is secondarily changed from third modal *-l-*:

*tc!ā/sÁsL/se* "I cry"

That *sASL-* here is equivalent to \**sAsl-* < \**sAcł-* is indicated by *tc!ā/θíl/se* "you cry;" contrast *θíl/t'āł* "you kicked him," *θícl/t'āł* "I kicked him."

It is to be carefully noted that *-c-* (or its reflexes *-s-*, *-θ-*) is in Chasta Costa found in both definite and indefinite tenses. There is no trace of an element corresponding to the Hupa *-e-* (*-ē-*), Kato *-ī-*, Chipewyan *-ī-*, which are found in forms of definite tenses. It is quite probable that the *-c-* of the indefinite forms was extended by analogy.

*Second Person Singular i-* (cf. Hupa *-ñ-*, i. e. *-η-*; Kato *-n-*; Chipewyan *n-*, *ne-*, or nasalization of vowel:

*t'íl/dAc* "you run"  
*t'ā/γít/nā* "you drink"  
*ná/tc!ít/L!ō* "you write"  
*na/da/γít/t!ō* "you bathe"  
*nā/dít/t!ō/t'e* "you'll bathe"  
*γā/γíl/gAθ* "you climb"  
*ya/díl/yac* "you are ashamed"  
*nā/θít/sī* "you made, told"  
*nā/xwíl/ye* "you play"  
*xwíl/ī* "you believe it"  
*xwAn/né/θiL/ya* "you win"  
*t'íl/xwAθ* "you cough"

In all these cases the *-i-* connects a following third modal element (*-t-*, *-l-*, or *-t-*) with a preceding prefix. Examples of *-i-* beginning its own syllable are:

*īl/ʌz* "you sneeze"  
*hó/il/ī* "stop!"

If there is no third modal element, the *-i-*, lengthened to close *-ī-*, closes its syllable:

*dā/ní/t'Ac* "go to bed!"  
*t'í/lat* "you are sleeping"  
*dā/θí/dā* "you are sitting"  
*γā/γí/t!a* "you fly"  
*dó/ī/se* "you do not cry"

This *i*-, *ī*-, is only secondarily the second person singular subjective element. The original element was doubtless *-ŋ*- (cf. Hupa), which was reduced to nasalization of preceding vowels; the inorganic vowel, when nasalized, took on *i*- timbre. Finally, when nasalization disappeared, the *i*- timbre alone remained as the reflex of original *-ŋ*-. Where, in many indefinite tense forms, the nasalized vowel was other than an inorganic one, there was nothing left of the *-ŋ*-:

*dō/yâ/t!a* "you won't fly"  
*nâ/xē* "you paddle"  
*nēl/ī* "look at him!" (cf. *nēct/ī* "I'm looking at him")

In such cases the second person singular fell together with the third, as in *dō/yâ/t!a* "he won't fly."

*First Person Plural (i)t*<sup>49</sup> (cf. Hupa *it/d-*, *-d-*; Kato *d-*; Chipewyan *-t-*, *-d*<sup>50</sup>):

*t'ít/lat* "we are sleeping"  
*tc!At/t'ít/θAt* "we wash ourselves"  
*t'e/nít/lat* "we drown"  
*dā/nít/t'Ac* "we went to bed"  
*γe/θít/ī* "we saw him"  
*yā/γít/t!a* "we fly"  
*t'é/An/γít/lat* "we are sinking in the water"  
*dō/it/se* "we are not crying"

In Hupa and Kato regularly, and in Chipewyan often, the first person plural subjective pronominal prefix begins its syllable; in Chasta Costa it regularly ends its syllable, unless it has to stand at the beginning of the verb form, when it constitutes a syllable by itself (cf. *dō/it/se* above; *dō* "not" is independent adverb rather than prefix).

<sup>49</sup> *t* is here unaspirated, and is thus etymologically identical with *d*.

<sup>50</sup> In Father Legoff's Montagnais paradigms *-id-* or *-it-* often, in fact regularly, appears: *-i-* seems, as in Chasta Costa, to be organic.

If the prefix preceding the pronominal element ends in a vowel, the *-i-* disappears:

*dō/yát/t!a* "we won't fly"

This does not mean, however, that this *-i-* is to be considered an inorganic vowel, as is the case in Hupa *it/d-*. If *-it-* is followed by third modal *-t-*, both *-t-* elements combine into a single *-t-*, and all that is left of the pronominal prefix is the *-i-*:

*t'ā/γá/θit/nā* "we drink" (contrast *t'ā/γáθt/nā*  
"they drink")

If the third modal element is *-t-* or *-l-*, *-t-* disappears and *-t-* is changed to *-l-*; thus the first person plural of *t-* verbs and *l-* verbs is always formed alike. In Hupa and Kato third modal *-t-* regularly becomes *-l-*, but *d-* is preserved; hence Hupa *dil-*, Kato *dúl-*. In Chipewyan, however, as in Chasta Costa, *-t-* not only becomes *-l-*, but *-t-* disappears. For Chasta Costa this means that the second person singular and first person plural of *l-* verbs is identical, provided, of course, that there is no deictic prefix of plurality in the latter and that the verb stem does not change for the plural. Examples of *l-* verbs are:

*dā/de/θil/θ!i* "we are sitting" (cf. Chipewyan *de/θil/θ'ī*  
"we are sitting")

*nā/dil/nic* "we work" (cf. *nā/dil/nic* "you work")

*t'íl/xwAθ* "we cough" (cf. *t'íl/xwAθ* "you cough")

*nā/xwíl/ye* "let us play" (cf. *nā/xwíl/ye* "you play")

*īl/Áz* "we sneeze" (cf. *īl/Áz* "you sneeze")

*na/da/γil/ét* "we are bathing;" *nā/dil/et* "we'll bathe"

*tc!a/γá/θil/se* "we cry" (cf. *tc!a/θil/se* "you cry")

Examples of *t-* verbs are:

*yá/wīs ya/dil/nī* "we whistle" (cf. third person plural:  
*ya/dÁt/nī*)

*nā/tc!il/L!ō* "we write" (cf. *nā/tc!il/L!ō* "you write")

If, in an indefinite tense form, the pronominal element is preceded by a prefix ending in a vowel and is, besides, followed by third modal *-l-* or *-l-*, both *-i-* and *-t-* have to disappear and there is nothing left of the pronominal element except, in the case of *l-* verbs, the change of *-l-* to *-l-*:

*nél/ī* "let us look at him!" (cf. *nét/ī* "look at him!")  
*tc!ā/γél/se*, very likely misheard for *tc!ā/γál/se* "we'll cry"  
 (cf. definite: *tc!a/γá/θil/se* "we cry")

Second Person Plural *ō-* (cf. Hupa *ō'-*; Kato *ō'-*; Chipewyan *ō'-*):

*t'ó/lat* "ye sleep"  
*t'e/θó/lat* "ye have been sleeping"  
*t'e/nó/lat* "ye drown"  
*γā/γó/t!a* "ye fly"  
*t'é/Λn/γō/lat* "ye sink in the water"  
*t'ā/γá/θōt/nā* "ye drink"  
*dó/ō/se* "ye are not crying"

No aspiration was heard after *ō* in Chasta Costa. This does not seem due to faulty perception, as *l-* verbs keep their *-l-* after *ō-*, whereas, under similar circumstances, Hupa, Kato, and Chipewyan change *-l-* to *-l-* (*ō'-l-* becomes *ōl-*). Indeed, in Chasta Costa *l-* verbs change their *-l-* to *-l-* after second person plural *ō-*. Examples of *ō-* before *l-* verbs are:

*nā/dól/nic* "ye work"  
*na/da/γól/ét* "ye bathe;" *nā/dól/et* "ye will bathe"  
*t'ól/xwΛθ* "ye cough"  
*nā/xōl/yé/le* "ye play" (for *-xwōl-*)  
*ōl/Λz* "ye sneeze"

Examples of *-l-* becoming *-l-* after *ō-* are:

*ya/dól/nī* "ye utter, make a sound" (cf. third person plural  
*ya/dΛl/nī*)  
*ne/xó/ōl/ī* "ye look at him" (cf. *nét/ī* "you're looking at  
 him")

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When, in an indefinite tense form, *ō-* is preceded by a prefix ending in *a*, *a* and *ō* contract to long *ā* (which, it would seem, remains long even in closed syllables):

- dō/yǎ/t!a* "ye won't fly" (< \**yaō-*; cf. third person singular *dō/yǎ/t!a* with original *yā-*; and second person singular *dō/yǎ/t!a* < \**yq-* < \**yaŋ*)  
*tc!ā/γǎl/se/t'e* "ye will cry" (cf. definite: *tc!a/γǎ/θōl/se* "ye cry;" and contrast *tc!ā/γǎl/se* "we'll cry" with short *-a-*)

*Third Person.* As already noted, the third person, apart from possible deictic prefixes, is marked by the absence of any pronominal element. If the element preceding the third modal prefix or the stem consists of a consonant which must begin its syllable, an inorganic *-A-* is found between the two; if a third modal prefix is absent, the syllable preceding the stem is closed by a consonant borrowed from the first consonant of the stem. Examples of third persons with *-A-* before a third modal prefix are:

- ya/dAl/yAc* "he is ashamed"  
*t'Al/dAc* "he runs"  
*nā/xwAl/ye* "he plays"  
*yā/γAl/gAθ* "he climbs"  
*yǎ/wīs dAt/nī* "he whistles"  
*t'ā/γAt/nā* "he drinks"

Examples of third persons with *-A-* followed by an inorganic consonant are:

- dā/nAt/t'Ac* "he went to bed" (*-t-* is not third modal; cf. second person singular *dā/nī/t'Ac*)  
*t'é/An/γAl/lAt* "he is sinking in the water" (*-l-* is not third modal; cf. second person singular *t'é/An/γī/lAt*)

First modal *n-*, reduced from *ne-*, however, has in several cases been found without following inorganic vowel and consonant.

In such cases it closes the preceding syllable, which may even belong to another word. Examples are:

- dô/dAt* 'An/t'e "not-anywhere there-is" (cf. Kato *qn/t'ē* "it is;" Hupa *ûn/tē* "there is")  
*lân/dō* "nine" (really *la n/dō* "one is-lacking"); *nā/xAn/dō* "eight" (reduced from *nā/xi n/dō* "two are-lacking") (cf. Kato *n/dō<sup>ε</sup>/bûñ* "it will not be," but also *nût/dō<sup>ε</sup>* "all gone")  
*cíc/mANèn/dá'* (= *cí c/mANè n/da'*) "I my-house is" (cf. Chipewyan *ne/da* "she sat")

If the verb form consists, properly speaking, of the stem alone, without prefix of any kind, an inorganic *A-* completed by a consonant that depends for its form on the first consonant of the stem is prefixed for the third person:

- As/sé/t'e* "he must cry" (< \**se/t'e*; cf. *dô/As/se* "I'm not crying" < \**Ac/se*)  
*dō/wa/Al/lê'* "he will become" (< \**lê*; *dō/wa* is adverb not influencing form of verb proper. That *-l-* is here no third modal element is shown by forms like Hupa *ō/le* "let him become")

This *A-* at the beginning of a third personal form appears also when the verb begins with a third modal element:

- Al/Áz* "he sneezes"

In this respect Chasta Costa differs from Kato, which need have nothing preceding the stem; with *As/se* compare Kato *tce'* "he cried."

In the third person of definite tenses with second modal  $\gamma$ - or *n-* prefix this element is followed by *-î*, in case there is no third modal prefix present. This goes back, without doubt, to nasalized *-i-* or *-A-*, in turn reduced from original *-iη-* (or *-Aη-*). This nasal element, characteristic of definite third personal forms (except such as have  $\theta-$ , Athabaskan *s-*, as second

modal prefix) is found also in Hupa (*-iñ-*), Kato (*-ûn-*), and Chipewyan (*-n-*, *-in-*). Examples are:

*t'e/nî/lat* "he drowns" (cf. Kato *tc'n/nûl/lat* "it floated there," *nûl-* assimilated from *nûn-*; *t'e/nî/lat* also "you drown")

*γî/dac* "he dances" (cf. Kato *tc'/gûn/dac/kwañ* "he had danced")

*yā/γî/t!a* "it flies" (cf. Hupa *na/win/tau* "it will settle down;" *yā/γî/t!a* also "it flies")

*dîi/s'at* "it pains" (*dîi-* < \**dîη-*, contracted<sup>51</sup> from \**de-/γîη-*; cf. Hupa *dū/win/tcat* "it got sick")

Rather hard to understand is:

*t'é/An/γAl/lAt* "he is sinking in the water"

One would have expected *-γî-*, not *-γAl-* (as seen above, *-l-* is not third modal, but inorganic). Is *γA-* reduced from first modal *γe-*, this form being indefinite in tense?

In Hupa this *-iñ-* does not seem to be found before third modal prefixes; in Chipewyan *-n-* (*-in-*) may, however, occur before *-t-* and, as inferred from Father Legoff's Montagnais paradigms, also *-l-*. As for Chasta Costa, what examples are available on this point show that *-i-* does not occur before *-l-* (e. g. *yā/γAl/gAθ* "he climbs"). For *t-* verbs I have no safe example. Before *-t-* it seems that *-i-* is present in some cases, not in others:

*tc!ō/γít/siL/la* "he pointed with his finger"

but, without *-i-*:

*na/da/γAt/t!ō* "he is bathing".

On the whole, it seems possible that Athabascan *-Aη-* (or *-An-*) was originally a more freely movable element than it has

<sup>51</sup> Parallel in form to Hupa verbs belonging to Class I, Conjugation 1 D, in which prefixed first modal *d-* or deictic *kʷl-* contracts with *-iη*, *w-* (Athabascan *γ-*) being lost. See Goddard, *op. cit.*, p. 113.

become in e. g. Hupa, being required by certain verbs in their definite tenses, but not by others. This is suggested also by Father Legoff's Montagnais paradigms.

THIRD MODAL PREFIXES. There are three of these: *-t-*, *-l-*, and *-t-*; they always complete a syllable immediately before the stem. *-t-* is characteristic of many verbs which are either transitive or, at any rate, imply activity directed outward; in some cases, however, this significance is not obvious. As we have seen, this *-t-* becomes *-l-* in the first and second persons plural. Examples of *-t-* (*-L-*) are:

*θict/t'āt* "I kicked him"

*tθ!Aθ/dà cAt nā/θit/sī* "story to-me you-told, made"

*néct/lī* "I'm looking at him"

*nāt/dè* "he washes (something)"

*nat/L'ò* "he writes"

*tc!At/t'ò* "he sucks"

*yū/wīs dAt/nī* "he whistles;" *yū/wīs dAct/nī* "I whistle"<sup>52</sup>

*xwAn/né/θiL/ya* "you win"

If nothing precedes this element, it seems (unlike *-l-*) to begin its word without preceding inorganic *A-*:

*dō/wa/l/t'át/nAt* "they will be broken" (*dō/wa* is merely proclitic)

*l/t'í* "he is important"

Verbs in *-l-* are regularly intransitive; they denote states of mind or bodily activities that may be thought of as self-contained, not directed outwards. A reflexive meaning is sometimes apparent. After first person subjective *-c-* (*-s-*) it always appears as *-t-*. Hence the first person singular, the first person plural, and the second person plural of *-t-* verbs and *l-* verbs are always alike (but contrast *θict- < \*sAct-* with *sAst < \*sAcl-*). As *-l-*, when standing after *s*, becomes *-t-* also in the third person, the second person singular alone remains

<sup>52</sup> This verb is irregular, inasmuch as *-l-* does not occur in the second person singular: *vū/wīs dī/nī* "you whistle."

as an infallible criterion of whether a verb belongs to the *l*-class or *l*-class. Examples of *-l*- are:

*ya/dAl/yAc* "he is ashamed"  
*xwAcL/i* "I believe;" *xwil/i/ha* "do you expect?"  
*t'Al/dAc* "he runs"  
*yā/γAl/gAθ* "he climbs"  
*nā/dAl/dè* "he washed himself"  
*Al/Áz* "he sneezes"  
*t'Al/xwAθ* "he coughs"  
*na/xAt/da/γAl/el* "they are bathing"  
*nā/xwAl/ye* "he plays"  
*nā/dAl/nic* "he works"  
*tc!ásL/se* "he cries;" *tc!ā/θil/se* "you cry"  
*tc!ácL/se/t'e* "I'll cry;" *tc!ál/se/t'e* "you'll cry"  
*hō/γAcL/i* "I stop, cease;" *hō/il/i* "stop!"

Verbs in *-t-* are also intransitive. Examples are:

*t'ā/γít/nā* "you drink"  
*ye/γát/ne/la* "he bit (it)"  
*tc!ō/γít/siL/la* "he pointed with his finger"  
*q!wAt/daθt/gAc* "it lies thrown down on top,  
 table-cloth"  
*γAct/lō* "I laugh" (*-t/lō* may, however, represent  
 original Athabascan *-dlō* "to laugh")  
*ya/da/γít/dja* "we are ashamed"

There may be a passive significance in:

*q!wAt/tc!At/dja* "whereon it is eaten, table"

With iterative *na-*:

*na/γá/θAθt/xwī* "I vomit"

VERB STEMS. The stems that have been determined for Chasta Costa are:

*-'ā,-'a* "to have position, to be" (cf. Hupa *-ai, -a*; Kato  
*-'ai', -'a'*): *θ/'ā/la* "(one table) was"

- 'AC* "to bring" (cf. Hupa *-an*, *-úñ*, *-auw* "to transport round objects"; Kato *-'qñ*, *-'qc*): *γAn/na/'AC* "he will bring it"
- 'An* "to bring to a halt, stop" (perhaps another form of preceding stem): *nā/ní/An* "stop him!"
- AZ* "to sneeze": *ACL/Áz* "I sneeze"
- al* "to come" (cf. Chipewyan *-'as*, *-'az*, *-'ais* "to travel, used of two persons only"?): *an/γí/'al* "come on!"
- êł*, *-el* "to bathe (plur. subject)" (cf. Chipewyan *-el*, *-eL*, *-ūL* "to move on the surface of water"): *na/da/γíl/êł* "we are bathing"
- ī* "to see, look at" (cf. Hupa *-en*, *-iñ*; Kato *-'iñ'* "to look"): *γe/θíc/ī* "I saw him"
- ī* "to stop, cease" (cf. Hupa *-en*, *-iñ* "to do, to act, to deport one's self"?): *hō/γACL/ī* "I stop (laughing)"
- ī* "to believe, expect": *xwACL/ī* "I believe"
- ya*, *-yAC*, *-yic* "to go, come" (cf. Hupa *-yai*, *-ya*, *-yauw*; Kato *-yai*, *-ya*, *-yac*): *t'e/θíc/ya* "I go;" *t'Ac/yAc/t'e* "I must go"
- ya* "to eat" (cf. Hupa *-yan*, *-yúñ*, *-yauw*; Kato *-yan'* *-yíl'*): *tc!Aγ/γe/θíc/ya* "I eat;" *q!wÁt/tc!At/dja* (<*-t/ya*) "whereon one eats, table"
- ya* "to win" (cf. Kato *-yan*, "Kato Texts," p. 146, l. 13; not listed in "Elements of the Kato Language"): *xwAn/né/θiL/ya* "you win"
- yan* "to upset" (cf. Kato *-yañ* "to clear off"?): *dō/wá/An/nā/yan/nAl* "he will upset them"
- ya*, *-yAC* "to be ashamed" (cf. Kato *-yañ* "to be ashamed"): *ya/dAl/yAC* "he is ashamed;" *ya/da/γít/dja* (<*-t/ya*) "we are ashamed"
- ye* "to play" (cf. Hupa *-ye* "to dance"): *nā/xwAl/ye* "he plays"
- lal* "to sleep" (cf. Hupa *-lal*, *-laL*; Kato *-lal*, *-laL*): *t'êθ/-lal/la* "he's been sleeping"
- lat* "to sink in water;" *-lat* "to drown" (cf. Hupa *-lat*,

- la* "to float"): *t'é/An/γAC/LAt* "I am sinking;" *t'e/-nic/lat* "I drown"
- lê* "to become" (cf. Hupa -*len*, -*liñ*, -*lū*, -*le*; Kato -*liñ*<sup>ε</sup>, -*le*): *dō/wa/Al/lê'* "it will become"
- lec* "to wager, bet": *né/tc!ūc/lec* "I'll bet you"
- lec* "to smoke": *mAt/t'é/tc!At/ts!Al/léc* "wherewith it is smoked"
- lō* "to laugh, smile" (cf. Chipewyan -*dlō*, -*dlōk*): *γít/lō* "laugh!"
- L!ō* "to write" (cf. Hupa -*Lōn*, -*Lō*, -*Lōw*, -*Loi* "to make baskets, to twine in basket-making;" Kato -*Lōi*, -*Lō*, -*Lōn*): *naL/L!ō* "he writes"
- nā* "to drink" (cf. Hupa -*nan*, -*nūñ*; Kato -*nqn*): *t'ā/-γAct/nā* "I drink"
- nā* "to lie" (cf. Kato *nōL/tin/na*<sup>ε</sup> "were left"?): *q!wAt/dasL/nā* "it was lying on it"
- ne* "to bite, seize with one's teeth": *ye/γát/ne/la* "he bit it"
- nī*, -*n* "to make a sound, to say" (cf. Hupa -*ne*, -*n* "to speak, to make a sound;" Kato -*nī*, -*ne*, -*n*, -*nec*, -*nīL*): *yú/wīs dAt/nī* "he whistles;" *á/djAn* "he says"
- nic* "to work": *nā/dAl/nic* "he works" (cf. Montagnais -*ni* "exprime l'action des mains"<sup>53</sup>)
- θAt* "to wash oneself (plur. subject)" (cf. Hupa -*sel*, -*seL* "to be or to become warm;" Kato -*sīl* "to steam," -*sūl*, -*sūL* "to be warm"): *tc!At/t'ít/θAt* "we wash ourselves"
- θet* "to throw": *γā/γt/θet* "you threw"
- se* "to cry" (cf. Hupa -*tcwū*, -*tcwe* "to cry, to weep;" Kato -*tceG*, -*tce'*): *tc!ásL/se* "he cries"
- sī* "to cause" (cf. Hupa -*tcwen*, -*tcwiñ*, -*tcwe* "to make, to arrange, to cause;" Kato -*tcin*, -*tcī*, -*tcīL*): *náct/sī* "I cause"
- sit* "to point with one's finger": *tc!ō/γít/siL/la* "he pointed with his finger"

<sup>53</sup> Father L. Legoff, "Grammaire de la Langue Montagnaise," p. 139.

- da'*, -*dā* "to sit, stay" (cf. Hupa -*dai*, -*da*; Kato -*da*, -*dai*): *dā/θi/dā* "you are sitting"
- dac* "to run" (cf. Hupa -*dal*, -*daL*, -*dauw* "to pass along, to go, to come;"; Kato -*dac* "to travel"): *t'Al/dAc* "he runs"
- dac* "to dance" (cf. Kato -*dac* "to dance"): *ni/dac* "you dance"
- de* "to wash (sing. subject)" (cf. Kato -*deg*, -*de'*): *nā/-daL/dè* "he washed himself"
- t'āl* "to kick" (cf. Hupa -*tal*, -*tūl*, -*tūL*, -*tal* "to step, to kick;"; Kato -*tal'*, -*tqL*): *θicl/t'āl* "I kicked him"
- t'Ac* "to lie down, go to bed" (cf. Hupa -*ten*, -*tiñ*, -*tūw* "to lie down;"; Kato -*tin*, -*tûc*): *dā/nAc/t'Ac* "I go to bed"
- t'at* "to break, go to pieces" (cf. Chipewyan -*tal*, -*tūl* "to break"): *dō/wa/t/t'át/nAt* "they will be broken"
- t'e* "to want" (cf. Hupa -*te* "to look for, to search after"?): *dō/ucL/t'e* "I do not want;"; *dé/ucL/t'e* "what I want"
- t'ī* "to be, make valuable" (cf. Carrier *tūt/thi* "thou makest him valuable, treatest him as important"): *t/t'ī γAN/na/'à* "he brags"
- t'a* "to fly" (cf. Hupa -*tau*; Kato -*t'aG*, -*t'a'*): *dō/yác/t'a* "I won't fly"
- t'e* "to be of (that) sort" (cf. Hupa -*te*; Kato -*t'e*): *dō/dAt 'An/t'e* "there is not anywhere (one like him)"
- t'ō* "to swim, bathe (sing. subject)": *nac/t'ō* "I swim, bathe"
- t'ō* "to suck" (cf. Kato -*t'ōt*): *tc'Al/t'ō* "he sucks"
- tθi* "to sit (plur. subject)" (cf. Hupa -*tse*; Chipewyan -*θ'ī*): *dā/de/θil/tθi* "we are sitting"
- ts'at* "to hurt, pain (intr.)" (cf. Hupa -*tcat*, -*tca* "to be sick, to become ill"): *d'i/s'at* "(my eyes) hurt"
- γa* "to go about, live" (cf. Hupa -*wai*, -*wa* "to go, to go about;"; Kato -*ga*, -*gai*): *nā/γa* "he goes about, lives"
- xe* "to paddle" (cf. Hupa -*xen*, -*xūw* "to float, used only of plural objects;"; Kato -*ke'* "to bathe (plural only);")

- Chipewyan *-kī* "to paddle a canoe, to travel by canoe"): *nác/xē* "I paddle"
- xwAθ* "to cough" (cf. Kato *kōs* "cough," as noun; Carrier *xwæs*): *t'Al/xwAθ* "he coughs"
- xwī* "to vomit" (cf. Carrier *khu* "vomiting," as noun): *na/γǎ/θAθt/xwī* "I vomit"
- gAθ* "to climb" (cf. Hupa *-kas* "to throw"): *yā/γAl/gAθ* "he climbs"
- gAc* "to throw"? (cf. Hupa *-kas* "to throw"): *q!wAt/daθt/-gAc* "it lies thrown down on top, table-cloth"

It will be observed that several verb stems are restricted in their use as regards number of subject (or object). This trait is characteristic of Athabascan, as also of other American linguistic stocks.

DEFINITE AND INDEFINITE TENSES. My material on Chasta Costa is not full enough to enable me to give a satisfactory idea of its tense-mode system. It is clear, however, that absolute time (present, past, future) is quite subordinate to whether activities are thought of as taking place at some definite time (generally present or past) or are more indefinite as to time occurrence. Indefinite forms are apt to be used for general statements that apply irrespective of any particular time, for future acts, for negative (particularly negative future) acts, and regularly for imperative and prohibitive forms. The contrast between definite and indefinite present forms comes out in:

- |   |   |
|---|---|
| { | definite: <i>ná/da/γAct/t!ǒ</i> "I bathe" (i. e. am. now engaged in bathing)                              |
|   | indefinite: <i>cAt/q!we na/dAct/t!ō</i> "I'm used to bathing" (here bathing is not restricted as to time) |
| { | definite: <i>tc!ā/sAsL/se</i> "I cry"   |
|   | indefinite: <i>t'wī/dAn As/se</i> "I always cry"  |
| { | definite: <i>γéθt/lō</i> "he breaks into laughter" (i. e. laughs at one particular point of time)         |
|   | indefinite: <i>γát/lō</i> "he laughs"   |

- { definite: *xAt/t'é/lat/la* "they have been sleeping" (may be said of them at moment of waking up)  
 { indefinite: *xAt/t'Al/lat* "they sleep"

Futures, as we shall see, are explicitly rendered by suffixing *-t'e* to present (generally indefinite) forms; but simple indefinite forms, particularly with adverbs pointing to future time, may often be used as futures in contrast to definite present forms. Examples are:

- { definite: *na/da/γil/êl* "we are bathing"  
 { indefinite: *nā/dil/et* "we'll bathe"  
 { definite *tθ!Aθ/dā cAt na/θil/sī* "story to-me you-told"  
 { indefinite: *xún/dè tθ!Aθ/dā nAt náct/sī* "tomorrow story to-you I-tell"  
 { definite: *n/γe/θic/ī* "I saw you"  
 { indefinite: *xAL/ts!i/dAn dō/wan/γAc/ī* "this-evening I'll-see-you"  
 { definite: *t'e/θic/ya* "I go"  
 { indefinite: *xun/dé t'ac/yAc* "tomorrow I'll-go"

Negative presents or futures are regularly expressed by prefixing *dō* "not" to indefinite forms; when more explicitly future, *-t'e* is suffixed to them. Examples of indefinite forms preceded by *dō* are:

- { definite: *tc!ac yā/γi/t!a* "bird is-flying"  
 { indefinite: *dō/yā/t!a* "he won't fly"  
 { definite: *na/γā/θAθt/xwī* "I vomit"  
 { indefinite: *dō/na/γAct/xwī* "I do not vomit"  
 { definite: *tc!ā/sASL/se* "I cry;" *tc!ā/θil/se* "you cry"  
 { indefinite: *dō/As/se* "I'm not crying;" *dō/ī/se* "you're not crying"  
 { definite: *γe/θic/ī* "I saw him;" *c/γe/θi/ī* "you saw me"  
 { indefinite: *dō/γAc/ī* "I didn't see him;" *dō/lā/c/γī/ī* "you didn't see me"  
 { definite: *t'e/θic/ya* "I go;" *t'êθ/ya* "he goes"  
 { indefinite: *dō/t'Ac/yic* "I'll not go;" *dō/t'Ac* "he won't go" (< \*t'A/yAc)

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Imperatives are simply second person subjective indefinite forms. Examples are:

$\gamma\acute{i}/\bar{i}$  "see him!"  $c/\gamma\acute{i}/\bar{i}$  "see me!"  
 $n\acute{e}t/\bar{i}$  "look at him!" (identical with indefinite present:  
 $n\acute{e}t/\bar{i}$  "you're looking at him");  $ne/c\acute{it}/\bar{i}$  "look at me!"  
 $n\bar{a}/n\acute{i}/An$  "stop him!"

Prohibitives are simply imperative forms preceded by *la*:

$la/\gamma\acute{i}/\bar{i}$  "don't see him!"

First person plural indefinite forms may have hortatory significance:

$n\bar{a}/xw\acute{il}/ye$  "let us play!"

As regards form, definite tenses are primarily distinguished from indefinite tenses by the presence of second modal prefixes in the former, often also by the appearance of the first modal prefixes in a fuller form than in the latter; the presence of *-i-* or *-i-* in certain third person definite forms may also be recalled. It seems, further, that certain adverbial prefixes which have a short vowel (even though in an open syllable) in definite forms lengthen it in corresponding indefinite forms:

}	definite: $n\acute{a}/da/\gamma Act/t/\acute{o}$ "I bathe;" $na/da/\gamma\acute{u}t/t/\acute{o}$ "you bathe;" $na/da/\gamma\acute{A}t/t/\acute{o}$ "he's bathing"
	indefinite: $n\bar{a}/dAct/t/\acute{o}/t'e$ "I'll bathe;" $n\bar{a}/d\acute{u}t/t/\acute{o}/t'e$ "you'll bathe;" $n\bar{a}/d\acute{A}t/t/\acute{o}/t'e$ "he'll bathe"
}	definite: $na/da/\gamma\acute{u}l/\acute{e}t$ "we are bathing;" $na/da/\gamma\acute{o}l/\acute{e}t$ "ye are bathing;" $na/xAt/da/\gamma\acute{A}l/e\acute{t}$ "they are bathing"
	indefinite: $n\bar{a}/d\acute{u}l/e\acute{t}$ "we'll bathe;" $n\bar{a}/d\acute{o}l/e\acute{t}$ "ye will bathe;" $n\bar{a}/xAt/d\acute{A}l/e\acute{t}$ "they'll bathe"
}	definite: $tc!a/\gamma\acute{a}/\theta\acute{il}/se$ "we cry;" $tc!a/\gamma\acute{a}/\theta\acute{o}l/se$ "ye cry"
	indefinite: $tc!\bar{a}/\gamma\acute{a}l/se$ "we'll cry;" $tc!\bar{a}/\gamma\acute{a}l/se/t'e$ "ye will cry"

These changes of quantity, however, are doubtless only secondarily connected with change of tense, as indicated, e. g., by

*tc!ā-* in definite singular forms: *tc!ā/sÁsL/se* "I cry;" *tc!ā/θíl/se/ha* "do you cry?" It is very likely that we are dealing here primarily with considerations of syllabic and quantitative rhythm or balance.<sup>54</sup>

In Hupa Goddard has exhaustively shown that verb stems often assume different forms for different tenses and modes. This is very likely also true to a considerable extent of Chasta Costa, but I have but little material bearing on this point. A quantitative change is found in:

{ definite *-ét*: *na/da/γíl/ét* "we are bathing"  
 { indefinite *-et*: *nā/díl/et* "we'll bathe"

*-c* characterizes indefinite forms in:

{ definite *-ya*: *t'e/θíc/ya* "I go;" *t'e/θí/ya* "you go"  
 { indefinite *-yAc*: *t'Ac/yAc/t'e* "I must go;" *t'ī/yAc/t'e* "you must go"  
 { negative indefinite *-yic*: *dō/t'Ac/yic* "I'll not go;" *lá/t'ī/-yic* "don't go!"  
 { definite *-ya*: *ya/da/γít/dja(<-t/ya)* "we are ashamed"  
 { indefinite *-yAc*: *ya/dAc/t/yAc* "I am ashamed"

PRONOMINAL OBJECTS. Pronominal objects are regularly prefixed to the verb. They come before deictic and first modal elements, but after adverbial prefixes. Thus, while not as thoroughly immersed in the verb form as the subjective pronominal elements, they cannot well be considered apart from it. The third person singular object is not designated. In form the objective elements are, on the whole, identical with the possessive pronominal prefixes of the noun. They are:

Singular 1.	<i>c-</i>	Plural 1.	<i>nō-</i>
2.	<i>n-, ne-</i>	2.	<i>nō-</i>
3.	—	3.	<i>λō-</i>

<sup>54</sup> Hardly stress accent as such. I cannot help feeling that such rhythmic phenomena will turn out to be of fundamental importance for Athabaskan generally.

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"He—them" or "they—them" is expressed by means of  $x\bar{i}$ - $c$ - and  $n$ -, when standing at the beginning of a verb form, take no inorganic  $A$ - before them (contrast subjective  $Ac$ -).

The definite forms of  $\gamma\acute{e}\theta/\bar{i}$  "he saw him" with combined pronominal subject and object are:

With first person singular object:

- |          |   |           |                                      |
|----------|---|-----------|--------------------------------------|
| Sing. 2. | $c/\gamma e/\theta\acute{i}/\bar{i}$ "you saw me" | Plural 2. | $c/\gamma e/\theta\acute{o}/\bar{i}$ |
| 3.       | $c/\gamma\acute{e}\theta/\bar{i}$                 | 3.        | $c/xA/\gamma\acute{e}\theta/\bar{i}$ |

With second person singular object:

- |          |   |           |                                       |
|----------|---|-----------|---------------------------------------|
| Sing. 1. | $n/\gamma e/\theta\acute{i}c/\bar{i}$ "I saw you" | Plural 1. | $n/\gamma e/\theta\acute{i}t/\bar{i}$ |
| 3.       | $n/\gamma\acute{e}\theta/\bar{i}$                 | 3.        | $n/xA/\gamma\acute{e}\theta/\bar{i}$  |

With first person plural object:

- |          |  |           |  |
|----------|--|-----------|--|
| Sing. 2. | $n\bar{o}/\gamma e/\theta\acute{o}/\bar{i}$ "you saw us" | Plural 2. | $n\bar{o}/\gamma\acute{e}/\theta\bar{o}/\bar{i}$ |
| 3.       | $n\bar{o}/\gamma\acute{e}\theta/\bar{i}$                 | 3.        | $n\bar{o}/xA/\gamma\acute{e}\theta/\bar{i}$      |

For  $n\bar{o}/\gamma e/\theta\acute{o}/\bar{i}$  "you saw us" one would have expected  $*n\bar{o}/\gamma e/\theta\bar{i}/\bar{i}$ . It seems that "ye saw us" has been extended in its usage to embrace also "you (sing.) saw us." It may indeed be that my data on this point rest on a misunderstanding, but there seems to be something analogous in Hupa. "You (sing.) are picking us up" would be expected in Hupa to be  $*y\acute{u}n/n\bar{o}/h\acute{i}l/l\acute{u}w$  ( $h\acute{i}l$ - assimilated from  $h\acute{i}\bar{n}$ -). Instead of this form, however, Goddard lists  $y\acute{u}n/n\bar{o}/h\bar{o}l/l\acute{u}w$ , which is not identical with but seems, as regards its second  $\bar{o}$ - vowel, to have been influenced by  $y\acute{u}n/n\bar{o}/h\bar{o}/l\acute{u}w$  "ye are picking us up."<sup>55</sup>

With second person plural object:

- |          |  |           |  |
|----------|--|-----------|--|
| Sing. 1. | $n\bar{o}/\gamma e/\theta\acute{i}c/\bar{i}$ "I saw you (pl.)" | Plural 1. | $n\bar{o}/\gamma e/\theta\acute{i}t/\bar{i}$         |
| 3.       | $n\bar{o}/\gamma\acute{e}\theta/\bar{i}/l\bar{i}$              | 3.        | $n\bar{o}/xA/\gamma\acute{e}\theta/\bar{i}/l\bar{a}$ |

<sup>55</sup> Goddard, *op. cit.*, p. 186.

With third person singular object:

- |          |   |           |   |
|----------|---|-----------|---|
| Sing. 1. | $\gamma e/\theta\acute{t}c/\bar{i}$ "I saw him" | Plural 1. | $\gamma e/\theta\acute{t}/\bar{i}$      |
| 2.       | $\gamma e/\theta\acute{t}/\bar{i}$              | 2.        | $\gamma e/\theta\acute{\delta}/\bar{i}$ |
| 3.       | $\gamma\acute{\theta}/\bar{i}$                  | 3.        | $x\bar{i}/\gamma\acute{\theta}/\bar{i}$ |

With third person plural object:

- |          |  |           |  |
|----------|--|-----------|--|
| Sing. 1. | $x\bar{o}/\gamma\acute{e}/\theta\acute{t}c/\bar{i}$ "I saw them" | Plural 1. | $x\bar{o}/\gamma\acute{e}/\theta\acute{t}/\bar{i}$ (heard also as $x\bar{o}/w\acute{e}-$ ) |
| 2.       | $\gamma e/\theta\acute{\delta}/\bar{i}$                          | 2.        | $x\bar{o}/\gamma\acute{e}/\theta\bar{o}/\bar{i}$   |
| 3.       | $x\bar{i}/d\Delta/\gamma\acute{e}\theta/\bar{i}$                 | 3.        | $x\bar{i}/\gamma\acute{e}\theta/\bar{i}/l\Delta$   |

Here again, one would have expected  $*x\bar{o}/\gamma e/\theta\acute{t}/\bar{i}$  for "you (sing.) saw them." As it is, "you (pl.) saw him" seems to be used also for "you (sing.) saw them," both forms being logically parallel in that both involve a second person—third person relation, only one of the two persons, however, being plural.

Objective forms of indefinite tenses of this verb are:

With first person singular object:

- $d\bar{o}/w\Delta/c/\gamma\bar{i}/\acute{t}/\bar{e}$  "you'll see me"  
 $d\bar{o}/l\Delta/c/\gamma\bar{i}/\bar{i}$  "you didn't see me"  
 $c/\gamma\acute{t}/\bar{i}$  "see me!"  
 $c/\gamma\Delta/\acute{t}/\bar{e}$  "he'll see me"

With second person singular object:

- $d\bar{o}/w\Delta/n/\gamma\Delta c/\bar{i}$  "I'll see you"

With third person singular object:

- $d\bar{o}/w\Delta/\gamma\Delta c/\bar{i}$  "I'll see him"  
 $d\bar{o}/\gamma\Delta c/\bar{i}$  "I didn't see him"  
 $d\bar{o}/\gamma\Delta c/\bar{i}/\acute{t}/\bar{e}$  "I won't see him"  
 $d\bar{o}/w\Delta/\gamma\bar{i}/\acute{t}/\bar{e}$  "you'll see him"  
 $\gamma\acute{t}/\bar{i}$  "see him!"  
 $l\Delta/\gamma\acute{t}/\bar{i}$  "don't see him!"

Objective forms of indefinite tenses of  $ne-t-\bar{i}$  "to look at" are:

With first person singular object:

- $ne/c\acute{t}/\bar{i}$  "look at me!"  
 $ne/c\Delta\acute{t}/\bar{i}$  "he looks at me"

With third person singular object:

- néct/ī* "I'm looking at him"  
*dō/néct/ī* "I'm not looking at him"  
*nét/ī* "you're looking at him;" "look at him!"  
*nél/ī* "let's look at him!"  
*ne/xō/ōl/ī* "you (plur.) look at him"

This last form may, likely enough, have been mistranslated for "you (plur.) look at them" (cf. *xō/γé/θō/ī* above).

Other forms with first person singular object are:

- cAsł/sī* "he lets me, causes me to"  
*cAsł/t'át* "he kicked me"

With second person singular object:

- né/tc!ūc/lec* "I'll bet you"

PASSIVES. As in Hupa, pronominal subjects of passive verbs are objective in form. From *ne-l-ī* are formed:

- |                                   |                                      |
|-----------------------------------|--------------------------------------|
| <i>nés/ts!At/ī</i> "I am seen"    | <i>ne/nō/ts!At/ī</i> "we are seen"   |
| <i>nén/ts!At/ī</i> "you are seen" | <i>ne/nō/ts!At/ī</i> "ye are seen"   |
| <i>nē'/ts!At/ī</i> "he is seen"   | <i>ne/xō/ts!At/ī</i> "they are seen" |

*ts!At-*, which appears in these forms, probably contains third modal *-t-* preceded by deictic *ts!*- implying indefiniteness of logical subject: "man sieht mich." Apparently connected with this *ts!At-* is *ts!Al-* in:

- mAt/t'é/tc!At/ts!Al/lec* "wherewith it is smoked, smoking utensils"

VERBAL SUFFIXES. A number of enclitic elements of temporal or modal significance are found rather loosely suffixed to verb forms. These, so far as illustrated in our material, are:

*-t'e* future particle (cf. Hupa *-te, -teL*; Kato *-teL, -tē/le*):

- ACL/Áz/t'e* "I shall sneeze"  
*t'Ac/lát/t'e* "I shall sleep"  
*nā/dAct/t'ō'/t'e* "I shall bathe"  
*néct/ī/t'e* "I'll look at him"  
*dō/γAc/ī/t'e* "I won't see him"

*nā/dAcL/nic/t'e* "I shall work"  
*dō/nā/dAcL/nic/t'e* "I shall not work"  
*tc!ácL/se/t'e* "I shall cry"  
*dō/As/se/t'e* "I'll not cry"  
*tc!ál/se/t'e* "you will cry"

*-t'e* seems to imply obligation to some extent, as well as simple futurity, as is shown by its translation as "must" in some cases:

*As/sé/t'e* "he must cry"  
*t'Ac/yAc/t'e* "I must go"  
*t'ī/yAc/t'e* "you must go"

All forms with suffixed *-t'e*, it will be noticed, are indefinite; none has been found that is definite.

*-nAt* seems to be used for future acts:

*dō/wá/An/nā/yan/nAt* "he will upset them"  
*dō/wa/t/t'át/nAt* "they will be broken, go to pieces"

*-ha*, *-hā* interrogative:

*nā/xwíl/ye/ha* "are you playing?"  
*t'e/θō/lat/ha* "have ye been sleeping?"  
*nō/γe/θō/ī/ha* "did you see us?"  
*net/ī/ha* "did you look at him?"  
*tc!ā/θíl/se/ha* "did you cry?"  
*dō/ō/se/ha* "are ye not crying?"  
*As/sé/t'e/ha* "will he cry?"  
*tc!ā/γál/se/t'e/ha* "will ye cry?"  
*t'ā/γít/nā/hā* "do you drink?"

*ha* seems to both precede and follow in:

*ha/xwíl/ī/ha* "do you expect?"

*-la*<sup>̄</sup> probably inferential (cf. Hupa *-xō/lan*, *-xō/lúñ*):

*t'e/θÁθ/lat/la* "I've been sleeping" (said on waking up)  
*LÁθ/ā/la* "there was one (table)"  
*txAs/xé/la* "(evidently) rich"

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Probably also in:

*dō/wí/la* "of course"

*-la* seems also to be used of simple narrative in past time, with very weak, if any, inferential force:

*tc!ō/γít/siL/la* "he pointed with his finger"

*ye/γát/ne/la* "he bit it"

*nAn/náθ/yā/la* "he went around it"

*nō/γéθ/ī/la* "he saw you (plur.)" (cf. *nō/γéθ/ī* "he saw us")

*nō/xA/γéθ/ī/la* "they saw you (plur.)" (cf. *nō/xA/γéθ/ī* "they saw us")

*xī/γéθ/ī/la* "they saw them" (cf. *xī/γéθ/ī* "they saw him")

I do not know whether the contrasts in person and number found in the last three pairs of forms are real or only apparent.

*-le* of unknown significance

*nā/xōl/yé/le* "you (plur.) play"

**SYNTACTIC COMBINATION OF VERBS.** Two verb forms sometimes combine syntactically, one depending on the other. The second verb is subordinate to the first in:

*dō/ucL/t'e nā/xwACL/ye* "I-do-not-want I-play," i. e. "I don't want to play"

*hō/γACL/ī γAct/lō* "I-stop I-laugh," i. e. "I stop laughing"

*hō/īl/ī γit/lō* "stop laugh!" i. e. "stop laughing!"

*ha/xwil/ī/ha γAn/na/Ac* "do-you-expect he-will bring?"

It seems that sometimes the first verb, which is then a third personal form, acts as a sort of complementary infinitive to the second:

*yā/γí/t!a θict/sī* "he-flies I-make-him," i. e. "I let him fly"

*yā/γí/t!a cAsl/sī* "he-flies he makes-me," i. e. "he lets me fly"

*t/t'ī γAn/na/à* "he-is-important he-has-for(?)," i. e. "he brags about him"

TEXT: THE GOOD DOG.<sup>56</sup>

l̄/t̄i <sup>57</sup> Make important	γAn/na/'à <sup>58</sup> he has	xã/dat <sup>59</sup> his own	lī/tc!é. <sup>60</sup> dog.	dó/dat <sup>61</sup> "Nowhere
'An/t!e <sup>62</sup> is like him	nã/γa <sup>63</sup> moves about,"	ã/djAn. <sup>64</sup> he says.	dé/ucL/t'e <sup>65</sup> "What I want	hī/t!i <sup>66</sup> that thing

<sup>56</sup> Wolverton Orton claimed not to know any regular Chasta Costa myth texts. The following, which is merely an English joke anecdote taken from a popular periodical that happened to be lying about and translated into Chasta Costa by Mr. Orton, will at least serve to give some idea of Chasta Costa word order and sentence construction.

<sup>57</sup> *l-*, third modal element. *-t̄i*, verb stem. Cf. Carrier *t̄i/t̄i* "thou makest him valuable, treatest him as important."

<sup>58</sup> *γAn-* and *na-*, adverbial prefixes. *-a*, verb stem. For *na/'a* "to have," cf. Hupa *nañ/a/te* "you will have." "He has his dog made valuable, treated as important," i. e., "he brags about his dog." Indefinite tense, because statement is general and does not refer to any one point of time.

<sup>59</sup> *x-*, third personal pronominal element. *-ã/dat*, reflexive possessive element.

<sup>60</sup> Possessed form of *l̄i* "dog." Observe change of *l-* to *l-*, and suffixing of *-tcle*. Cf. Hupa *-l̄iñ/k(?)e*; Chipewyan *lin/k'e*.

<sup>61</sup> *dō*, negative adverb. *-dat*, postpositive element.

<sup>62</sup> *'A-*, reduced from *'a-*, prefix used with verbs of saying, doing, and being. It is probably equivalent to indefinite demonstrative: "(there is of) that (kind)." *-n-*, first modal element. *-t!e*, verb stem. Cf. Hupa *ún/te* "there is;" Kato *qn/t'ē* "it is;" Chipewyan *an/t'e/hī/k'e* "it was." Indefinite tense, because statement is general.

<sup>63</sup> *nã-*, adverbial prefix. *-γa*, verb stem. "Moves about," i. e., "is living, is to be found": "there is no (dog) like him anywhere." Cf. Hupa *na/wa* "they were there;" Kato *na/ga/kwqn* "he had walked;" Navaho *na/Ga*, i. e., *na/γa*, "he is going about" (quoted from Goddard, Analysis of Cold Lake Dialect, Chipewyan). Indefinite tense; general statement.

<sup>64</sup> *ã-*, prefix used with verb of saying; see note 62. *dj-*, third personal deictic prefix; or perhaps *djA-* = *\*dya-*, reduced from *\*dye-*, first modal prefix *d-* and third person deictic prefix *ye-*. *-n*, verb stem. Probably definite in tense, though it shows no second modal prefix; cf. Hupa present definite third singular *a/den*.

<sup>65</sup> *de*, apparently relative in force. *u-*, adverbial prefix. *-c-*, first person singular subjective element. *-L-*, third modal prefix. *-t'e*, verb stem. Indefinite tense; general statement.

<sup>66</sup> *hī*, demonstrative stem. *-t!i*, suffix applying, it would seem, to things. Perhaps *hī/t!i* is assimilated from *\*hī/t!a*; for *-t!a*, cf. Chipewyan *t!a* "that; often used to point out one of several persons or things characterized by a descriptive phrase or clause."

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s/ts!An/na/'Ác <sup>67</sup>	ał/dac/ní/dan. <sup>68</sup>	dó	t'wī/dè <sup>69</sup>	Lá	ā/djan.
to me he brings	when I tell him."	"Not	everything,"	one	says.
łf/t li/nī <sup>70</sup>	maN/mé/q'le <sup>71</sup>	t'/γí/ī. <sup>72</sup>	xat	q!wát/tc!At/djā <sup>73</sup>	
Dog-owner	around in house	he looked around. Then		table	
Lāθ/ā/la <sup>74</sup>	maN/mé <sup>75</sup>	was/xé	q!wát/daθt/gác <sup>76</sup>	nāθ/L!ō <sup>77</sup>	
one there was	in house.	Good	table-cloth,	paper	
hī	q!wát/dasL/nā <sup>78</sup>	ī/γí/tc'u <sup>79</sup>	mał/t'é/tc!At/ts!Al/léc. <sup>80</sup>		
that	was lying thereon,	that	wherewith it is smoked.		

<sup>67</sup> *s-*, assimilated from *c-*, objective (or possessive) first person singular pronominal element. *-ts!An*, postposition. *na-*, adverbial prefix. *-'Ác*, verb stem. Cf. Hupa *dō/xō/liñ/na/ta/aww* "he won't carry." Indefinite tense; general statement.

<sup>68</sup> *a-*, as in notes 62 and 64. *-ł-*, postposition; refers to implied third person indirect object of verb. *-ú-*, first modal prefix. *-c-*, as in note 65. *-nī*, verb stem. *-dan*, postposition; here used to subordinate verb. Cf. Hupa *ún/nil/dūw/ne* "I am telling you." Indefinite tense; general statement.

<sup>69</sup> *t'wī*, pronominal stem denoting totality. *-de*, indefinite demonstrative stem.

<sup>70</sup> *łi* "dog." *-łi/nī* "one who has;" evidently contains common Athabascan suffix *-n*, *-nī* "person."

<sup>71</sup> *maN* "house." *-me/qle*, compound postposition.

<sup>72</sup> *t'*, first modal prefix reduced from *t'e-*. *γī-*, first modal prefix *γ-* reduced from *γe-*, *-ī-* remaining unexplained. *-ī*, verb stem. According to this analysis, *t'/γī/ī* is indefinite in tense; this seems hard to understand, as it refers to one act in past time. Another analysis seems more likely: *t'*, instead of or misheard for *t'e-*, form regularly used in definite tenses; *γ-*, second modal prefix; *-ī-*, definite third person ending for *γ-* verbs. Cf. Hupa *łit/te/we/iñ/il* "he looked about as he went along."

<sup>73</sup> *q!wát-*, postposition "upon" used as adverbial prefix. *łc!*, deictic prefix here indicating indefiniteness of object. *-ł-*, third modal prefix presumably with passive force. *-dja*, from *-ya* after *-ł-*, verb stem "to eat." "It is eaten thereon," i. e., "table."

<sup>74</sup> *Lā*, numeral "one," to which verb proper, *θ/ā/la*, is attached. *θ-*, second modal prefix. *ā-*, verb stem. *-la*, verb suffix. Definite past tense, because referring to definite point of time in narrative. Cf. Chipewyan *θe/'ā/hī/k'e/lai* "(lake) was there."

<sup>75</sup> *-me*, postposition.

<sup>76</sup> *q!wát-*, as in note 73. *da-*, adverbial prefix. *θ-*, second modal prefix. *-ł-*, third modal prefix. *-gac*, verb stem. Verb form ("it lies thrown on top") used as noun.

<sup>77</sup> *nā*, adverbial prefix. *θ-*, second modal element. *-L!ō*, verb stem. Verb form ("whereon there is writing") used as noun.

<sup>78</sup> *q!wát-*, as in note 73. *da-*, adverbial prefix. *s-*, second modal prefix. *-ł-*, third modal prefix; doubtless original *-ł-* changed to *-ł-*, *-L-*, because of preceding *s-*, which in turn is prevented by it from changing to *θ-*. *-nā*, verb stem. Definite past tense.

<sup>79</sup> Analysis uncertain, presumably demonstrative in force.

<sup>80</sup> *mał-* "therewith" consists of pronominal stem *m-* followed by postposition *-ł-*. *t'e-*, adverbial prefix. *łc!*, deictic prefix indicating indefiniteness of object. *-ł-*, consonant borrowed from following *-łc!*, to complete syllable begun by *łc!*. *łc!Al-*, apparently passive in force. *-lec*, verb stem. Verb form used as noun: "smoking materials."

txAS/xé/la<sup>81</sup> dó/at/tlī.<sup>82</sup> q!wát/tc!at/djā xá s/ts!AN/na/Ác  
 He was rich bachelor. "Table quickly he'll bring to me,"  
 djÁN/la<sup>83</sup> hī/tlī/ni. dō/LAN<sup>84</sup> xwACL-ī<sup>85</sup> djÁN/la dú/at/tlī/ni.  
 said dog-owner. "Not much I believe it," said bachelor.  
 né/tc!ūc/lec.<sup>86</sup> cō<sup>u</sup>/djī.<sup>87</sup> an/γí/aL<sup>88</sup> djÁN/la hī<sup>i</sup>/tlī/ni tc!ō/γít-  
 "I'll bet you." "All right!" "Come here!" said dog-owner, he pointed  
 /siL/la<sup>89</sup> hī q!wát/tc!at/dja lát/dAN<sup>90</sup> nan/náθ/yā/la<sup>91</sup>  
 with his finger. Dog table once he went around.  
 xat ye/γát/ne/la<sup>92</sup> mā<sup>a</sup>/dAN.<sup>93</sup> lá djÁN/la dó/at/tlī/ni  
 Then he bit it at edge. "Don't!" said bachelor,  
 t'wī/dé dō/wa/nā/yan/nAī.<sup>94</sup> dō/wī/la<sup>95</sup> djÁN/la q!wát/tc!at/dja  
 "everything he will upset." "Of course," he said, "table"

<sup>81</sup> txAS/xé, adjective stem "rich;" perhaps related to wAS/xé "good." -la, verb suffix of probably inferential value.

<sup>82</sup> dō, negative. at = atl "wife." -tlī, noun suffix denoting "one who has." "One who has no wife," i. e., "bachelor."

<sup>83</sup> djÁN, as in note 64. -la, verb suffix.

<sup>84</sup> dō, negative. LAN, adverb "much."

<sup>85</sup> xw-, adverbial prefix. -c-, first person singular subjective pronominal element. -l-, third modal prefix; from -l-, because of preceding -c- (cf. note 98). -ī, verb stem. Indefinite present, negative adverb preceding.

<sup>86</sup> ne-, second person singular objective pronominal element. tc!ū-, adverbial prefix; very likely really compound of deictic element tc!- (indicating lack of specified object, namely wager) and modal ō-, ū- denoting future imperative. -c-, as in note 85. -lec, verb stem. Indefinite present, because of future or slight hortatory meaning: "let me bet with you!" Cf. Chipewyan *tūs/be* "let me swim."

<sup>87</sup> With cō<sup>u</sup>-, cf. Hupa *-hwōñ* "good;" Kato *-cōñ* "to be good."

<sup>88</sup> an-, adverbial prefix. γ-, first modal prefix. -ī-, second person subjective pronominal element. -aL, verb stem. Indefinite tense, used as imperative.

<sup>89</sup> tc!ō-, adverbial prefix; perhaps compound of deictic element tc!- (object pointed out is not specified) and first modal ō- of unknown significance. γ-, second modal prefix. -ī-, connecting element between second and third modal elements, characteristic of third person of definite tenses with γ-. -l-, third modal prefix. -siL, verb stem. -la, verb suffix. Definite past; marks point in narrative.

<sup>90</sup> Numeral adverb of *la* "one." -dAN, postposition.

<sup>91</sup> nan- and na-, adverbial prefixes. -θ-, second modal prefix. -yā, verb stem. -la, verb suffix. Definite past; refers to definite point of time in narrative.

<sup>92</sup> ye-, adverbial prefix. γa-, second adverbial prefix. -l-, third modal prefix. -ne, verb stem. -la, verb suffix. According to this analysis, this verb is indefinite in tense, which is difficult to understand. More plausibly, γat- may be considered as misheard for γAt-; γ- second modal prefix. In that case, it is definite past.

<sup>93</sup> mā<sup>a</sup>-, noun stem "edge." -dAN, postposition.

<sup>94</sup> dō/wa, proclitic adverb indicating futurity, probably not with absolute certainty. nā-, adverbial prefix. -yan, verb stem. -nAī, verb suffix. Indefinite in tense, because future in meaning.

<sup>95</sup> Adverb containing inferential -la.

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dō/wá/An/nā/yan/nAł <sup>96</sup>	t'wī/dé	dō/wa/ł/t'át/nAł <sup>97</sup>	θAk/gwé		
he will upset,	everything	will go to pieces,	in fragments		
s/ts!An/na/Ác.	ha/xwil/í/ha <sup>98</sup>	ÁL/tcā/γī <sup>99</sup>	γÁN/na/Ác <sup>100</sup>		
he will bring to me.	Do you expect	big thing	he will bring here		
ła/mé/q!e/ca. <sup>101</sup>	was/xé	hí.	nā/ní/An <sup>102</sup>	nā/ní/An	djÁN/la
all in one time?	Good	dog."	"Stop him,	stop him!"	said
dō/at/t!ī/ni.	dō/dá/q!e <sup>103</sup>	nā/nÁc/An <sup>104</sup>	djÁN/la	hí/t!ī/ni	
bachelor.	"Unable	I stop him,"	said	dog-owner,	
t'wī	γÁN/na/Ác/t'e <sup>105</sup>	xwAN/né/θiL/ya <sup>106</sup>	djÁN/la	dō/at/t!ī/ni.	
"all	he will bring here."	"You win,"	said	bachelor	

<sup>96</sup> As in note 94, except that another adverbial prefix, *An-*, is present.

<sup>97</sup> *dō/wa* and *-nAł*, as in note 94. *ł-*, third modal prefix. *-t'át*, verb stem.

<sup>98</sup> *ha*, interrogative adverb. *xw-*, adverbial prefix. *-i-*, second person singular subjective pronominal element. *ł-*, third modal prefix. *-ī-*, verb stem. *-ha*, interrogative suffix. Indefinite present in tense.

<sup>99</sup> *A-*, of unknown significance. *L-*, prefix common to several adjectives. *-tcā/γī*, adjective stem "big."

<sup>100</sup> *γAn-* and *na-*, adverbial prefixes. *-Ac*, verb stem. Indefinite tense, because pointing to future time.

<sup>101</sup> *ła*, numeral stem "one." *-me/q!e*, compound postposition. *-ca*, found also with *ła* alone: *łd<sup>a</sup>/ca* "one."

<sup>102</sup> *nā-*, adverbial prefix. *n-*, first modal prefix. *-ī-*, second person singular subjective pronominal element. *-An*, verb stem. Imperative mode.

<sup>103</sup> Adverb containing negative *dō-*. Perhaps *-q!e* is postposition (cf. *-me/q!e*).

<sup>104</sup> *nā-*, *n-*, and *-An*, as in note 102. *-c-*, first person singular subjective pronominal element. Indefinite in tense, because of preceding negative adverb.

<sup>105</sup> As in note 100. *-t'e*, future suffix; here used because idea of futurity is more explicit.

<sup>106</sup> *xwAN-*, adverbial prefix. *ne-*, first modal prefix. *θ-*, second modal prefix. *-i-*, second person singular subjective pronominal element. *-L-*, third modal prefix. *-ya*, verb stem. Definite present in tense.

## APPENDIX.

A few Galice Creek words were obtained from Mrs. Punzie, a few Applegate Creek words from Rogue River Jack. These two Athabaskan dialects are probably practically identical. *ś* indicates something acoustically midway between *s* and *c*; *r* (tongue-tip trilled) and *l* occur as reflexes of Athabaskan *n*; nasalization (indicated by *'*) seems to occur. *k'* and *k'w* are found as contrasted with Chasta Costa *x* and *xw*.

## GALICE CREEK.

- ya'/k'ás* "seeds (sp.?):" said to be called *bánax* or *báyu* in Chinook Jargon  
*tc!a/ba/ǎ/k'wa's* "brush used for medicinal purposes (sp.?)"  
*L!ō'/dáí* "tar-weed" (cf. Chasta Costa *L!ō'/dé*; Hupa *Lō/daitc*)  
*yét/γat/ts!ai/yè* "sunflower" (cf. Chasta Costa *tc!Ał/γat/ts!è*)  
*gys* "camass" (cf. Chasta Costa *gōθ*; Hupa *kos* "bulbs")  
*dál/si* "pine" (cf. Chasta Costa *dAl/si*; Kato *dúl/tcīk*)  
*lǎ /L!i* "pine-nut" (cf. Chasta Costa *nǎ/L!e*)  
*dé/reś* "manzanita" (cf. Chasta Costa *dA/nAc*; Hupa *din/nūw*; Kato *tûn/núc*)  
*má'/ts!i* "cat-tail" (cf. Chasta Costa *mAt/tc!i*)  
*śás/da'* "oak" (cf. Chasta Costa *cAc/dā'*)  
*ǐ/dá/ge* "acorn" (perhaps misunderstood; cf. Kato *L/taG* "black oaks")

## APPLEGATE CREEK.

- k'á'/tc'u* "goose" (cf. Chasta Costa *xā'/tc'ú*; Kato *ka'*)  
*dAc/tc'ù* "grouse" (cf. Chasta Costa *dAc/tc'ú*; Kato *dAc/-tcō*)

- dAc/t'ê'/tc'u* "bob-white, quail"  
*k!ai'/díc/tca/wè* "ruffed grouse, pheasant"  
*k'án/ta/tc'u* "pigeon" (cf. Kato *kwī/yīnt*)  
*dō/s'An/ts!a/ya* "screech-owl"  
*sī/tc!e/les* "kingfisher"  
*tc!á/ke/dì* "red-headed woodpecker"  
*tcā'/wác/tc(!)e* "sandhill crane" (cf. Chasta Costa *sā'/was/-ts!é*)

### Editorial Note

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The Athabaskan languages of southwestern Oregon—which are now (1989) virtually extinct—constitute a distinctive subgroup whose relationship to the northwestern California subgroup is surprisingly distant, although the two are usually classified together as "Pacific Coast Athabaskan" (Hoijer 1960). The Oregon group seems to have comprised four distinct, though closely related, languages: Upper Umpqua, Galice-Applegate, Chetco-Tolowa, and Lower Rogue River. The last was spoken in a variety of local dialects, the best known of which are Chasta Costa (on Rogue River about 30 miles upstream from the mouth), Tututni (near the mouth of the river), Euchre Creek (along the coast to the north of the river mouth), and Upper Coquille (still farther north, in the inland area behind Coquille Bay). No full grammatical study exists of these or of any Oregon Athabaskan language. Besides Sapir's description of Chasta Costa, the fullest published documentations of Oregon Athabaskan are of Galice (Hoijer 1966), Tututni (Golla 1976), and Tolowa (Bright 1964; Bom-melyn et al. 1989). Considerable manuscript documentation also exists, particularly of Galice (by Melville Jacobs; see Seaburg 1982) and of Lower Rogue River (by J. P. Harrington; see Mills 1981: 69-76). Some of Harrington's Lower Rogue River material (including a number of aluminum disk recordings) was obtained from Wolverton Orton, Sapir's Chasta Costa consultant.

## Corrigenda to Father Morice's "Chasta Costa and the Dene Languages of the North."<sup>1</sup>

IN view of the fact that Father Morice has reviewed my *Notes on Chasta Costa Phonology and Morphology* in so evidently a friendly spirit it may seem a bit churlish to point out what seem to me to be either slips or misunderstandings in his recently published paper on Chasta Costa and more northern Athabaskan dialects. If, nevertheless, I venture to do so, it is not because of any desire to minimize the value of Father Morice's paper or to attach an overweening importance to my own very scanty contribution to Athabaskan linguistics, but to help advance our understanding of the problems of Athabaskan phonology and morphology. The chief value of Father Morice's paper seems to me to lie in the further light it throws on the Carrier language, of which previous papers have already shown he has an admirable mastery. I earnestly hope that Father Morice will not be content with the rather sketchy papers he has hitherto given us on the Carrier language, but will eventually publish a complete presentation of the intricacies of its phonetics and grammatical structure.

1. "Dr. Sapir's *a* is my *æ*, almost the sound of *u* in 'but,' more exactly that of *e* in the French *je, te, le*" (p. 560, footnote). My *a* of Chasta Costa words is to be pronounced like *a* of German *Mann* and thus in sound corresponds to Carrier *a*, not *æ*. My *A* is another vowel altogether, though often phonetically reduced from original *a*. It is prac-

<sup>1</sup> See *American Anthropologist*, N. S., 17, 1915, pp. 559-572.

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tically identical in sound with *u* of *but* and doubtless corresponds phonetically, largely also genetically, to Carrier *æ*.

2. "This [C. C. *tc!ac* 'bird'] is evidently none other than the Carrier *tʃæʒ* [Morice's *ʃ* and *ʒ* are described by him in a letter as sibilants midway between *s* and *c*, and *z* and *j*, respectively; they correspond historically to Chipewyan *θ* and *ʝ* < Ath. *s* and *z*], which in that language means not 'bird' but 'feather-down'" (p. 560, l. 15). This is not so evident. In fact it is phonologically impossible. Father Morice's Carrier form is clearly cognate with Chipewyan *-θ'úθ* (Goddard; my *-θ!Aθ*) "soft feathers," Montagnais, *thæpdh* (Petitot; *θ!Aγθ* in my orthography) "plume servant à broder, côte de plume" (possibly mistranslated for "duvet"), Hare *kkwèw* (my *kʷ!ew*), Loucheux *thaw* (my *θ!aw*), Navaho *ts'òs* (Franciscan Fathers; my *ts!os*) "down feather." These forms imply original Athabaskan *\*ts!ez* (reduced *\*ts!éz*, *\*ts!ěs*) and *\*ts!os* "down." This would be expected to appear in Chasta Costa as *θ!Aθ* (very likely actually found in *θ!Aθ-nā-yal-θ!oθ* "humming-bird," perhaps literally "soft-feathers fly-about-making-a-humming-sound"; for verb stem *-θ!oθ* cf. Hupa *-tsòts*, *-tsòs* "to make a kissing-like noise, to smack one's lips," Nav. *beěts'òs* "whistle" as noun). C. C. *tc!ac* can have nothing to do with this *θ!Aθ*, but must go back to Ath. *\*kʷ!ac* or *\*tc!ac*.<sup>1</sup>

3. "This possessive [C. C. *-lītc!e* '(his) dog'] entails in Chasta Costa the accretion of a sort of suffix which he writes *tc!e*, the equivalent of my *tʃe*. Now *lītʃe* means in Carrier, not somebody's dog, but she-dog!" (p. 561, l. 3). Father Morice's quandary is of his own seeking. *-ts!e* of his Carrier form is not at all connected with *-tc!e* of my Chasta Costa one. Carrier *li-ts!e* is simply compounded of *li* "dog" and *ts!e* "woman." This *ts!e* (Ath. *\*tc!e*) is found in Carrier *tʃèkhè*, Montagnais *tsè-kwi*, *tsè-k'è* (i. e., *ts!e-k'e*), Hare *tsè-līnè*, *tsè-k'u*, Loucheux *tsè-ndjò*, Kato *tc!ek*, C. C. *ts!āxe*. Carrier, Montagnais, Kato, and Chasta Costa point to Ath. *\*tc!e-k'e* "woman." C. C. *-tc!e* of *-lītc!e*, however, goes back, not to Ath. *\*tc!e*, but to Ath. *\*-kʷ!e* with glottalized anterior palatal *kʷ!*; cf. Hupa *-līñ-ke* "(his) pet" (read-*kʷ!e*). How this peculiar possessive *\*-kʷ!e* (cf. normal *-e* in, e. g., Hare *sé-līn-e* "my dog") arose I can not say. Its isolated character stamps it as probably archaic. Perhaps *-kʷ!* of Ath. *\*-līnkʷ!e* is connected with *-g-*, *-k* of Ath. *\*lik*, *\*lig-*, which is parallel to *\*līn*; cf. Anvik *hlīk* (Chapman; my *lik*), Loucheux *l'égæ-tséllæ*

<sup>1</sup> Since this was written Dr. Goddard has kindly called my attention to Hupa *kīyauw* (read *kʷ!auW*) "birds" which corresponds exactly to Ath. *\*kʷ!ac*. This eliminates Ath. *\*tc!ac* as possible prototype and still more effectively disposes of Father Morice's analysis.

“ petit chien ” (i. e., *lega-*). (Incidentally, Petitot gives for “ chienne ” Montagnais *l'intsè*, Loucheux *l'entsi*. Are these forms errors for *-ttsè*, *-ttsi*?)

4. “ *Thé* . . . , at least in the north, does not merely mean ‘ in the water, ’ as Sapir would have it . . . but it hints at the ‘ bottom of the water ’ ” (p. 561, l. 25). C. C. *t'e-* was defined as “ in the water. ” That, in Pacific Athabaskan, it has no necessary reference to “ the bottom of the water ” is shown by several of Goddard’s Hupa and Kato examples. Thus, some Hupa verbs with *t'e-* are translated “ in the water it seemed about to tumble, ” “ in the water she floated back, ” “ when he put his hand in it (i. e., the water), ” cf. Kato *t'e-* verb “ she washed them. ” Evidently Goddard’s definition of Hupa *t'e-* as referring “ only to motion into water and under its surface ” seems quite adequate. In Carrier *thénillat* “ thou art precipitately brought to the bottom, thou sinkest, ” second modal *-n-* (to use Goddard’s terminology) is terminative in function, so that *t'e-n-* . . . *-llat* necessarily denotes “ to sink to the bottom of the water, ” even if *t'e-* by itself be assumed to mean “ in the water. ” A wider range of significance for Ath. *\*t'e-* than Father Morice would assign it is implied also by such Navaho forms as *tqě-lĩ* “ water horse ”; Navaho *tqě-* (i. e., my *txe-*) regularly corresponds to Ath. *\*t'e-*. Navaho *tqě-* forms are likely to be archaic, as Ath. *\*t'e-* has been almost entirely superseded in Navaho by Ath. *\*t'a-* (Navaho *tqa-*); see below. Even in northern Athabaskan I do not find F  ther Morice’s remark to apply without qualification, even if correct for Carrier. In Anvik Ath. *\*t'e-* appears as *tě-*, *t -* (Chapman’s orthography); note *t yido tel* “ floating in the water. ” In Loucheux Ath. *\*t'e-* appears as *tchi-* (Petitot’s orthography), i. e., *tc'i-* (Loucheux *t' -*, i. e., *t'e-*, does not correspond, according to Loucheux phonetic laws that I have worked out, to Ath. *\*t'e-*, but to Ath. *\*t'a-*); note *tchi-dhill * “  tre   flot. ”

5. “ *Tha-* . . . , which he gives as ‘ referring to the water ’ has really that signification [i. e., ‘ in the water ’] ” (p. 561, l. 27). Ath. *\*t'a-* is undoubtedly found employed locally (“ in the water ”) in practically all Athabaskan dialects; indeed it seems in some dialects (e. g., Navaho, to some extent apparently also Chipewyan) to have extended its sway at the expense of parallel Ath. *\*t'e-*. There is, however, plenty of evidence to show that Ath. *\*t'a-* is frequently substantival, not local, in force, that it is, in fact, an old noun stem (“ water, wave, sea, ” parallel to more wide-spread Ath. *\*t' * “ water ”) that has become a verb prefix. A local meaning is impossible, for instance, in the numerous verbs of

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drinking found in Pacific Athabaskan (e. g., Hupa *ta-win-nan* "he drank it," Kato *ta-ya'-ō-nqñ* "let them drink," C. C. *t'ā-γAct-nā* "I drink"). A direct substantival meaning, moreover, is obvious in such compound nouns as Navaho *tqā-bā* "shore" (lit. "water-edge"), while in several Mackenzie Valley dialects Ath. *\*t'a* even occurs as uncompounded noun stem (Montagnais *t'a*, i. e., my *t'a*, "flot, onde"; Hare *t'a*; Loucheux *t'è*).

6. "As to the verbal stem *-at*, which he believes to mean 'to come,' I more than suspect that it is but a corresponding form of *-ya*, which he represents as expressing the idea of 'going, coming,' and should be *-yal*" (p. 562, l. 11). That C. C. *an-γī-at* really means "come on!" and not, like Carrier *ʼæn inyal*, "go on!" (as suggested further on by Father Morice, l. 26) is conclusively proved by two facts. In my brief Chasta Costa text (p. 337, l. 3) *an-γī-aL* occurs as translation of English "come here!" (this text, it should be remembered, was translated from English) under circumstances in which "go on!" would be quite out of place. Further, during my residence among Chasta Costa Indians in Siletz Reserve, Oregon, in 1906, I distinctly remember that *an-γī-at* was often used by elders in calling children to them. As to whether recorded C. C. *an-γī-at*, *an-γī-aL* is to be understood as *an-γī-yal*, as claimed by Father Morice, or as *an-γī-'at*, as I had assumed, I now incline to think that *-yal* is correct. This is because of such forms as Hupa *wiñ-yaL* "come on" and Kato *gūn-yaL* "walk," which seem to correspond exactly to C. C. *-γī-(y)at*. Should *-at* prove to be correct, it would probably have to be compared with Loucheux *-a* "to go," Ath. *\*-ac* "two go" (with dualic *-c*).

7. "Dr. Sapir furthermore quotes the verb stem *-t!o* as denotive of the act of swimming, while, according to him, that of paddling is rendered by the radical *-xe*. Now, in most northern Déné dialects, the former refers to paddling, while the latter indicates the act of navigating, or moving about in a canoe" (p. 562, l. 28). True, but there is plenty of evidence to show that Ath. *\*-k'e*, *\*-k'en*, *\*-k'ēη*, *\*-k'i* frequently refers to or implies paddling. Thus, Goddard translates Chipewyan *-kī* by "to paddle a canoe, to travel by canoe" (e. g., *ta-kī-hwū* "when he paddled"). This is confirmed by Father Legoff, who defines *'ke'l* (i. e., *-k'el*): "est le progressif de *'ki*, et signifie proprement naviguer, en ramant" (e. g., *pes-'ke'l* "je rame, j'avance en ramant"). Similarly, for "ramer" in Hare Petitot gives not only *ê-tūðh*, but also *ê-k'é*. And in Anvik I find *-kan*, *-kahl* often translated as "to paddle" (e. g., *xū-kahl* "he is paddling," *tī-çū-kan* "he paddled on"). For C. C. *-t!o* "to swim,

bathe" I find no exact parallels. It may, as Father Morice suggests, have primarily meant "to paddle" (denominative verb from Ath. \**t!os* "paddle") and changed its force dialectically.

8. "The verbal stem *-lal* . . . , to which our author attributes the sense of 'to sleep,' has in Carrier the value of 'to dream of' (with a complement). Might not Dr. Sapir's informant have misunderstood his questioner and thus unwittingly misled him?" (p. 563, l. 1). I think we can manage without this hypothesis of misunderstanding. In Hupa *-lal*, *-laL* means not only "to dream," but also "to sleep" (e. g., *nit-te-sil-lal-le* "you would go to sleep"). Both meanings are given also for Kato *-lal*, *-lqL* (e. g., *n-tō-lqL* "let him sleep"). Turning to northern Athabaskan, we find that in Chipewyan (Montagnais) *-lal*, *-lal*, *-lal*, *-lal* regularly means "to sleep, to fall asleep, to put to sleep" (e. g., Goddard's *hī-te-lal* "he is asleep"; Petitot's *in-t'es-l'al* s. v. "dormir debout," *es-l'al* s. v. "endormir"; Legoff's *in-'tes-la'l* "je m'endors"), while for "rêver" Petitot gives quite another stem in Montagnais and Hare. C. C. *t'e-θ-lal* (*la*) "he's been sleeping," with its prefixed elements *t'e-* and (in definite forms) *-θ-*, corresponds remarkably to Hupa *-te-sil-lal-* quoted above, Kato (*n-*)*te-s-laL* "he went to sleep," and Chipewyan (*in-*)*te-θ-Lal* "he is asleep." In Hupa and Kato *-lal*, *-lal*, when meaning "to dream" seems regularly preceded by *na-* (e. g., Hupa *kin-na-is-lal* "he dreamed," Kato *ū-na-s-laL* "he dreamed about").

9. . . . "*-lal*, or rather *-llal*. . . . As may be seen by Sapir's rendering: *t'ūllal*. The double consonants *ll* and *ts* are of frequent occurrence in Déné and form as many indivisible groups. The syllables of all Sapir's verbs in the first person plural are wrongly cut up: the *t* which he attributes to the penultimate syllable should commence the last one: *-llal*, *-tšæł*, *-llat*, *-thæc*, etc. Hence several of his verb stems are incomplete. For instance, *-se*, 'to cry,' should be *-tse* (Carrier *-tso*); *-sī*, 'to cause,' should be *-tsī* (Carrier *-tsi*); *-lo*, 'to laugh,' cannot be understood without its *t*. . . . Were he familiar with the Dénés' syllabic way of writing their own language, he would have been spared this little inaccuracy" (p. 563, l. 1 and footnote 1). There are several comments I wish to make on this passage.

(a) That, in Chasta Costa, not *-llal* but *-lal* is to be considered as true verb stem is quite unmistakably evidenced by such forms as *t'ī-lal* "thou art sleeping," *t'ō-lal* "ye sleep." Were *-t-* part of the stem, there would be absolutely no reason for its disappearance in these forms (cf., for phonetic comparison, *t'ā-γit-nā* "thou drinkest," *t'ā-γā-θōl-nā*

"ye drink," in which third modal prefix *-t-* is preserved between personal element *-i-*, *-ō-*, and stem consonant *n*). These remarks apply also to C. C. *-lat*, not *-llat*, as Father Morice would have it. Comparison with Hupa and Kato, also Chipewyan, abundantly confirms my own analysis.

(b) There is no point whatever in quoting C. C. *t'it-lal* (not *t'illat*, as Father Morice has it) "we are sleeping" as evidence of a stem *-llat*. In Chasta Costa *-(i)t-* regularly appears as first person plural subjective prefix, except, as in Chipewyan, before third modal *-l-* and *-l-* (e. g., *γe-θit-'ī* "we saw him," where Father Morice would hardly claim that *-l'ī*, not *-ī*, is the true stem). That this *-t-* is indeed an organic element in the first person plural prefix is shown by comparison with Hupa *-d-* (e. g., *na-diL-Le* "we are painting"), Kato *-d-* (e. g., *na-dūl-yīc* "let us rest"), Chipewyan *-it-*, *-d-* (e. g., *e-gīt-'ī* "we saw it"), Loucheux *-di-* (e. g., *i-di-kwołł* "nous amenons"). What has apparently misled Father Morice in his analysis of Chasta Costa is that Ath. first person plural (and dual) *\*(i)d(ě)-* has in several dialects, perhaps by analogy of third modal *-l-* and *-l-* verbs where *-d-* regularly disappeared (I am inclined to think that in Hupa and Kato *-d-* has in these cases been restored by analogy), been replaced by *-ī-*, *-i-*, e. g., Carrier *nd-ī-ta* "we are both sick" (Carrier first personal plural prefix *tʂæ-*, i. e., *tʂA-*,<sup>1</sup> does not seem to be a widespread Athabaskan element, though Father Jetté has recorded for Ten'a *tʂ-* forms of like meaning, perhaps to be understood as *tʂ!*); Hare *i-ssi* "nous deux faisons" (*ya-issi* "nous faisons"); Navaho *ch'ī-ne-ī-kā* "we two carry milk out" (*ch'æ-de-ī-kā* "we carry milk out"). Even in these dialects, however, survivals of the old *-d-* are found in such cases as allowed of its carrying over into the stem syllable, e. g., Carrier *nī-tas* "we two walk," i. e., *nī-t!as*, morphologically equivalent to *n-īt-'as* (cf. *næ-hæ-'as* "they walk two together"); Hare *witta* "nous deux allons," i. e., *wi-t!a* (Ath. *\*zi-t!as*), morphologically equivalent to *w-īt-'a* (Ath. *\*z-id-'as*); Navaho *da'-d-ī-t'a'* "we put a round object on" (equivalent to *da'-d-īt-'a'*), *bā'-nī-'nūl* "we two put several things on" (equivalent to *ba'-n-ūt-nūl*), *ī-gyě* "we two marry" (equivalent to *īd-yě*, cf. *i-yě* "he marries"). There can be no talk in such cases of stems *-t!as*, *-t!a'*, *-'nūl*, and *-gyě* but only of phonetic resul-

<sup>1</sup> I strongly suspect, as is indeed indicated by Father Morice himself (see "The Déné Languages," 1891, p. 193) that this *tʂæ-* is really impersonal in meaning, to begin with; with Carrier *næ-tʂæ-tit* "we walk"; cf. *næ-tʂi-ya* "one walks." For reasons of modesty, perhaps, it may have become customary to say "people (in general) do so and so" instead of "we do so and so." This indefinite Carrier *tʂæ-* is quite possibly cognate with Hupa *tc-*, i. e., *tc!-*, of third personal forms applying to adult Hupa (e. g., *lce-xauW* "he is catching," originally perhaps "one catches").

tants of first person plural *-d-* plus stems *-ʼas*, *-ʼaʼ*, *-nīl*, and *-ye* (Ath. *\*-γe*).

(c) As regards syllabic division, I must emphatically disagree with Father Morice. It is quite clear that in many Athabaskan dialects the *-t-* (*-d-*) of the first person plural belongs to the following syllable, as we have just seen. This proves nothing, however, for Chasta Costa, nor do I see how familiarity with the Carriers' syllabic way of writing their own language would have materially helped my ear in its perception of Chasta Costa sound combinations. As a matter of fact, my informant Wolverton Orton was particularly careful in syllabifying and I was practically never in doubt, in recording his forms, as to where syllabic division was to be placed. Hence *tʼi-lal* is not to be "corrected" to *tʼi-lal*, *tʼe-nit-lat* to *tʼe-ni-llat*, *γit-lō* to *γi-llō*, *tc!At-tʼit-θAl* to *tc!At-tʼi-tθAl* (Father Morice's *-tšæl*). Father Morice's *-thæc* is simply another orthography for my *-tʼAc*. I may point out that were we dealing in these Chasta Costa forms with such consonantal groups (affricatives) as *tl* and *tθ*, preceding *i* would appear lengthened to *ī*, because completing its own syllable. That I have consistently misheard both vocalic quantity and syllabic division in these words (e. g., *-tʼit-θAl* for *-tʼī-tθAl*) I cannot admit. Naturally I do not deny that *tθ* and *tθ!* also occur in Chasta Costa as true affricatives, though *tθ* seems to have regularly developed to *θ*.

As to C. C. *-lō* (I have no example of C. C. affricative *tl*, *dl*, nor does it seem to occur in Hupa or Kato), I am uncertain, as I pointed out in my "Notes," whether this is to be understood as directly representative of Ath. *\*-dlo* (as preserved, e. g., in Carrier, Chipewyan, and Navaho) or as analyzable into third modal *-t-* and stem *-lō*. For Ath. *dl*: *l*, cf. Ath. *\*-dlo*, *\*-dli* "to be cold": Montagnais *é-llu* "cold," Kato *lō* "frost." C. C. *-lō* "to laugh" might well correspond to Kato *-lō* "to deceive" (primarily "to laugh at"?).

(d) As regards C. C. *-se* "to cry" and *-si* "to cause," Father Morice is going altogether too far when he says these stems are incomplete for *-tse* and *-tsi*. As I have already stated in my "Notes" (p. 287), Ath. *tcʼ*, of which Carrier *ts* is reflex (Ath. *tcʼ* is preserved as such in Navaho, Jicarilla Apache, Kato, and, as labialized *tcʼw*, in Hupa), has always been simplified in Chasta Costa to *s* (Ath. *tcʼ > ts > s*; cf. Ath. *ts > tθ > θ*). Hence to "correct" C. C. *-se* to *-tse* is as justifiable as it would be to "correct" French *chef* to *\*kep* because, as no one denies, derived from Latin *caput*.

10. "If Dr. Sapir will allow me, I will also observe that the desinence *-tcʼac* [probably misprint for *-tʼAc*], which he gives as a distinct verbal

element, is nothing else than the plural stem of the same [Carrier] verb *nanisthi*, whose derivative *nthæsthîh* effectively means 'to lie down, go to bed' (p. 563, l. 7). Father Morice then goes on to compare C. C. *-t'Ac* directly with Carrier *-thés, -théz, -thæs* (plural stem). These statements are misleading. It is evident from my Chasta Costa material (e. g. *dā-nAc-t'Ac* "I go to bed") that *-t'Ac* applies to singular subjects. This is confirmed by comparison with Hupa *-tūW* (which corresponds regularly to C. C. *-t'Ac*) and Kato *-tūc* (e. g., Hupa *tcin-ne-tūW* "she goes to bed," Kato *na-nūn-tūc* "lie down again"). This Ath. *\*-t'ēc* is characteristic in Pacific Athabaskan of "indefinite"<sup>1</sup> forms as contrasted with "definite" Ath. *\*-t'in, \*-t'ēŋ, \*-t'i* (Hupa *-ten, -tiñ*; Kato *-tin*; Carrier *-thi*; Montagnais *-t'i*; Navaho *-tqî*); in most Athabaskan dialects *\*-i'e* or *\*-t'el* is used in "indefinite" forms (Hupa imperative *-te*; Montagnais eventual *-t'è*; Navaho present *-tqe*, future *-tqel*). "Indefinite" *-c* forms are in general apparently characteristic of Pacific Athabaskan. C. C. *-t'Ac* is phonetically practically identical with Carrier *-thæs*, but not morphologically. Carrier "proximate future" *-thæs* is reduced from present *-thés*; in other words *-s* (Ath. *-c*) is here found in all forms, "definite" and "indefinite." This plural (and dual) stem Ath. *\*-t'ec, \*-t'ej, \*-t'ēc* (cf. Hupa *-tetc*; Montagnais dual *-t'ez*; Navaho *-tec*; Jicarilla Apache *-kec*) contains dualic *-c* (cf. Ath. *-'ac* "two go"; Navaho *-'esh, -'ēzh, -'ışh* "to act upon two animals"). We now see clearly that Father Morice was misled by a phonetic convergence of morphologically distinct, though genetically related, forms.

II. "Unless I am very much mistaken, what he adduces as the equivalent of 'I am seen, you are seen, he is seen,' etc., really means simply: 'people see me' (French: *on me voit*), 'people see thee,' etc." (p. 563, l. 22). Father Morice is, in my opinion, quite right. In fact he merely repeats what I had already pointed out (p. 332): "*ts!A-*, which appears in these forms, probably contains third modal *-t-* preceded by deictic *ts!* implying indefiniteness of logical subject: 'mann sieht mich.' " Surely Father Morice knows that German *man sieht mich* is identical in force with French *on me voit*.

I take this opportunity of modifying my analysis of C. C. *ts!A-*. I do not now think that it is comparable to C. C. deictic *tc!*-, which denotes lack or indefiniteness of *object*, not *subject*, of transitive verbs; this *tc!*- goes back to Ath. *kʷ!(ē)*-, which is preserved as such in Hupa. C. C. *ts!*- (Ath. *\*tc!*-) of such forms as *nes-ts!A!-i* "one sees me, I am seen,"

<sup>1</sup> I use "definite" and "indefinite" in Goddard's sense. "Definite" tenses are present definite and past definite, all others are "indefinite" (including present indefinite, imperative, eventual, and other forms).

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however, is clearly subjective and impersonal in force and very probably corresponds to Carrier indefinite  $t\zeta(\text{æ-})$ , see 9 *b* above. Goddard's Chipewyan  $ts'$ - is probably identical with this Chasta Costa and Carrier impersonal prefix (e. g.,  $ts'e-L\bar{u}$  "he was caught," i. e., "one caught him"); this means that Goddard's comparison of Chipewyan  $ts'$ - with Hupa  $k^{(y)!}$ - is incorrect (see p. 133 of his "Analysis of Cold Lake Dialect, Chipewyan"), and indeed we should in that case, as in Kato and Chasta Costa, have expected  $tc!$ -. I do not know how to reconcile with these subjective impersonal forms (Ath.  $*tc!$ -> Kato  $tc!$ -,  $ts!$ -,  $s'!$ -; C. C.  $ts!$ -; Carrier  $ts!$ -; Chipewyan  $ts!$ -) Petitot's Montagnais, Hare, and Loucheux indefinite  $tse$ - forms. Could he have throughout misinterpreted  $ts!e$ - (in his orthography  $ttse$ -) as  $tse$ -?

E. SAPIR

### Editorial Note

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This reply to Morice's criticism of Sapir's Chasta Costa work (Morice 1915b) prompted a rejoinder (Morice 1917). Both of Morice's papers, together with his original review of Sapir's monograph, are reprinted in the appendix to this volume.



## THE NA-DENE LANGUAGES, A PRELIMINARY REPORT<sup>1</sup>

THE problem attacked in this paper is that of the genetic relationship of Athabaskan, Haida, and Tlingit. Important morphological, to a less extent also lexical, resemblances between Haida and Tlingit have long been pointed out by Boas and Swanton, resemblances which have led them to assume, though rather hesitatingly, genetic relationship between these languages. Boas has also somewhat vaguely hinted at fundamental resemblances in structure between Athabaskan and Haida-Tlingit, but no concrete evidence has been given on this point. A full presentation of the comparative lexical, phonological, and morphological evidence that serves to show, beyond all reasonable doubt, that Athabaskan, Haida, and Tlingit are indeed but divergent representatives of a common prototype is given in an extensive paper on "The Na-dene Languages" now in course of preparation as a memoir of the Anthropological Series of the Geological Survey of Canada. The present sketch, prepared at the request of Dr P. E. Goddard, is merely a rapid abstract of some of the leading points involved. I wish expressly to emphasize the fact that it does not present all the evidence at my disposal. While, however, it does not constitute the complete demonstration of my thesis, I believe that enough is here given to remove this thesis beyond the realm of the merely probable. The term "Na-dene," which has been chosen to designate the hypothetical prototype of Athabaskan, Haida, and Tlingit, will be explained in the latter part of the paper.

### I. MORPHOLOGICAL FEATURES

*Stem and Word Form.*—The most typical and doubtless historically primary type of stem form found in the Na-dene languages is the monosyllabic stem consisting of consonant plus vowel; in

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<sup>1</sup> Read in substance before the Anthropological Association at Philadelphia.

Haida (H.) the consonant may be replaced by a cluster of two consonants which, in cognate words, appears contracted to a single consonant in Athabaskan (Ath.) and Tlingit (Tl.). Examples are: Ath. *\*-tsi*<sup>1</sup> "daughter," *\*t'o* "water," *\*t'l'o* "grass," *\*-k'e* "foot," *\*-ne* "to speak," *\*-ya* "to stand (plur. subj.)," *\*-'a* "to find," *\*-γa* "for," *\*-na* "around," *\*na-* "again;" H. *tc'u* "cedar," *q!a* "harpoon," *st!a* "foot," *lga* "rock," *t'a* "to eat," *q!a* "to sleep," *xa* "to follow," *sa* "above," *gu* "at," *q!o-* "by means of the teeth;" Tl. *t'a* "stone," *nu* "fort," *xa* "enemy," *ha* "to dig," *q'a* "to say," *ci* "to hunt for," *l!a* "behind," *k'a* "on," *dju-* "quickly." Many, perhaps all, elements consisting of a single consonant (or cluster of two consonants) are phonetically reduced owing to the loss of a vowel; e.g., Ath. *\*-n*, *\*-ŋ* "person" < *\*-ne*; H. *st!l-* "with the fingers" < *st!lla* "hand;" Tl. *t* "to" < *dε*.

In all Na-dene languages, however, a large number of stems is found consisting of consonant plus vowel plus consonant; e.g., Ath. *\*-ts!ən* "bone," *\*-t!as* "to cut;" H. *k'un* "point," *sgot* "to hide;" Tl. *d!s* "moon," *tsi'n* "to be strong." In a very large number of cases there is clear internal evidence to show that the final consonant is an old suffixed element whose original meaning has doubtless generally been lost. Examples of such "petrified" suffixes are: Kato *lets* "clay," Navaho *lε'c* "dirt, ground," cf. Navaho *lε'-* in compounds; Anvik *t'al* "bed" (< Ath. *\*t'el*), Hupa *-t'ε'c* "several lie," cf. Hupa *-t'ε* "to lie (sing.)," past definite *-t'ε'n*; H. (Masset) *s'ai!ən* "to weep," cf. *s'ai-ga*; H. *xal-* "by means of fire acting from without," cf. *xai* "sunshine;" Tl. *t'i'n* "to see," *t'i's!* "to look for." While a considerable number of such stem finals correspond in Athabaskan and Haida or Tlingit (e.g. Ath. *\*-del* "several go," H. *dal* "many persons go by land;" Ath. *\*-k!an* "to burn," Tl. *q!a'n* "fire"), numerous cases are found of stems that cor-

<sup>1</sup> Forms given as Ath. are reconstructed on the basis of the actual forms found in various Athabaskan dialects. The general methodology of linguistic reconstruction and the sounds reconstructed for Athabaskan specifically are dealt with in the longer paper above referred to. The phonetic system employed in this paper is the one worked out by the Phonetic Committee of the American Anthropological Association; this report will be published in the near future.

\* Indicates reconstructed forms.

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respond according to regular phonetic law except for the final consonant; sometimes two of the three Na-dene languages agree as against the other; often the simple vocalic stem is found in one or two, but extended by a final consonant in the other. Examples of these cases are: H. *t'a't* "year," Tl: *t'a'k* "year;" Chipewyan *θlal* "moss," Louch. *tc!ek*, Tl. *s!alc* (Chip. *θla-* and Louch. *tc!e-* point to Ath. *\*ts!a-*, which points, with Tl. *s!α-*, to Na-dene *\*ts!a-*); Ath. *\*-lad* "end," H. *lan* "end;" Ath. *\*-yel* "night passes," H. *ga'l* "night," Tl. *get* "to get dark;" Ath. *\*-ca*, *\*-cal* "to catch with a hook," H. *djul* "bait," Tl. *cat* "to seize;" Ath. *\*xes* "mountain," Tl. *ca* "mountain;" Ath. *\*-t'an* "to eat," H. *t'a* "to eat;" Ath. *\*-t!o* "to shoot," Tl. *t!uk* "to shoot." Examples of this sort make it fairly obvious that many of the stems with final consonants that are yielded by a purely descriptive analysis are ultimately reducible to vocalic stems followed by what was originally a suffixed element. That all Na-dene stems with final consonants are of such origin cannot be demonstrated, but it does not seem at all improbable. The characteristic Na-dene stem may thus be symbolized by *cv*, of which *c* and *cv-c* are further developments.

Reduplication is a grammatical process that is conspicuous in Na-dene by its absence. It is found neither as a word-forming nor purely grammatical device. The only possible widespread Athabaskan exception that I have been able to find is the demonstrative stem *didi* "this," alongside of unreduplicated *di*. With this it is interesting to compare the probably reduplicated Haida interrogative stem *gu'gu-s* "what?" A negative feature of this sort is not in itself very indicative, but gains in weight when the Na-dene languages are contrasted with the Tsimshian, Kwakiutl-Nootka, and Salish languages to the south, in all of which reduplication plays an extremely important part.

The typical Na-dene word is built up of a number of monosyllabic elements (in most cases of form *cv*), one of which is the main stem, about which cluster a number of subsidiary etymological and grammatical elements that may be termed prefixes and suffixes. The various elements of a word, aside from certain ones that are perhaps best considered as proclitic and enclitic particles, make up a

coherent enough morphological unit, but are far from welding together in a manner suggestive of such form units as we are accustomed to in Indo-germanic or are found also in many American Indian languages (e. g., Kwakiutl, Eskimo, Yana, Southern Paiute). Most of the elements preserve a considerable share of individuality, while many can, indeed, be shown to be identical in origin: with or specialized forms of independent stems. Thus, an Athabaskan word like Kato *t'aya'o'naη* "let them drink" readily falls apart into four perfectly distinct elements: the main stem *-naη* "to drink" and three subsidiary elements that may be described as prefixes, but which are far from fusing either among themselves or with this stem into a close morphological unit; the prefixes are *t'a-*, an element having reference to water (cf. independent forms Kato *t'o* "water," Montagnais<sup>1</sup> *t'a* "billow"), a demonstrative element *ya'*- indicating the plurality of the implied (but not definitely expressed) third personal subject of the verb, and *o'-*, a hortatory or "future imperative" modal element: "water-they-shall-drink." The "word" *t'aya'o'naη* feels decidedly like an old "sentence" of monosyllabic constituents, *t'a ya' o' naη*, the first three elements of which have lost their absolute independence and all four of which have settled down to a rigidly prescribed order relatively to each other. This same type of sentence-word (we may either think of it as very closely knit sentence or, as we are more accustomed to do, as relatively loosely knit word composed of easily analyzed elements) can be abundantly illustrated also in Haida and Tlingit. A Haida example is *tl!algu'tdayaη* "(she) had put (it) (on her son) as a blanket," consisting of a primary stem *-lgu'l-* "to go around, to be wrapped about," an instrumental prefix *tl-* denoting activity with the hands (identical with the verb stem *tl* "to touch"), a classifying nominal prefix *tl/a-* which defines the object of the verb as belonging to the class of flexible things thought of as crossing or coiled (cf. *tl/a-da* "to wear;" an original Haida stem *\*tl/a* "blanket"

<sup>1</sup> Another name for Chipewyan. I use "Montagnais" to indicate that I am quoting from Petitot, "Chipewyan" from Goddard. All other Athabaskan forms are quoted from Goddard and The Franciscan Fathers; all Haida and Tlingit forms, from Swanton.

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becomes very probable on reference to Ath. *\*t!e* "blanket"), a causative suffix or auxiliary verb stem *-da* "to cause, to have as," and two temporal-modal elements, a perfective *-y-* (or *-i-*) and a suffix *-aŋ* indicating that the statement is not made on one's own authority: hand-blanket-be wrapped about-cause-d-as experienced by others. Finally, a typical Tlingit example is afforded by *q!a-o-di-sa* "(he) blew (upon the raft)." As in the Athabaskan example given above, the main stem, *sa* "to blow," comes at the end of the word; it is preceded by three elements, an instrumental prefix *q!a-* "with the mouth" (identical with the noun stem *q!a* "mouth"), a modal element *o-* whose exact significance is unknown (it seems to be found only in active past temporal forms with third personal subject), and another modal or "aspect" suffix *di-* of apparently inceptive or momentaneous force: mouth—in past time (?)—momentaneously—blow.

One of the incidental consequences of this type of structure is that, while the analysis of the word into its parts is in most cases easily undertaken, a just idea of the actual value or content of the word as a whole cannot be obtained by merely summing the values of the analyzed elements. There is, equally in Athabaskan, Haida, and Tlingit, a great deal of idiomatic usage involved; in many cases all we can say is that it is customary for a certain perfectly definite idea to be expressed by a stem of fairly wide range of significance preceded by such and such not always evidently applicable prefixed elements. Thus, the purely etymological analysis of the Hupa *do' ma(k)-k!ai na-si-ŋ-'a* "not-it-after over surface of ground-continuously-thou-have in possession" conveys as good as no notion of the actually well determined idea conveyed: "thou didst not want to (go home)." Similarly, the Haida verb *k'wa-lgi-sta-sga-* "in a stream-large cylindrical objects-remove from (a place)-toward an open place" really means "(olachens) run in a stream toward the sea."

*Noun and Verb.*—The relation between noun and verb is quite parallel in all three languages. While verbal and substantival forms are throughout clearly kept apart (verb forms may be substantivized in various ways), the radical element of a word may often

be indifferently used as predicating or denominating stem. Thus, the Haida stem *na* indicates both "house" and "to dwell," *gō't* is used either as a noun meaning "buttocks" or an adjectival verb "to be last." In Tlingit this elasticity of usage is apparently less marked, though examples occur (e. g., *sa* "voice, name; to name, call;" *cu* "song; to sing"). Denominative verbs of this sort are particularly common in Athabaskan, e. g., Kato *k!αη'* "withes," *-k!αη'* "to twist;" Chipewyan *xal* "club," *-xal* "to use a club;" Hupa *il'o* "grass," *-il'o* "to make baskets;" Chipewyan *t'αn* "ice," Kato *-t'αη* "to be cold;" Navaho *si'l* "steam," Kato *-si'l* "to steam." Under these circumstances it is perfectly natural that stems which are found used only as nouns in one of the Na-dene languages have become specialized as verbs in another. Examples are: H. *xao* "liquid," Ath. *\*-k'a* "liquid has position;" Tl. *q!a'n* "fire," Ath. *\*-k!an* "to build a fire, to burn;" Ath. *\*tc'el* "steam," H. *sgal* "to steam;" H. *das* "live coals," Ath. *\*-das* "to burn, to singe;" Ath. *\*ts!ai*, *\*ts!a* "dish," Tl. *sl!ql* "dish," H. *sqlao* "to put in a dish."

A peculiarity of many Na-dene verb stems is that they are limited in their range to a particular class or number of objects. The simplest type of these is formed by verbs applying specifically to a singular, dual, or plural subject or object; e. g., Tl. *gu* "to go (one person)," *at* "to go (plur.);" H. *q'a* "to go (one person)," *dal* "to go (plur.);" *t'ia* "to kill one person," *il'da* "to kill several;" Ath. *\*-ya* "one person goes," *\*-del* "several go;" Hupa *-ye'n* "to stand (sing.)," *-ya* (plur.); *-'a* "one object is in position," *-'ell* "several objects are in position." Still more characteristic are distinctions based on the shape of the object affected; e. g., Tl. *t'αn* "to carry a long thing," *t'i* "to carry a round thing;" Hupa *-t'αn* "to handle or move a long object," *-k'os* "to handle or move anything that is flat and flexible;" Navaho *-'εc* "to lead (by a rope) a pair of animals," *-'los* "to lead (by a rope) a single animal;" *-t!ε'* "to act upon an animate object," *-djoł* "to act upon such objects as hay, wool, or hair." In Haida such verbs do not seem to be found, but it is interesting psychologically to observe that corresponding classifications are here expressed by another means,

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namely by the use of a long series of classifying nominal prefixes; e.g., *tclis-* "cubic objects, such as boxes," *sqa-* "long objects, like sticks and paddles," *ga-* "flat objects."

*Verb Structure.*—In all Na-dene languages the verb consists of a series of elements, which may be grouped into certain classes that have fixed position in the complex relatively to each other; the verb stem gravitates towards the end of the complex, particularly in Athabaskan and Tlingit. The typical Athabaskan verb may be analyzed as consisting of: adverbial prefix (including original noun stems,<sup>1</sup> local postpositions,<sup>2</sup> petrified demonstrative stems of chiefly objective reference,<sup>3</sup> and certain other elements which do not occur in other connections<sup>4</sup>) + objective pronominal prefix + demonstrative element referring to subject of verb + "first modal" element + "second modal" element<sup>5</sup> + pronominal subject + "third modal" element<sup>6</sup> + verb stem + temporal-modal suffix + syntactic suffix (these are best considered as enclitic particles). Any of these elements but the stem may, in a particular form, be missing; two or more of the same general type may be exemplified in a single form. The order of elements as given above varies slightly for different dialects.

Quite similar in its general features to the structure of Athabaskan verb forms is that of corresponding forms in Tlingit. The analysis may be given as: pronominal object (best considered as proclitic to verb form) + nominal prefix of instrumental signifi-

<sup>1</sup> E. g., Hupa *l'a-* "water," *sa-* "mouth."

<sup>2</sup> E. g., Hupa *ye-* "into," *wa-* "to," *xa-* "after."

<sup>3</sup> E. g., Hupa *a-* used as indefinite object with verbs of saying and doing, *xa-* "same as before."

<sup>4</sup> E. g., Hupa *da-* "resting on," *no-* "coming to rest," *na-* denoting indefinite movement over surface, *na-* "again." At least some of these may be independent verb or other stems in origin. With *da-* cf. Ath. verb *\*-da* "to sit (sing. subject)"; *na-* may be identical with *\*na-* "two" (found, alongside of absolute *\*nak'e*, in, e. g., Hupa *na-dŋ* "twice," *na-nun* "two men").

<sup>5</sup> These two sets of "modal" elements are not easy to define. They are best considered as indicating certain "aspects," i. e., as defining range of activity with reference to such notions as inception, continuation, distribution, cessation, and indefiniteness of object.

<sup>6</sup> These "modal" elements also are difficult to define and, like "first" and "second modal" elements, are largely bound up in usage with idiomatic factors. Their primary significance is to define *voice*, i. e., such notions as transitive, intransitive, and passive.

cance<sup>1</sup> + "first modal" prefix<sup>1</sup> + pronominal subject + "second modal" prefix + "third modal" prefix<sup>3</sup> + verb stem + quasi-temporal suffix + syntactic suffix.

Differing more widely from the Athabaskan pattern of verb structure is that of Haida. In Haida the pronominal subject and object are not as closely welded into the verbal framework as in Athabaskan and Tlingit and are best considered as independent elements of speech. However, as they occupy definitely determined positions immediately before the verb form proper, their structural difference from the corresponding elements of Athabaskan and Tlingit is more apparent than real. There is involved here merely a difference of degree of coalescence of originally distinct elements. The Haida verbal scheme may be represented as follows: pronominal object + pronominal subject + instrumental prefix (most of which are in origin noun and verb stems capable of being used independently) + classifying nominal prefix (several of which, perhaps all, are old noun stems) + prefixed adverbial element<sup>4</sup> + main verb stem + auxiliary verb stem (doubtless independent verb stems in origin which have become specialized as quasi-suffixes) + adverbial element (in origin independent noun, verb, adjective, or adverb stems)<sup>5</sup> + locative suffix + temporal-modal suffix.

This analysis of the Haida verb is not complete. It should

<sup>1</sup> E. g., *q/a-* "mouth," *lu-* "nose, point."

<sup>2</sup> These elements do not form a well-defined class. They embrace such notions as causation, aspect, voice, tense, and indefiniteness of subject. They correspond, in Athabaskan, partly to certain adverbial prefixes, partly perhaps to "first modal" elements.

<sup>3</sup> These two sets of "modal" prefixes seem primarily to define various aspects (perfective, progressive, completive, inceptive, repetitive, momentaneous, transitional). They correspond to Athabaskan "first modal" and more particularly to "second modal" elements. As far as known, Athabaskan "third modal" elements find no counterpart in Tlingit.

<sup>4</sup> These elements, of which Swanton lists four, are termed by him "stems in initial position." It does not seem to me that there is any real necessity for the setting up of this class. Two of the elements are best regarded as nominal classifiers, one as an instrumental prefix, the other as a verb stem regularly compounded with other stems (see below).

<sup>5</sup> Swanton classifies these into three groups of "stems in terminal position," but this sub-classification, even if justified, is of no particular consequence here.

be observed, first of all, that the order of elements fluctuates in accordance with their logical relation to each other; thus, locative suffixes directly follow the main stem and are followed by auxiliary verb stems, if the locative element does not logically apply to the latter (e. g., *q'a-dl-da* "to take aboard," literally "to go-into canoe-cause"). Secondly, two or more independent verb stems may combine into a compound verb which is held together by the preposed pronoun (or pronouns) and the suffixed temporal-modal suffix (or suffixes) at the end of the complex. Each member of the compound may be itself attended by derivative prefixes or suffixes (including even certain temporal-modal elements, like continuative *-gaŋ-*). If we assume, as internal Haida evidence makes more than probable, that all auxiliary verb stems and suffixed adverbial elements are nothing but compounded originally independent stems, we may reduce the above analysis of verb forms to: pronominal object + pronominal subject + I. + II. + ... + temporal-modal element, in which I., II., ... stand for complexes of type: instrumental prefix + classifying nominal prefix + verb stem + locative suffix + continuative suffix).

Naturally, in any given verb form only a comparatively small number of theoretically possible positions are filled. I. generally contains the predominant stem of the whole verb form. Haida verb composition in its present form is doubtless largely a specialized development, though probably based on Na-dene processes. For this reason the typical Haida verb form in its older form must be defined, eliminating II., . . . , as: pronominal object + pronominal subject + instrumental prefix + classifying nominal prefix + verb stem + locative suffix + temporal-modal element. This scheme, despite its peculiar features, more nearly resembles the Athabaskan and Tlingit schemes than the one first given.<sup>1</sup>

Comparing the three verbal analyses given, we find that the Na-dene languages have several important traits of verb morphology in common. These are:

<sup>1</sup> I do not, of course, mean to imply that all instrumental and classifying nominal prefixes are older, as verbal elements, than all "stems of terminal position." Analogy always operates to feed a type already in existence.

1. Noun stems are included as prefixes in the verb complex. They are partly of instrumental (or local) significance, partly, more particularly in Haida, general classifiers of subject or object.

2. Both pronominal subject and object elements regularly precede the verb stem. Of these, the object comes first in the complex. In Haida the degree of coalescence of pronominal elements with the verb complex is much less than in Athabaskan and Tlingit. In these languages the subjective pronominal element is an integral part of the verb-form, being often separated from the objective element by an adverbial prefix.

3. Local affixes are found in both Haida and Athabaskan, though they are suffixed in the former, prefixed in the latter. At least some of the Athabaskan local prefixes are postpositions in origin; these, as regards their position after pronominal objects, offer striking analogies with corresponding elements in Haida and Tlingit, as we shall see later.

4. Athabaskan and Tlingit possess a large number of prefixed "modal" elements, which define adverbial notions, to a less extent temporal ideas, but primarily aspects. They are divisible into several position-classes, according to whether they precede or follow pronominal object and subject. These elements are in some respects the most characteristic of Na-dene morphology, though their presence is hardly traceable in Haida.

5. The verb stem is a generally monosyllabic element clearly marked off from the rest of the verb complex. It is nearly always preceded by a number of originally independent modifying elements. In Athabaskan it undergoes internal phonetic and morphologic changes as it passes from one tense (present and past, definite and indefinite) to another. Such changes have not been indicated by Swanton for either Haida or Tlingit. Dr Boas, however, on the basis of material recently secured from a Chilcat Indian, informs me that internal stem changes for tense, analogous to those found in Athabaskan, are characteristic also of Tlingit.

6. A series of temporal-modal elements is found suffixed to the verb stem. Some of these are firmly united with the verb stem (e. g., continuative *-l* in Hupa *tc!u-wi-l-t'ε-l* "he was bringing;")

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usitative *-tc* in Tlingit *u-q'ox-tc* "he kept coming in;" perfective *-y-* in Haida *su'-da-y-aganu* "had said"), others are more in the nature of enclitic particles (e. g., emphatic *-hε* in Hupa *do' a-du-win-ne-hε* "don't say that!" imperative *-dε* in Tlingit *na-at-dε* "(for firewood) go!" Haida hortatory *-djaŋ* in *l giŋ-gat-djaŋ* "let me adorn [you]!").

7. Still more loosely suffixed, in most cases, to the verb form is a series of syntactic particles, largely used to subordinate it in various ways. In part these elements, as we shall see, are post-positions in origin.

8. While compounding of verb stems is most luxuriantly developed in Haida, indications are not lacking of the presence of the process also in Tlingit and Athabaskan. Thus, the Tlingit verb stem *ci* "to desire" may be prefixed to another verb stem to form its desiderative (e. g., *ci-t'αn* "to desire to pick berries"); cf. such Haida compounds as *gi'da-yu'αn-siŋ-ga* "to wish to give much food," in which the auxiliary verb stem *-siŋ* "to wish," however, is suffixed to the main stem. Nearer the Haida type is the class of Athabaskan verbs in *\*-ts!ε* (cf. independent verb stem *\*-ts!ε* "to hear"), indicating that the action of the main verb is heard or otherwise perceived (e. g., Hupa *-t'uW-ts!ε* "to hear one splitting logs," Chipewyan *-ni-θ'ε* "to hear one say"). Differing morphologically from, yet psychologically similar to, the Haida type of verb composition is the use in Tlingit and Athabaskan of two independent verb forms to form a logical unit; e. g., Tl. *gaŋ gaŋ-γi'-sa-t'i* "cry you-will-be," i. e., "you will cry" (cf. such Haida compounds as *t'a'-ga* "to eat-be," i. e., "to eat"), and Hupa *tc!t[n]-ni-ŋ-ya wi-n-t!ε* "he-came he-was-(thus)," i. e., "he always came."

9. A highly important feature found in all Na-dene languages is the use of subjective or objective pronominal elements, according to the nature of the verb, to indicate its logical subject. This feature will be referred to again in connexion with the pronouns.

More important than any of the specific features we have named is the similar manner in which the various elements going to make up a verb-complex are linked together. The resulting structure may be termed a sentence in miniature, not only psychologically, but, as is much less often the case in America, also morphologically.

*Noun Structure.*—There are a large number of monosyllabic noun stems, which may be used absolutely, in all three Na-dene languages. These are both of type cv and cvc.

They often enter into composition, the qualifying noun regularly preceding (e. g., Chipewyan *t!o-bec* "grass-knife, mowing machine;" Tl. *ʒa't-s!a'x* "root-hat"). In Haida, however, simple composition of noun stems does not seem to be often found (in such compounds as Masset *i't!adas 'ai* "chief's blood," possessive *-i* or *-α* seems to have contracted with the final vowel of the second noun). Another type of composition which is particularly characteristic of Na-dene is the suffixing of a possessive element (Ath. *\*-e, \*-ye, \*-ye*; Tl. *-i, -γi, -u, -wu*; H. *-ga, -i, -α*) to the second member of the compound; this element indicates that the second noun governs the first, in other words that the first is genitively related to it (e. g., Chipewyan *k'a-t'uwe* "goose-lake;" Tl. *s!atc a'n-i* "moss town;" H. *xo'ya tlu-ga* "raven's canoe, beans"). It is important to observe that finite verb forms may be nominalized or turned into relative clauses in Athabaskan and Tlingit by the suffixing of this possessive (better relative) element (its different forms in Athabaskan and Tlingit are due to phonetic factors); cf. Montagnais *t!ai gay-e* "plate which-is-white" with Tl. *at-ci'-γi* "those who can sing."

Possessive pronouns are prefixed to nouns; they are identical in form with the objective forms used with verbs. Most nouns but terms of relationship and, generally speaking, those indicating parts of the body are in Athabaskan followed by the relative particle discussed above (e. g., Chipewyan *be-θi* "his head" but *be-ay-ε* "his snowshoes"). Similarly in Tlingit the relative suffix is regularly used with a possessive prefix except in the case of terms of relationship and, though not consistently, body part nouns (e. g., Tl. *du-tla* "his mother" but *du-tc'u'n-i* "his dream"). Haida possessive constructions are on the whole analogous to those of the other two Na-dene languages, the relative suffixes *-ga* and *-i, -α* being used in some cases, omitted in others (e. g., *l dja'-ga* "his wife," Masset *l tla'l* "her husband," Masset *l k!u'g-i* "its heart").

Derivative affixes (aside from nominalized verb forms) are quite sparingly used in Na-dene. A diminutive suffix is found in both

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Athabaskan and Tlingit (e. g., Hupa *djelo'-tc* "small storage-basket," Tl. *a'-k!u* "little lake"). Noun plurals (aside from Tl. collective *-q!*) are not often formed, though special plural forms for terms denoting human beings are found here and there (e. g., Kato *sk'i'-k'* "boys," Tl. *du-k'a'ni-γen* "his brothers-in-law," H. *k!wai-ga-lαη* "elder brothers").

*Pronouns.*—There are two classes of pronouns in Na-dene. Subjective pronouns are used as the subjects of active verbs (in Athabaskan of most verbs generally); objective pronouns as the objects of transitive verbs, subjects of neuter verbs (which may best be interpreted as objects of impersonal verbs), and possessive prefixes with nouns. While the two series are distinct as such, not all the respective forms are etymologically unrelated; in Tlingit there are one or two minor differences between the objective and possessive series. In both Athabaskan and Tlingit, as we have seen, the subjective and objective pronominal elements are integral parts of the verb complex, the possessive elements of the noun complex; in Haida the pronominal elements may be considered as independent words or, at least in part, as proclitic elements. A third series of pronouns is found in Athabaskan and Tlingit; these are independent denominative terms, which, however, have no influence on the form of the verb or noun.

The employment of objective pronouns with verbs denoting states has been rather obscured in Athabaskan by the spread of subjective forms, but there are enough cases to make it clear that the impersonal verbs with objective pronominal elements characteristic of Haida and Tlingit were at one time better represented also in Athabaskan.

The contrast between verb forms with subjective and objective pronominal subject is exemplified, e. g., by Tl. *gu-x-t'u-si't* "we will cook it" (with subjective pronominal element *t'u-* "we") and *ha-k<sup>u</sup>-gu-wa-t!a* "we will be warm" (with objective pronominal element *ha-* "us": "it will be warm to us"); by H. *l q'a-t!α!-gan* "I got off" (with subjective pronominal element *l* "I") and *di sk!vstl-djuti'-ga* "I am truly full" (with objective pronominal element *di* "me": "it is truly full to me"); and by Hupa *o-η-xai* "thou

art buying" (with subjective pronominal element *-ŋ* "thou") and *ni[k]-k'-o-wαŋ* "go to sleep!" (with objective pronominal element *ni* "thee": "let it sleep to thee!"). That the verb forms with objective pronominal subject are indeed impersonals with pronominal object is made clear by comparing them with such transitive forms as Tl. *ha-u-si-ne'x* "they have cured us;" H. *di' dalaŋ tl-gaxa-gul-ga* "you tire me with your handling;" and Hupa *ya[n]-ni-l-t'ιŋ* "he picks thee up." The possessive use of objective pronominal elements is illustrated by Tl. *ha'-q'aha'gu* "our eggs;" H. *di' gi'da* "my daughter"; Hupa *ni[t]-t'ai* "thy paternal uncle."

*Postpositions.*—Very characteristic of Haida, Tlingit, and Athabaskan is a set of local and relational elements which regularly follow the noun or pronoun that limits them (e. g., H. *st'al-ai st'α* "the cliff from;" Tl. *xa'na-dε* "evening-towards;" Hupa *nun-tc'ιŋ* "ground-toward"). These postpositions offer remarkable morphological and etymological analogies in the three languages. No less than about thirty-five Athabaskan postpositions and local verb prefixes (which, as we shall see, are in all probability postpositions in origin) can be more or less confidently stated to be cognate with corresponding Haida, Tlingit, or Haida-Tlingit elements. Out of twenty-five Hupa postpositions listed by Goddard, at least fifteen seem to be related to similar elements in Tlingit, Haida, or both. These facts show that the postpositional elements of Na-dene reach back, aside from certain later dialectic developments, into the earliest period of Na-dene linguistic history that it is impossible to arrive at by comparative evidence.

In some cases it is possible to show that postpositions are nouns in origin, the complex of noun + postposition forming originally a compound noun. Thus, Hupa and Kato *-lai*, Chipewyan *-layε* "on top of" is simply the noun stem for "end, top" compounded with the preceding element; Chipewyan *-ba* "around," the similarly employed stem for "edge" (Ath. *\*maŋ*, *\*man*). With Tlingit *!a* "behind," Haida *!al* "behind, back of," and Tl. *k'a* "on" compare respectively Chipewyan *-!a-zε* "back" (body-part), Kato *-!a* "tail," and Navaho *-k'a* "surface." Hence it is intelligible that the same noun stem may in some cases have developed inde-

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pendently into distinct postpositions in different Na-dene languages; e. g., Ath. \**man*, Tl. *wan* "edge" means "around" as Athabaskan postposition, "close to" as corresponding Tlingit element. The nominal origin of postpositions is further made very probable by the fact that they are frequently preceded by possessive pronouns: Hupa *mi-yε* "under it" (originally perhaps "its bottom") like *mi[n]-niη* "its face;" Tl. *hasdu-q'a'nax* "after them" (originally perhaps "their following") like *hasdu-caγi'na-γi* "their anchor;" H. *di' ga* "to me" (originally perhaps "my vicinity") like *di' go'η-ga* "my father." Whether we shall ever be able actually to demonstrate the nominal origin of all Na-dene postpositions is doubtful, but there can be little doubt of the correctness of this view.

Postpositions often occur compounded among themselves. In some cases the analysis is evident (e. g., Chasta Costa *-mε'-q'ε* "inside of" < "therein-at;" Tl. *-k'α-q'* "on" < "on-at;" H. *gei-s't'α* "out of" < "in-from"); in others the two (or more) elements have grown into a unit that can be analyzed only by comparative evidence (e. g., Tl. *t'a'γi* "under" contains Tl. *γi'* "down in," but *t'a'* does not occur alone; comparison with Tl. *t'a'-k* "in the middle of," *t'ι-n* "with," and particularly Ath. \**t'a* "among," shows *t'a'γi* to have originally meant "down among").

Postpositions combine with verb forms in two ways, as local or relational prefixes and as syntactic suffixes. We have already indicated that several of the local prefixes of Athabaskan are merely postpositions in origin that have become somewhat firmly attached to the verb complex. Thus, Hupa *xa-* in *xa-n-t'ε* "look for it!" is evidently etymologically identical with *-xa* in *no'-xa* "after us." In some cases the postposition comes after elements which can hardly be disconnected from the verb form, e. g., *a-ya-l-tc!i[t]-dεn-nε* "he told them" (here *-l* "with" appears immersed in the verb, which demands the indefinite objective *a-* "it" as constant prefix; morphologically parallel is Tl. *da-* "to" in verbs of saying, e. g., *ye da-γα-du-q'a* "thus to-him-spoke" like Ath. *a-l-*, which is doubtless identical in origin with postpositive *-dε* "to," Masset *da* "to," Ath. \**-d*, \**-dč*, \**dč-n* "to, at"). These facts are not surprising when we bear in mind that the indirect object, nominal or

pronominal, precedes the verb and is followed by its postposition (e. g., Hupa  $\text{x}\acute{o}\text{'-}\text{x}\acute{a}$   $\text{t}'\epsilon\text{-}\eta\text{'-}\text{in-}\text{t}'\epsilon$  "him-for thou-wilt-look;" Tl.  $\text{a-da}$   $\text{a-o-li-t'aq!}$  "it-around they-drifted;" H.  $\text{la-gei}$   $\text{la}$   $\text{sk'it-nan}\eta\text{-xida-i-as}$  "it-into he began-to-chop-up"). It needs only the removal of the object (which then remains understood) from the postposition to bring the latter into closer touch with the verb. In the last Hupa example the removal of the expressed object ( $\text{x}\acute{o}\text{'-}$ ) leads to a form like the  $\text{x}\acute{a-n-t}'\epsilon$  first quoted. In Tlingit this use of the postposition as verb prefix with unexpressed object does not seem to be common, but examples abound in Haida, e. g.,  $\text{gei}$   $\text{la}$   $\text{q'a-tc!i-gan}$  "into he went-in." In the last example  $\text{gei}$  is morphologically, as well as etymologically, parallel to Hupa verb prefix  $\text{ye-}$  "into" (cf. Chipewyan postposition  $\text{-ye'}$  "in"). Here again we observe that Haida has allowed distinct elements to coalesce to a less extent than Athabaskan. In view of the tendency in Athabaskan for postpositions to become specialized as verb prefixes, it is not surprising if we find cases of such prefixes, no longer used as postpositions, corresponding etymologically to Haida postpositive elements. Such an example is Ath.  $*\text{ts}\check{\epsilon}\text{-}$ ,  $*\text{ts}\check{\epsilon}\text{-}\eta\text{-}$  "away from, out of;" H.  $\text{st'a}$  "from, after" (for H.  $\text{st'}$ : Ath.  $\text{ts}$ , cf. also H.  $\text{st'a}$ -classifier for ring-shaped objects: Navaho  $\text{tsa-b}\acute{a}\text{'s}$  "ceremonial hoop,"  $\text{yo-s-tsa}$  "ring").

A verb form as such is sometimes conceived of as nominalized and is followed by a postposition which serves to subordinate it. Thus, in a Chipewyan form like  $\text{hi-l-tc!}\epsilon\text{-t!a}$  "because he was angry," postpositive  $\text{-t!a}$  "with, on account of" (cf.  $\text{b}\epsilon\text{-t!a}$  "with it") nominalizes and subordinates  $\text{hi-l-tc!}\epsilon$  "he was angry" ("he-was-angry because-of," "because of his being angry"). Such syntactical developments have taken place independently in the Na-dene languages, to some extent even in the various Athabaskan dialects. This is indicated, among other things, by the fact that even where two Na-dene languages have employed the same postposition for syntactic purposes, the use to which it is put is different (e. g., Ath.  $*\text{-de}$  "if" and Tl.  $\text{-t}$  "in order to" both go back to Na-dene postpositive  $*\text{-da}$  "to, at"). Tl.  $\text{-}\gamma\text{a}$  and  $\text{-n}$ , which make subordinate clauses out of verb forms (e. g.,  $\text{h}\alpha\text{s}$   $\text{a-ga-ca-n}$  "when they marry;"

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*a-t'e-x-γa* "when she slept"), are doubtless identical with postpositive *-γa* "in the neighbourhood of" and *-n* "with, at."<sup>1</sup> In Haida temporal clauses are formed by nominalizing verb forms by means of suffixed demonstrative (*g*)*ai* "the," these being then followed by postpositive *dlu*. Subordinate clauses formed by means of postpositions without preceding (*g*)*ai* also occur (e. g., Masset *l k!ota'l-an sil-e-t* "after he died," literally "he died place-the-to"). The degree of coalescence of postposition and verb is again much less in Haida than in Tlingit and Athabaskan.

*Summary.*—It has become evident that the morphologies of Haida, Tlingit, and Athabaskan present numerous and significant points of comparison. Despite not unimportant differences of detail, the same fundamental characteristics are illustrated in all three. In not a few cases elements (or even processes) which are thoroughly alive in one of the languages linger on merely as survivals in another (e. g., *-xa*, freely used in Haida as distributive suffix with numerals, postpositions, and nouns, lingers on in Tlingit as compounded *-nα-x* after numerals and as sporadic noun plural *\*-k'*, *\*-k'e*, *\*-k'ai* in Athabaskan).

Considerable specialization must, of course, be allowed for. Peculiar to Haida are the development of a large class of nominal classifiers, a great exuberance of composition of verb stems, the development of a set of local suffixes in the verb, and greater looseness in the treatment of pronominal elements and postpositions. The synthetic tendency has gone farthest in Athabaskan, in which, e. g., pronominal subject and "modal" element often unite inextricably (there are, however, analogies to this in Tlingit). Tlingit, on the whole, seems to have the smallest number of purely distinctive morphologic features. It shares with Athabaskan a lesser degree of independence of pronominal elements, a great development of verb prefixes denoting aspects and, it would seem, the employment of internal stem changes for tense differences. As in Haida, the distinction between active verbs with subjective pronouns and static verbs with objective pronouns is better preserved than in Athabaskan.

<sup>1</sup> My interpretation of Tl. *-l*, *-γa*, and *-n* as syntactically specialized postpositions differs from Swanton's, at least as far as expressed in his grammatical sketch.

## II. COMPARATIVE VOCABULARY

The lexical evidence bearing on the genetic relationship of Athabaskan with Haida and Tlingit comprises, at the moment of writing, over three hundred distinct Athabaskan stems and grammatical elements which can be, with greater or less probability, assigned to the reconstructed Na-dene language. Only a selection, comprising less than one third, of this lexical material is here presented. The arrangement is alphabetical, from the point of view of Athabaskan.

ATHABASKAN	HAIDA	TLINGIT
1. <i>a-</i> demonstrative stem	<i>a-</i> dit.	<i>a-</i> dit.
2. <i>-ade</i> "elder sister"		<i>a't</i> "father's sister, father's sister's daughter"
3. <i>-ca-η</i> obligatory future	<i>-sa-η</i> infallible future	
4. <i>-ca, -cal</i> "to catch with a hook"	<i>dʒil</i> "bait"	<i>cat</i> "to seize"
5. <i>-d, -dē</i> "at, to"	<i>-da</i> "to"	<i>-t, -dε</i> "to"
6. <i>da</i> "what?"		<i>da</i> "what?"
7. <i>-da, -dal</i> "to go, to travel"	<i>-dal</i> "to move along"	
8. <i>-dan</i> "to drink"		<i>dana</i> "to drink"
9. <i>-das</i> "to burn"	<i>da'dj, (das)</i> "live coals"	
10. <i>-del</i> "several go"	<i>dal</i> "several go by land"	<i>at</i> "several go"
11. <i>del</i> "crane"	<i>dilax</i> dit.	<i>du'l</i> dit.
12. <i>di</i> "this"	<i>dei</i> "just that way"	<i>de</i> "now"
13. <i>-dja</i> hortatory	<i>-dja-η</i> dit.	
14. <i>djan</i> "mud"	<i>tc'a'n</i> dit.	
15. <i>-gan</i> "to be mouldy"	<i>gu'na</i> "decayed"	
16. <i>-go</i> "toward"	<i>gua, gui</i> dit.	
17. <i>-gid, -yid</i> "to dive"	<i>gi</i> dit.	
18. <i>-γa</i> "for," <i>-γan</i> "to"	<i>ga</i> "to," <i>gan</i> "for"	<i>ga</i> "for"
19. <i>-γα</i> "to go"	<i>-ga</i> "to go in order to"	<i>-γα</i> "to go to"
20. <i>-γε, xe</i> "grease"		<i>e'x</i> "grease"
21. <i>-yed</i> "to run"	<i>ga'l</i> dit.	
22. <i>-yel</i> "to be dark, night passes"	<i>ga'l</i> "night"	<i>get</i> "to get dark"

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ATHABASKAN	HÁIDA	TLINGIT
23. - <i>ye</i> , - <i>yel</i> "to kill, to fight"	<i>gail</i> "to fight"	
24. - <i>γwo</i> "tooth"		<i>ux</i> "tooth"
25. <i>hai</i> "that"	<i>hao</i> "that"	<i>he</i> "this"
26. <i>he</i> -, <i>xe</i> - "they"		<i>has</i> "they"
27. <i>xo</i> -, <i>hě</i> - "he, him"		<i>hu</i> "he"
28. - <i>k'a</i> "liquid has position"	<i>xao</i> "liquid"	
29. - <i>k'an</i> , - <i>k'a</i> "to fish with a net"	<i>xao</i> "to fish"	
30. - <i>k'a</i> "on"		- <i>k'a</i> "on"
31. - <i>k'e</i> personal noun plural	- <i>xa</i> distributive suffix	- <i>nα-x</i> distributive numeral suffix
32. <i>k'ene</i> "friend"		<i>xo'n</i> "friend"
33. <i>kla</i> "arrow"	<i>q/a</i> "harpoon"	<i>q/a</i> "point"
34. <i>klěη</i> "withes"	<i>q/an</i> "grass"	
35. - <i>klan</i> "to burn"		<i>q/a'n</i> "fire"
36. - <i>k'le</i> "on"		- <i>q'l</i> "at"
37. - <i>k'os</i> , <i>k'es</i> "to tie"	<i>k'u</i> "to tie"	
38. - <i>i</i> "with"	<i>al</i> "with"	
39. <i>l</i> -, <i>la</i> negative		<i>l</i> negative
40. <i>la</i> "one"	<i>l/a</i> - "the first"	<i>l/e</i> - "one"
41. - <i>la</i> "to jump"	<i>l/a</i> "to dive"	
42. - <i>lad</i> "end"	<i>l/an</i> "end"	
43. <i>lo</i> ', <i>lok</i> ' "fish"		<i>ll'u'k!</i> "cohoes"
44. - <i>l/a</i> "butt; behind"	- <i>dlga</i> "after"	
45. <i>mě</i> - "he, it"	<i>wa</i> - "that"	<i>we</i> "that"
46. <i>man</i> "edge"		<i>wan</i> "edge"
47. <i>měs</i> "cheek"		<i>wac</i> "cheek"
48. - <i>n</i> , - <i>η</i> local postposition	- <i>n</i> , - <i>η</i> general postposition	- <i>n</i> "with," also local postposition
49. - <i>na</i> "to die"		<i>na</i> "to die"
50. - <i>nan</i> "to drink"	<i>nial</i> , <i>ni'l</i> dit.	
51. - <i>ne</i> , - <i>n</i> "person, people"	<i>na</i> "to live; house"	<i>na</i> "people"
52. - <i>něg</i> , - <i>lěg</i> "to relate"		<i>nik</i> "to tell"
53. - <i>ne</i> "to play"	<i>nan</i> dit.	
54. - <i>ni</i> "to touch, to do with one's hands"		<i>ni</i> "to put"
55. <i>no</i> "place of retreat. island"		<i>nu</i> "fort"
56. - <i>onaγ(e)</i> "older brother"		<i>hunx</i> "man's older brother"
57. <i>s</i> - durative verb prefix		<i>s</i> - modal prefix

ATHABASKAN	HAIDA	TLINGIT
58. -sĕn "to hide"		sin "to hide"
59. sil "steam," steam"	-sil "to sil "to steam"	si't "to cook"
60. -t'a "among"	t'a-oan "alongside of"	-t'a'-k'u "in the middle of"
61. t'a "wave" t'a- referring to water	t'a'ŋa "sea-water"	
62. -t'an "to eat"	t'a dit.	t'a'q! "to chew"
63. -t'e "to look for," look"	-t'an "to look"	t'il'n "to see"
64. -t'e "to be cold," t'ĕn "ice"	t'at "cold"	t'a'dj "cold"
65. -t'e "to lie"	t'ai, t'i "to lie"	t'ai "to lie," t'a "to sleep"
66. t'ez "night"		t'a't "night"
67. -t'a "because of"	-t'a dit.	
68. t'a "feather," t'a "to fly"	t'agun "feather," "feather-like object"	t'a-wu "feather"
69. -t'a "tail," t'a-ŋ "back- wards"	-t'al "back of"	-t'a "behind"
70. -t'es "to step"	t'a "to step"	
71. -t'a "to shoot"		t'uk "to shoot"
72. -t'od "to rub"		t'us "to rub"
73. tsa "ring-like object"	st'a- "ring-shaped ob- ject"	
74. ts'ai "dish"	sq'lao "to put in a dish"	sl'q! "dish"
75. -tslĕn "bone"		sl'a'q "bone"
76. tsi "again"		ts'lu "again"
77. -tc'i "grandfather"	tc'in dit.	
78. -tc'on "mother-in-law"	djo'n dit.	tc'a'n dit.
79. tcla "hat"		sj'a'x "hat"
80. tclo "fir, spruce"	tcju "cedar"	
81. -xa "for"		-xα-n "to"
82. xa- "up, out of"	k'wa-gi "above"	k'e "upward"
83. xa' "goose"	xaha "mallard"	
84. xa-ŋ "quickly"	xao- "to do a thing quickly"	
85. -xan, -yan "to grow up," xan "old age"		can "old person"
86. x'in "song"		ci' "song"
87. -ya "to stand" (plur.)	ga "to stand"	
88. -yan "to eat"		ya'n "to eat"

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ATHABASKAN	HAIDA	TLINGIT
89. <i>ye-</i> "that," <i>y-</i> "he"	<i>gai</i> "this, that, the"	<i>ya</i> "this"
90. <i>-ye</i> "at the foot of, under"		<i>-γi</i> "down in"
91. <i>-yě</i> personal noun plural		<i>-γe-n</i> plural of terms of relationship
92. <i>ye</i> "supernatural being," <i>-yěn</i> "to practice sha- manism"		<i>γe'k</i> "supernatural helper"
93. <i>-ye</i> "in"	<i>-gei</i> "into"	<i>-ge'</i> "inside of," <i>-γi-k</i> "inside"
94. <i>-ye</i> suffix making relative clause		<i>-γi</i> suffix making rela- tive clause
95. <i>yo</i> "that yonder"	<i>gu</i> "there"	<i>yu</i> "that yonder"
96. <i>-a</i> "to go"	<i>q'a</i> "to walk"	
97. <i>-a</i> "to tell, to sing"		<i>q'a</i> "to say"
98. <i>-in</i> "to see, to look"	<i>q'in</i> dit.	<i>gen</i> dit.

### III. PHONOLOGY

The phonetic systems of Athabaskan, Haida, and Tlingit, despite a good many differences of detail, present important points of similarity. Three types of stops are found in each: intermediate (or sonant), aspirated surd, and glottalized (fortis). Sibilants and sibilant affricatives, k-spirants, and laterals are well developed. A remarkable phonetic feature held in common by the three Na-dene languages is the paucity of labials; *b*, *p'*, and *p!* were clearly not found in Na-dene (*b* and *p'* are rare Haida sounds), *m* existed only doubtfully (Ath. *m*, whence *b* in certain dialects, is not equivalent to Haida *m*, but to Haida-Tlingit *w*), while *w* was certainly found. Athabaskan has lost the old velar series of stops as such, while Haida and Tlingit have preserved them; on the other hand, the Na-dene anterior palatals, best preserved in Haida, have been lost as such in Tlingit.

In the more elaborate paper on the Na-dene languages in course of preparation, the historical relationship of the Athabaskan sounds to their Na-dene prototypes and Haida and Tlingit correspondents is systematically worked out on the basis of all the evidence available. Here it will suffice to point out some of the more important correspondences, referring to the numbered entries of the comparative vocabulary for illustrative examples.

*Stopped Consonants*

1. Ath. *d*: H. *d*, *-t*: Tl. *d*, *-t* (nos. 2, 5, 6, 7, 8, 9, 10, 11, 12, 21)
2. Ath. *t'*: H. *t'*: Tl. *t'* (nos. 60, 61, 62, 63, 64, 65, 66)
3. Ath. *tl'*: H. *tl'*: Tl. *tl'* (nos. 67, 68, 69, 70, 71, 72)
4. Ath. *g*: H. *g*: Tl. *g*, *-k* (nos. 15, 16, 52)
5. Ath. *k'*: Tl. *k'* (no. 30)
6. Ath. *k'*: H. *x*: Tl. *x* (nos. 28, 29, 31, 32)
7. Ath. *x*: H. *k'(w)*: Tl. *k'* (no. 82)
8. Ath. *k̲'*: H. *k̲'* (no. 37)
9. Ath. *y,(g)*: H. *g* (nos. 17, 87)
10. Ath. *kł'*: H. *qł'*: Tl. *qł'* (nos. 33, 34, 35, 36)
11. Ath. *'*: H. *q'*: Tl. *q'* (nos. 96, 97, 98)
12. Ath. *γ*: H. *g*: Tl. *g* (nos. 18, 21, 22, 23)
13. Ath. *γ*: H. *g*: Tl. *g*, *γ* (no. 93)

*Continuants*

14. Ath. *m*: H. *w*: Tl. *w* (nos. 45, 46, 47)
15. Ath. *n*, *-ŋ*: H. *n*, *-ŋ*: Tl. *n* (nos. 3, 8, 14, 15, 32, 34, 35, 46, 48, 49, 50, 51, 52, 53, 54, 55, 56, 58, 63, 78, 85, 88, 98)
16. Ath. *l*, *ł*: H. *l*, *ł*: Tl. *ł* (nos. 4, 7, 10, 11, 22, 23, 38, 39, 59)
17. Ath. *s*: H. *s*, *dj*: Tl. *s* (nos. 9, 57, 58, 59)
18. Ath. *c* (*s*): H. *s*, *dj*: Tl. *c* (nos. 3, 4, 47)
19. Ath. *x* (> *c* in most dialects): Tl. *c* (nos. 85, 86)
20. Ath. *γ*: H. *g*: Tl. *γ* (nos. 88, 89, 95)
21. Ath. *γ* (before front vowel): H. *g* (*g*): Tl. *γ* (nos. 90, 91, 92, 93, 94)
22. Ath. *x*: H. *x*, *x*: Tl. *x* (nos. 20, 81, 83, 84)
23. Ath. *h*, *x*: H. *h*: Tl. *h* (nos. 25, 26, 27)
24. Ath. *γ*: H. *g*: Tl. *γ*, *-x* (nos. 19, 20, 24, 56)

*Affricatives*

25. Ath. *ł*: H. *tl*: Tl. *tl* (nos. 40, 41, 42, 43)
26. Ath. *dj*: H. *dj*, *tc'* (nos. 13, 14)
27. Ath. *tc'*: H. *tc'*, *dj*: Tl. *tc'* (nos. 77, 78)
28. Ath. *tl'*: H. *tc'*: Tl. *sl'* (nos. 79, 80)
29. Ath. *tsł'*: Tl. *tsł'*, *sl'* (nos. 75, 76)
30. Ath. *tsł'*: H. *tlł'*: Tl. *tlł'* (e. g., Ath. *\*-tsle* "penis": Tl. *tlle'ł* dit.; Ath. *\*-tsłs* "to sit [plur. subj.]" : H. *tlł/a-(o-)* dit.)

*Consonant Clusters.*—The study of Na-dene sibilants and sibilant affricatives is rather involved and presents several difficulties. The summary given above (17, 18, 19, 26, 27, 28, 29, 30) exhibits some of the main developments. An important group of cases is afforded by Haida stems or elements beginning with consonant clusters whose first element is a lateral (*ł*, *tlł*, *dlł*) or a sibilant (*s*). Swanton, in

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commenting on these clusters, surmised that they were perhaps due to the prefixing of an old morphological element (e. g., *l-*, *s-*). There is, however, no evidence whatever to support this. On the other hand, I have at my disposal upwards of twenty such examples which point clearly to the inference that these Haida clusters were found in Na-dene and correspond to lateral and sibilant affricatives in Athabaskan and Tlingit. The following relations can be established:

- A. 31. H. *lg-*: Ath. *ll-* (?)  
 32. H. *lq'*: Ath. *ll-*  
 33. H. *dlg-*: Ath. *ll-* (no. 44)  
 34. H. *ll'*: Ath. *tc'*  
 35. H. *llx-*: Ath. *tcl-* (?)  
 36. H. *lld-*: Ath. *tsl-* (cf. 30.)
- B. 37. H. *sg-*: Ath. *ts-* (?)  
 38. H. *sql-*: Ath. *tsl-*: Tl. *sl-* (no. 74)  
 39. H. *sg-*, (*sk'w-*): Ath. *tc'*: Tl. *tc'*  
 40. H. *sqlw-*: Ath. *tcl-*  
 41. H. *st'*: Ath. *ts-* (*tsl-*): Tl. *t'*  
 42. H. *st'*: Ath. *tc'*  
 43. H. *stl-*: Ath. *tcl-*

*Vowels.*—The great majority of vowel correspondences is perfectly intelligible; a certain number of unsolved problems still remain. In comparing Tlingit with Haida and Athabaskan forms, it is necessary to bear in mind that, under as yet undetermined circumstances, Tlingit *a* has developed to *e* (e. g., Tl. *xa* "to eat": *a-xe'-x* "he ate"; Tl. *de'x* "two": *daxa-ducu* "two plus five, seven"; Tl. *t'a* "stone": *t'e-ql'* "stones"). A more important problem is presented by Ath. *e* (doubtless open in quality), which is not to be directly compared with Tl. *e*. It is clear, both from internal Athabaskan evidence (e. g., Ath. *\*-t'e* and *\*-t'a* "to look for"; Ath. *\*t'e'* "in the water," *\*t'a-* "water") and, still more, from comparison with Haida and Tlingit, that Ath. *e* (which must be assumed for the earliest Athabaskan period) has developed from Na-dene *a*; less frequently Ath. *e* goes back to Na-dene *i*. Under what phonetic circumstances, however, Na-dene *a* has remained as such in Athabaskan or become *e* is not clear for the present. This I believe to be one of the most important problems of Na-dene phonology.

Some of the more important vocalic correspondences are:

44. Ath. *a*: H. *a*, *a'*: Tl. *a*, *a'*,  $\alpha$ , (*e*) (nos. 1, 2, 3, 4, 6, 7, 8, 9, 13, 14, 18, 19, 25, 28, 29, 30, 33, 35, 40, 41, 42, 44, 46, 49, 60, 61, 62, 67, 68, 69, 73, 74, 79, 81, 82, 83, 84, 85, 87, 88, 96, 97)
45. Ath. *e* (sometimes reduced to  $\epsilon^1$ ): H. *a*, *a'*,  $\alpha$ : Tl. *a*, *a'*,  $\alpha$ , (*e*) (nos. 5, 10, 20, 21, 22, 26, 31, 34, 45, 47, 51, 53, 64, 65, 66, 70, 75, 89, 92)
46. Ath. *i*: H. *i*, *i'*, *i*, *ei*: Tl. *i'*, *i*,  $\epsilon$  (nos. 12, 17, 54, 59, 77, 86, 98)
47. Ath. *o*: H. *u*, *o'*: Tl. *u*, *u'* (nos. 16, 24, 27, 37, 43, 55, 56, 71, 72, 78, 80, 95)

Whether or not Na-dene possessed pitch accent must remain undecided for the present. Its presence in Tlingit and a few remarks by Morice and Legoff as to its possible existence in Athabaskan make this not improbable. Should this prove to be the case, some of the phonological difficulties in Athabaskan and Tlingit vocalism may be solved (e. g., Ath. *e* < Na-dene  $\grave{a}$ , Ath. *a* < Na-dene  $\acute{a}$ ). All this, however, is quite vague as yet.

#### IV. CONCLUSION

The main conclusion to be derived from the selected morphological, lexical, and phonological evidence that we have passed in review is, I believe, obvious. Athabaskan, Haida, and Tlingit must be considered genetically related. The correspondences are of so intimate a character that mutual borrowing of words and morphological features seems out of the question. It is, however, no less obvious that each of these languages is very distinctive and represents a highly differentiated form of the Na-dene prototype. In no sense can Haida, Tlingit, and Athabaskan be said to form a continuum comparable to that of the Athabaskan dialects when these are compared among themselves. Each Na-dene language has evidently passed through a very long period of development in linguistic isolation from its sister languages. It would be rash, in the present state of our knowledge, to dogmatize on the relative conservatism of the Na-dene languages. I would venture to suggest, however, that Haida has remained the most faithful to the original sound system of Na-dene, but that, on the whole, the original morphological features are best preserved in Tlingit.

<sup>1</sup> This weak vowel is differently colored in different dialects; e. g., Hupa  $\epsilon$  (less frequently  $\alpha$ ), Carrier  $\alpha$ , Navaho *i*.

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Several facts suggest that Tlingit and Athabaskan may have had a common linguistic history after Haida had become differentiated, but too much should not be made of this.

The name that I have chosen for the stock, Na-dene, may be justified by reference to no. 51 of the comparative vocabulary. "Dene," in various dialectic forms, is a wide-spread Athabaskan term for "person, people"; the element *\*-ne* (*\*-n*, *\*-η*) which forms part of it is an old stem for "person, people" which, as suffix or prefix, is frequently used in Athabaskan in that sense. It is cognate with H. *na* "to dwell; house" and Tl. *na* "people." The compound term "Na-dene" thus designates by means of native stems the speakers of the three languages concerned, besides continuing the use of the old term Dene for the Athabaskan branch of the stock.

An important ethnological consequence of our linguistic results is that a demonstration is at last given of the northern provenience of the Athabaskan-speaking peoples. So long as Athabaskan was counted a separate linguistic stock, there was no conclusive *à priori* reason for considering its Pacific and Southern branches as having spread out from the northern group. Under the present circumstances a southern drift of Athabaskan-speaking tribes cannot seriously be doubted. The center of gravity of the Na-dene languages is clearly in the northwest, in southern Alaska and adjacent parts of northern British Columbia and southern Yukon Territory. Owing to the great linguistic gulf separating Haida and Tlingit, I should be inclined to consider the coast of southern Alaska, the present home of the Tlingit Indians, as the most likely region in which the Na-dene languages developed. The Athabaskan branch of the stock undoubtedly formed a relatively undifferentiated unit long after Haida and Tlingit had become differentiated from each other. The Athabaskan dialects have so many distinctive traits in common that it is perfectly evident they have had a long history in common. They may be considered a specialized interior offshoot, just as Haida is a specialized island offshoot.

## Editorial Note

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Nineteenth-century Russian linguists speculated about a possible relationship among Athabaskan, Tlingit, and Eyak, an isolate of the Copper River area (Krauss 1964; Pinnow 1976). Sapir was almost certainly unaware of this work, and saw data on Eyak only quite late in his career, after Birket-Smith and de Laguna's ethnographic field work in 1933. The germ of Sapir's Na-Dene hypothesis, as he himself notes (p. 534), lay in the speculations of Boas and Swanton (especially Swanton 1908: 472-485) about a historical connection between Haida and Tlingit. It was the position of Haida, rather than that of Athabaskan or Tlingit, that was central to Sapir's view of the relationship. Haida, with its relatively uncomplex morphology, seems an improbable congener for languages so thoroughly "polysynthetic" in spirit as Athabaskan and Tlingit, but in Sapir's view the convoluted morphosyntax of Athabaskan-Tlingit was a late development, and the more open structure of Haida words represented either an archaic situation or a quite different development from the "isolating" Na-Dene proto-language. Most of Sapir's lexical comparisons with Haida depended on the assumption of morphosyntactic changes of this magnitude.

Sapir's Na-Dene proposal was not well received. Both Boas (1920) and Goddard (1920) disparaged Sapir's use of a genetic hypothesis to explain resemblances — particularly morphological similarities — that they felt could better be explained as borrowings. The issue of Athabaskan-Tlingit-Haida "morphological borrowing" remained alive until at least the 1950s, when Dell Hymes in an important series of papers proposed a technique of "positional analysis" to assess the historical value of structural resemblances of this sort (Hymes 1955, 1956).

Research in recent decades has clearly established the genetic relationship of Athabaskan and Eyak (Krauss 1964, 1965). A genetic relationship between Athabaskan-Eyak and Tlingit is accepted by most scholars, but is seen as distant and problematic (Krauss 1968, 1969; Krauss and Leer 1981; Pinnow 1966). In the recent literature, it is this grouping that is usually referred to as "Na-Dene." Krauss has called Sapir's belief that Haida belongs in Na-Dene "an illusion" based on "mistranscription, misanalysis, mistranslation, and/or misinterpretation" (1979: 841). Levine, in an influential paper (1979), has given a detailed critique of the "spurious" evidence on which Sapir based his hypothesis, tracing many of the supposed errors to Swanton's deeply flawed description of Haida (1911). In his recent general treatment of linguistic relationships in the Americas, Greenberg (1987: 321-330) rebuts Levine and wholeheartedly accepts Sapir's more inclusive version of Na-Dene, which he sees as an intrusive group unrelated to any other American Indian linguistic stock. Pinnow also regards the relationship of Haida to Athabaskan-Eyak-Tlingit as likely to be

genetic, and has published considerable lexical evidence for the relationship (Pinnow 1985a,b,c, 1986a,b, 1988, 1990), as well as a comprehensive history (in German) of Na-Dene research from 1798 through 1976 (Pinnow 1976).

Sapir's ms. corrigenda on his own offprint are as follows:

<i>Original</i>	<i>For:</i>	<i>Read:</i>
p. 545, l. 32	-ga	-ga
p. 546, l. 6	ga-læŋ	ga-læŋ
p. 553, entry 63	t'i!n	t'i·n
p. 553, entry 79	sja·x <sup>u</sup>	s!a·x <sup>u</sup>
p. 553, entry 80	tcju	tc!u
p. 553, entry 87	ga	ga

On p. 535, lines 1-3, the text from "the consonant . . ." to "Tlingit (Tl.)." is bracketed with a question mark by Sapir. On p. 541, footnote 3, Sapir indicated the last sentence of the note with the word "revise!" On p. 547, last paragraph, Sapir questions the statement "Chipewyan -ba. . . \*man)." On p. 549, end of first paragraph, Sapir questions the sentence "Such an example . . . 'ring')." In the Comparative Vocabulary, Sapir questions the Tlingit forms in entries 22 and 33 and the Haida forms in 60, 74, 89, and 95; adds Tlingit *na* 'to drink' to entry 50; and recalculates the total entries from 98 to 95. On pp. 555-556, Sapir questions nos. 30, 33, and 38 in the list and states that "This paragraph [headed "Consonant Clusters"] should be eliminated. Swanton is right." On p. 557, first text paragraph, Sapir questions the sentence "Should this prove . . . Na-dene á)." On p. 558, Sapir notes, beside the first three lines, "More certain now."



## The Sino-Dene Hypothesis

[excerpt from a letter to A. L. Kroeber]

I have long wanted to write you about Nadene and Indo-Chinese, but my evidence accumulates so fast that it is hard to sit down and give an idea. Let me say this for the present. If the morphological and lexical accord which I find on every hand between Nadene and Indo-Chinese is "accidental," then every analogy on God's earth is an accident. It is all so powerfully cumulative and integrated that when you tumble to one point a lot of others fall into line. I am now so thoroughly accustomed to the idea that it no longer startles me. For a while I resisted the notion. Now I can no longer do so.

The chief stumbling-blocks in the way of a general acceptance of the synthesis would be: 1. Failure to realize the very exceptional type of language to which Nadene belongs. It is really quite alone in America, so far as I can see. The contrast between it and Eskimo, Wakashan, and Algonkin is tremendous. 2. Failure to realize that the Nadene languages are not one-third as synthetic as they look. Go at analysis half-way decently and get into a critical perusal of connected text and you soon realize that the complex verb breaks down into a cluster of very live elements, each of which has a syntactic or positional value, not merely as "affix" but as radical element. Haida in particular, I find, is extremely analytic. It knows no "prefixes" and "suffixes" at all except for certain important survivals that Swanton does not even mention (e.g. causative and denominative *s-* in *s-kît* to 'handle a club, to club' < *kît* 'club', cf. Tlingit *su-*, transitivity prefix; also Haida *t-* = Tlingit *tu-* = Athabaskan "3d modal" *t-*, also primarily transitivity). What Swanton calls affixes are all independent stems entering into composition, or even little verbs. There is no "tense suffix" in Haida, merely a series of enclitic phrases consisting of demonstrative + particle verb of being. His "continuative" *-gAñ*, e.g., is simply 'that-is (duratively)', his "imminent future" *-asañ* is really *-'a-sa-ŋ* 'this-will-be (durative)', and so on. It all crumbles to pieces at the least touch. I think the same will prove true of Athabaskan-Tlingit, though here the integration is more thorough. But I no longer seriously believe we have the right to consider anything preceding the "second modal" elements (Ath.  $\gamma$ -, *n-*, and *s-*) as part of the verb and am beginning to doubt if even these elements and the subjective pronominal "prefixes" are part of the true verb. I think it more than likely that such an Ath. form as *\*yasčt-k'os* (purely theoretic form *ad hoc*! Not to be mistaken for genuine Ath.) 'I picked up a flexible object' is to be analyzed as *\*ya sč c t-k'os* 'up it-is (that) I handle-a-flexible-object'. *\*t-k'os* is the verb; the rest is a series of somewhat reduced independent elements that follow in a definite order. 3. The third prejudice to overcome is the nature of Indo-Chinese itself.

Modern Chinese is a very secondary development. The most typical representative of the earlier stage is Tibetan — which is startlingly Nadene-like. It has those fundamentally important “3d modal” elements of Ath., Tlingit, and Haida (e.g. *du-* ‘to be together’: *s-du-* ‘to cause to be together, to assemble’; in fact, 4 of its more important verb prefixes, which are “voice” elements, seem to me to correspond in form and meaning to Nadene elements — *s-* to Tlingit-Haida *s-*; *r-* to Tlingit-Haida-Ath. *l-*; *d-* (medio-passive) to Tlingit-Ath. *d-*, survivals also in Haida; nasal prefix to Ath. “3d modal” *-n-*, *-ŋ-*, of mysterious value but probable active intransitive). Moreover, Tibetan has vocalic ablaut in its verbs (e.g. *ŋ-geŋ-s* ‘to fill’, perfect *b-kaŋ*, fut. *d-gaŋ*, imperative *k’oŋ*). Again, the transitive verb is really passive, as in Tlingit. In both, for instance, you would say ‘Man-by horse kill’ = ‘The man killed the horse’, Tlingit agentive *-tc* corresponding exactly to Tibetan instrumental *-s*. In both Indo-Chinese and Nadene, postpositions are of extreme importance and serve to subordinate preceding verbs and clauses. Indeed, reading Tibetan text gives you precisely the same feeling as reading Haida text. I wish I had time to illustrate. In both groups the fundamental element is really a noun, the verb a kind of denominative structure. In brief, I should say that the similarity in feeling between Tibetan and Nadene is at least as close as between Latin and English, probably closer. Thus the theoretical road to a synthesis is clear. And the lexical evidence is startling. You would be amazed at some of my material. Things like:

1. Tlingit *k’a* ‘surface’; Navaho *k’ā* ‘surface’: Tibetan *k’a* ‘surface’
2. Chinese *t’an* ‘charcoal’: Haida *s-t’an* ‘charcoal’
3. Old Chinese *ti* ‘this’: Ath. *di* ‘this’ (Ath. *di* really means *ti*)
4. Old Chinese *ti* ‘pheasant’: Ath. *di* ‘partridge’
5. Nadene *k’u* ‘hole’ (Tl. *k’ú-q’u* ‘hole’, *t’a- t’ú-k’u* ‘cave’ = ‘rock-interior-hole’, *γa-k’o* ‘to fall into a hole’; Nav. *k’o*, e.g. *ts’e-k’o* ‘rock-hole’ = ‘canyon’); Indo-Chinese *k’u* ‘hole’ (dozens of forms, e.g. Tib. *k’u-ŋ* ‘hole’, Karen *k’u*, with falling tone, ‘to dig a hole’).

These are only a drop in the bucket. Naturally it is a big problem and there are going to be hundreds of knotty points to unravel. But I do not despair. My present plan is to proceed as follows. First, to prepare part 1 of a Nadene comparative study, to consist of my present lexical material (about 300 comparable radical elements, to which I add constantly). In this I would give reconstructed Athabaskan but also actual Ath. dialectic forms. Before publishing parts 2 and 3, on morphology and phonology, which need much preliminary work, I intend to publish special papers on selected portions of Nadene grammar, e.g., certain archaic post-positions; or demonstrative stems; or general points of syntax. In this way I shall be keeping the problem live and accumulating experience for the definitive Nadene study. Of course I shall have to do Ath., Haida, and Tlingit in the field. I want particularly to gather a large amount of purely lexical material. People do not realize how scanty is our material, and for my purpose, which is comparative, I need stacks of it. What Goddard gives us is a miserable pittance — and wretchedly analyzed or not analyzed. Did you read his attack on my Nadene? You can have no idea of the laughable errors he commits. It is the

work of an utter groundling that does not know his own material. What do you think of a man who expects you to unravel the complex phonology of Nadene by drawing up an alphabetical list of Tlingit "stems" and "matching" them with random "stems" from Kato or Ten'a *ad libitum*? Very much as though you "matched" Sanskrit words now with French, now with Portuguese. Great *method*, what? And what do you think of a man who rules out comparisons because he does not "know" the Ath. form in question? Particularly when the form occurs in a book (Chapman's Ten'a) which he has "edited"! I may reply to Goddard, but it is really no use. He is a man of no more than average linguistic ability, completely at the mercy of his local sentimental memories, and absolutely without vision as to the older drift of Ath. He probably imagines his lists of stems are the last word on the whole subject. The degree to which he has failed to analyze his material is shocking in the extreme.

I shall not broach the Indo-Chinese part of the problem till I have moored myself more completely in Nadene. The final plan is: 1. a Nadene comparative grammar to be published in 3 parts (possibly an Ath. etymological dictionary as a side-show); 2. a Nadene-Indo-Chinese demonstration; 3. a more general treatment of the evolution of the whole group, showing how old types have been replaced by new ones. As a starter, I am at work now on a paper on Haida phonetics, which may interest you when you see it.

P.S. I cannot resist the temptation to give a somewhat livelier idea of the remarkable way in which lexical elements are interwoven in Nadene and Indo-Chinese. I have some cards along, so don't need to trust to memory. I shall give an idea of the richness of some of my entries by dealing with a group of related words.

In Ath. we have a stem *\*lu*, post-vocalic *\*-lu*, which may be rendered as 'coil' or 'loop'; e.g. Nav. *tō* 'loop', as vb.: Nav. *-lo* 'to catch with a rope', Jic. Apache *-lo* 'to lasso', Chipewyan *-lu*, *-tu* 'to be caught in a net or noose'. So far, so good. Here our friend Dr. P. E. Goddard would end. But it is difficult to believe that Ath. *\*l̥lo·t* 'rope, strap' (found in all dialects) is unconnected. How? Without going into details (it would take too long), I may say that I feel justified in analyzing *\*l̥lo·t* into *\*t-'lo·-t*. How *\*-'lo·-*, *-'lu* is related to *\*lu*, *-lu* I cannot yet tell, but I strongly suspect Nadene had both *l* and *l̥*, and in related stems. As you will see from my Haida paper, Haida has both *l* and *l̥*; in Tlingit *l̥* probably became *l̥'*. I should guess that *l̥* is causatively related to *l*; Ath. *\*lu*, *-lu* is intr.: 'loop; to lie coiled', *\*-'lu* would be 'to cause to be coiled, to make a loop, to tie around' (possibly *-lo* is a secondary form of *\*-'lu*). Now *-t* we know to be continuative or usitative; and *t-* is medio-passive. Hence *\*t-'lo·-t* is what is always caused to loop around, what loops about something', in other words, 'rope, strap'. We learn important things from such an analysis: that "3d modal" elements were welded with verb stems and appear in nominal derivatives; that there was an old alternation *l*: *l̥* whose significance remains to be discovered. That we are on the right track is confirmed by another common Ath. stem

whose formation is precisely parallel to that of *\*t'lo-t*. This is *\*t'tel* 'fire-drill'. Fortunately we are here not dependent on Goddard's material alone. From Petitot we learn that in Hare and Loucheux there is a verb *\*-le* (*-d-le*, *-t-le*, *-l-le*) meaning 'to revolve' (words involving it are: 'virer au cabestan', 'cylindrique', 'tourbillon', 'tourner', 'se tourner'). Hence *\*t'-le-t* is 'what keeps turning itself, what revolves drill-like'. This parallelism of *\*t'lo-t* 'rope' to *\*t'tel* 'fire-drill' is, of course, highly suggestive. It shows that many of Dr. Goddard's "stems" may not be pure father-Adam radicals. And we see that Ath. *t't* fails to correspond to Haida and Tlingit *t't* for a reason. It is a secondary development in probably all 3 groups. Such a sound as *t'* appears in cognate words throughout; not so *t't*—which fact alone casts a reflex light on our analysis.

Let us proceed. To Ath. *\*lu*, *-lu* is clearly related Ath. *\*-lui* 'to wrap around': Hupa *-loi* 'to tie, to wrap around', Kato *-li'* 'to tie up' (old Ath. form possibly causative *\*-lui*). And further, having once allowed Ath. *t't* to analyze itself into medio-passive *t-* (*d-*) + *'l*, we do not feel we are doing anything ungodly to analyze Ath. *\*t'lu* 'grass' into *\*t'-lu* 'what is wound (in basketry)'. This analysis of 'grass' is helped by denominative Ath. verbs, e.g. Hupa *t'lo-n*, *-t'lo*, *-t'lo-W*, *-t'lo-i* 'to make baskets, to twine in basket-making'; Nav. *-t'lo*, *-t'lo'*, *-t'lo-l* 'to tie (e.g. the hair)'.

We may summarize all this as follows:

Ath. *\*lu*, *-lu* 'coil, loop'

— *\*lu* 'to be caught in a noose'

— *\*'lu* 'to catch in a noose'

— *\*'lui* 'to wrap around'

*t'-lu* 'what is twined' > 'grass' (denominative vb.: 'to twine in basketry; to braid hair')

*\*t'-lo-t* 'what is always looped' > 'rope, strap'

Now comes the fun. Indo-Chinese *lu* as follows:

Tibetan *lu-ŋ* 'a strap, slung over the shoulder or round the waist, for carrying things'

Miao *lo-ŋ* 'bridle' (close *o*)

Tib. metaphorically: caus. *s-lu* 'to cause to be snared', i.e. 'to ensnare, beguile, seduce'

Angâmi Naga *te-rhu* 'sly' (*rhu* < *h-ru*; Tibeto-Burman *hl-*, *hr-* > *lh-*, *rh-* is exceedingly common; *h-* is common as causative prefix, e.g. Tib. *s-l-* often parallel to *lh-*)

T'ai group: Siamese *roi*<sup>(2)</sup> 'enfiler' (numbers indicate tones in H. Maspéro's orthography); White Tai *roi*, *loi* 'enfiler'

And now Chinese: *lu-* group: *luŋ*<sup>(2)</sup> (numbers for tones according to usual Modern Pekinese system) 'a cage, to snare' < Old Chinese (i.e. 7th Cent. forms, which I have worked out carefully from Karlgren's tables) *lu[o]ŋ-* (- = level; / = rising; \ = falling tone). *luŋ*<sup>(2)</sup> (in *luŋ*<sup>(2)</sup> *t'ou*<sup>(2)</sup> 'halter', i.e. 'snare-head') < Old Chinese *lu[o]ŋ-*; *lu*<sup>(4)</sup> 'girdle gem' < *luo*\ (words with falling tone seem frequently to be old passive derivatives: 'what is looped around one's waist?'); *lu*<sup>(2)</sup> 'thatched hovel' < *luo-*; *lu*<sup>(2)</sup> 'hempen thread' < *luo-*; *lo*<sup>(2)</sup> 'conch,

spiral, screw' < *luâ-* (*â* is a dark-timbred *a*-vowel); *lo*<sup>(2)</sup> 'lines in the palm' < *luâ* ?*lei*<sup>(2)</sup> 'to creep, cling to', same character also read *lei*<sup>(3)</sup> 'series, connected' (words evidently refer primarily to creeping vines) < *luâi-*, *luâil*. These Chinese *lu*, *luâ* forms are paralleled by another set in *lui-* (cf. Ath. \**-lui* above): *lei*<sup>(3)</sup> 'to bind' < *lʷwiĕ-* (< \**lʷwiĕ-*); *lei*<sup>(3)</sup> 'a creeper (as of melon or pea)' (not sure of reconstruction, but phonetic element in character suggests initial *lu* or *lʷwi*); *lū*<sup>(3)</sup> 'silken thread, a hank' < *lʷiul*. And metaphorically we have *luŋ*<sup>(4)</sup> 'foolish, to impose on' < *lu*[o]ŋ \; *lū*<sup>(4)</sup> 'deceitful' < *lʷwiŋ* \ (i.e. 'winding about, ensnaring with blandishments'; cf. Tibetan *s-lu* above).

Other probably connected Tibetan words are: *lhub* (i.e. causative *h-lub*) 'to bind, tie, fasten (e.g. ornaments to the ear)'; *k-lub* 'to cover (e.g. the body with ornaments)'; *lwa-ba* 'a woolen blanket'.

Observe how well the Ath. forms integrate with the numerous Tib. and Chinese forms. But we are not done. Very likely connected with Ath. \**-lu* is Ath. \**-lu-s* 'to drag an animal by a rope': Nav. *-lōs*, *-lo·z*, *-lōs* classifier verb "denoting a single animal as an object: the inference is that the animal is led by a rope" (Franciscan Fathers); Hupa *-los* 'to drag, to pull along'. With these forms I feel inclined to compare (though here I feel far more hesitant) Chinese *lo*<sup>(2)</sup> *tsz*<sup>(3)</sup> 'mule' (*tsz*<sup>(3)</sup> is merely 'son', often used to make nouns) < *luâ-*; also *lū* 'donkey' < *lʷwiŋ*-. The parallelism between Ath. and Chinese would be a convergence from related radicals rather than a specific etymological parallel.

But we are far from finished. Perhaps related to Ath. \**-lu* is an important classifier verb \**-le*, \**-la*: Nav. *-le*, *-la*, *-lel* 'to handle a long, flexible object, as a rope, quirt, leather, hide, etc.' (Franciscan Fathers). Parallel to this is a set of Indo-Chinese forms in \**la*, \**le* (Ath. *ε* is often parallel to *a*; just how related I do not yet understand, possibly reflex of old alternation *a*: *iā*):

Tib. causative *s-le*, *lhe* (< *h-le*) 'to twist, plait, braid the hair, to make a basket, to knit'; *s-le* 'a coarse basket'; *s-le-po*, *s-le-ba*, *s-le-bo* 'a flat basket' (*-po*, *-ba*, *-bo* are "articles"); *lha-s*, *lhe-s* < *h-la-s*, *h-le-s* 'braid, wicker-work, texture; twisted cake or bun'; *lhe-s-ma* < *h-le-s* 'the act of twisting, plaiting' (*-ma* is "article"); *lan-bu* 'braid, plait, tress of hair' (*-bu* is diminutive); *lan-ts'ar* 'ornaments worn in the hair'; *le-brgan* 'diapered design of woven fabrics'; *le-na* 'the soft downy wool of goats below the long hair; fine woolen-cloth'; *lda-ldi* 'a kind of ornament of silk or cotton, a fringe or tassel' < *d-la-* (*dl-* regularly > *ld-* in Tib.; very easy to illustrate); *ldañ-mgo* 'the yarn-beam of a loom' < *d-lañ-* (*mgo* 'head'); *ldem-ldem* < *d-lem* 'flexible, supple, elastic, pliant'; *ldeb-* < *d-leb-* 'to bend round or back, to turn round, to double down'. I am not so certain of this last, which brings us into a large set of forms in *la-* and *lo-* referring to 'turning, turning back', which may well be related to our present set but which I prefer, for brevity's sake, not to go into just now.

Now Chinese. We have two series: \**la* and \**li*. Based on \**la* are: *lan*<sup>(2)</sup> 'basket with handle' < *lâm-*; *lan*<sup>(3)</sup> 'rope, hawser' < *lâm*/; *lao*<sup>(4)</sup> (*tez*/) 'netted case' < *lâk*, same character also read *lə*<sup>(4)</sup> 'joined, to tie up'; *lei*<sup>(1)</sup>, also read *lə*<sup>(1,2,4)</sup> 'to rein in, to strangle' < *lək* (perhaps better to *lu-* series above); *lo*<sup>(2)</sup> 'net, sieve' < *lâ-*; *lo*<sup>(2)</sup> 'shallow open basket' < *lâ-*. Based on \**li* are: *li*<sup>(2)</sup> 'ornamented girdle'

< *lyie-* (?); *li*<sup>(2)</sup> 'basket' < *lyi-*; *li*<sup>(2,4)</sup> 'rope to tie a boat', character also read *ši*<sup>(3)</sup> 'a well woven gauze' < *xyl* (?), which probably means older \**h-li* (loss of post-consonantal *l* is now well established for Chinese).

Is it not impressive that Ath. and Indo-Chinese \**lu* seem to have reference chiefly to "looping," Ath. \**le*, *la* and Indo-Chinese \**la*, *li* to "handling a long flexible object, twining, basketry"? Now let us return to Nadene. In Tlingit we have *lit* 'fine basket'. Remember that Tlingit has no voiced *l*, only voiceless *t*. Further, experience shows abundantly that many Tlingit forms in final consonant (particularly if glottalized) are compounds. Hence we may suspect that *lit* really means old \**li-t*(*a*). Reference to Ath. gives us \**-t'a* 'receptacle': Hupa *-t'a* 'sack'; Kato *-t'a* 'pocket, blanket fold'; Nav. *-dzus-t'a* 'pocket' (*-dzus* 'hollow, semi-tubular'?). This somewhat unsatisfactory parallel is buttressed by Haida *t'ao-t'a* 'box' (almost certainly misheard for *tao-t'a* 'food-receptacle'). Tlingit *lit* is therefore probably *li-t'a* 'receptacle (for small objects) of twined basketry'. We have further *t'i* 'woolen blanket' < \**li* or \**li*' (final glottal stops seem regularly to affect the first consonant; I have good evidence for this). Based on \**la* or \**liā* we have also in Tlingit *t'leq* 'tentacles of squid' \**t-le-q*' (with medio-passive *t*; Tlingit *e* is always related to *a*-forms) < 'what is long and twists itself?' (cf. fundamental meaning of Ath. \**-le*, \**-la* above).

And in Haida we have *dli-n* 'arm of devil-fish', which I analyze as *d-li-n* (*d*-medio-passive; *-n* perhaps causative, to which there are good Ath. and Tibetan analogies; *-li-* < *liā* ?) < 'long things that twist themselves about'?

I am quite likely to have misinterpreted here and there, but the Nadene and Indo-Chinese parallels seem highly suggestive to me. Of course, this sort of group-parallelism is not isolated.

I shall refer to another interesting group, without going into details. I spoke of Ath. \**-le* 'to revolve' and its derivative \**t'lel* 'fire-drill'. To these forms belong Haida *lut* 'to surround, move around'. In Indo-Chinese we have a well-chambered Tibetan set: *re* and *ril* (e.g. *re-s* 'change, turn, time, times'; *ŋ-g-re* 'to roll one's self'; causative *s-g-re* 'to roll'; *ril* 'round'; causative *s-g-ril* 'to wind or wrap round; to roll, wrap, or wind up; to wag (the tail); to roll (a stone)'. Here may also belong Haka *kut-hrer* 'ring' (*kut-* 'hand'; *h-* common Tibeto-Burman causative prefix), though Conradi sets this to Tib. forms in *la-*, *le-* referring to "twining."

### Editorial Note

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Sapir's manuscript Sino-Dene "dictionary," including more than a hundred lexical comparisons, is in the Library of the American Philosophical Society (manuscript 497.3 B63c Na20a.3, vol. 2; cf. Kendall 1982: 28). Nearly all the entries date from the early 1920s, and it is clear that Sapir went little further with the idea than the speculations contained in this letter. Of these speculations (see also 1925o, later in this volume) Krauss has written: "Sapir was . . . carried far beyond any objectively justifiable conclusions by his enthusiasm for the idea" (Krauss 1973: 963). Few would challenge the accuracy of this assessment. The connection is, however, a plausible one, both on linguistic and anthropological grounds, and it continues to attract attention. Robert Shafer, a Sino-Tibetanist, published two papers in support of the Sino-Dene hypothesis (Shafer 1952, 1957), but, being based neither on Sapir's Sino-Dene files nor on extensive comparative Athabaskan or Na-Dene data, his work cannot be considered an authoritative statement. Greenberg, Turner and Zegura (1986) have proposed that Na-Dene (including Haida) represents the language of an Asiatic population that entered the New World about 7,000 years ago, and that it is distinct, both physically and linguistically, from all other American Indian populations. While this is consistent with Sapir's Sino-Dene hypothesis, Greenberg, in his recent world-wide linguistic classification, does not link Na-Dene with Sino-Tibetan or with any other linguistic group, considering it to be one of 15 fundamental linguistic families in the world (1987: 332-337). Pinnow (1990), relying mainly on Greenberg's own evidence, believes that a good case can be made for viewing Na-Dene as intermediate between Old World languages (especially Sino-Tibetan) and New World languages (especially Greenberg's "Almosan-Keresiouan" phylum).



## Athabaskan Tone

A part of the summer of 1922 was spent by the writer at Sarcee Reserve, Alberta, in studying the language of the Sarcee Indians. A series of texts was obtained as well as supplementary grammatical material. The most important single point that appeared was the fact that Sarcee has a well-developed system of pitch accent. Fundamentally this system has a striking resemblance to the Tlingit tonal system described by Dr. Boas, though secondary developments have complicated the Sarcee system considerably. The tonal resemblances between Tlingit and Athabaskan constitute an important further argument in the Nadene theory recently put forward. Hints on Athabaskan tone are to be found also in Father L. Legoff's study of Chipewyan (*Grammaire de la Langue Montagnaise*). Father Morice makes a few isolated references to tone in Carrier, where it is almost certainly a feature of importance judging from brief MS linguistic notes taken by C. M. Barbeau among Carrier Indians at Hagwelgate. Some years ago P. E. Goddard noted tonal differences between otherwise identical second person singular and third person subjective forms in the Hupa verb; these observations, based on the study of [391] Rousselotgraphs, agree with the Sarcee results obtained. So fundamental is tone to Sarcee morphology that it is well nigh inconceivable that it should be entirely absent in any other Athabaskan dialect.

### Editorial Note

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Sapir's references to earlier work are to Boas (1917) for Tlingit, to Legoff (1889) for Chipewyan, and to Goddard (1907) for Hupa "Rousselotgraphs." Morice later commented on Carrier tone more extensively in his full treatment of the language (1932).

At the time of Sapir's Sarcee work, tone systems had been described for many African and Asian languages but only rarely noted among American Indian languages (Sapir's own description of a pitch accent in Takelma being one of these instances; see 1912h, Volume VIII). We now know tone to be a widespread feature in the Americas, particularly in eastern North America and in lowland South America. Ironically, comparative evidence in Athabaskan (and Athabaskan-Eyak) now indicates that tone was not present in the proto-language but developed in several Athabaskan subgroups (but by no means in all) as syllable-final consonants were simplified or lost (Krauss and Golla 1981:

69-70). Sapir, in later fieldwork, encountered at least two Athabaskan languages without tonal systems, Anvik and Hupa. In the latter case, where Sapir had gone to the field with every expectation of confirming Goddard's earlier reports, he was clearly nonplused (see Sapir 1928i, reprinted in this volume, and Sapir's letter to Kroeber, 28 June 1927, quoted in Krauss 1986: 163).

## A TYPE OF ATHABASKAN RELATIVE

As is well known by students of Athabaskan linguistics, the Athabaskan adjective is in form a verb. Even the simplest, non-pronominal or third-personal, form regularly contains either a "first modal" prefix <sup>1</sup> (generally *dž-*, *d*; *ně-*, *n-*; *t'ě-*, *t'-*; or *tě-*, *t-*), a "second modal" prefix (*sě-*, *s-*), a "third modal" prefix (generally *-l-* or *-t-*), or a first (or second) modal prefix followed by a third modal prefix (forms in *dě-l-*, *ně-l-*, *ně-t-* are typical). It is unnecessary to give examples here, as they may be readily supplied from the special dialectic monographs (see, e.g., Goddard, Legoff, Morice, Petitot).

Father Legoff, however, in his *Grammaire de la Langue Montagnaise* <sup>3</sup>, calls attention to an interesting class of adjectival derivatives ("nouns formed from 'adjectives'") in which the prefixed elements are lost and the bare stem appears in the relative <sup>4</sup> form. Some of his examples are :

1. I follow Dr. Goddard's convenient terminology, without thereby committing myself in the least as to the term "modal".

2. I use *ě* as a formula for the reduced or "pepet" vowel which has different forms according to dialect or according to varying phonetic circumstances in one dialect (e.g. *ɨ*, less frequently *α*, *ε*, *a*, or *u*, in Hupa; *α* in Kato and Chasta Costa; *ε*, *α* in Chipewyan). It may often be shown to be a reduced form of an older Athabaskan *ε* or *i*.

3. Montreal, 1889. See p. 30. Petitot and Legoff use "Montagnais" in the sense of Chipewyan.

4. By "relative" I mean the form assumed by nouns when they are qualified by preceding elements (nominal or pronominal) and by verbs when they are used as relative clauses. The fundamental Athabaskan relative suffix is probably *-e*, *-ě* (*-γe*, *-γě*), but the actual dialectic forms are often involved by the operation of various

*dε-l-ba* (TO BE) GRAY : *bay-ε* THE GRAY ONE  
*dε-l-gai* (TO BE) WHITE : *gay-ε* THE WHITE ONE  
*nε(d)-du-ε* (TO BE) SHORT : *du-ε* THE SHORT ONE  
*dε-yεl* (TO BE) SQUAT : *yεl-ε* THE SQUAT ONE  
*dε-bq̄z̄* (TO BE) ROUND : *bq̄z̄* THE ROUND ONE  
*dε-l-χεn* (TO BE) BLACK : *χεn* THE BLACK ONE  
*dε-yo'* (TO BE) SHAGGY : *yo'* THE SHAGGY ONE  
*dε-l-θo'* (TO BE) YELLOW : *θo'* THE YELLOW ONE.

Such forms as *bq̄z̄*, *χεn*, *yo'*, and *θo'* look for all the world like unmodified stems, but there is every reason to believe that they are relative forms, like *gay-ε* and *yεl-ε*, that have either fallen together with or that differ in some respect from the parallel stem forms found in the adjective-verbs. Possibly the phonetic record is defective <sup>6</sup>.

Legoff says of these forms : "This kind of

phonetic laws. Frequently the *e*, *ě* is dropped but is then apt to leave a trace in the voicing of the preceding consonant, now final (e.g. the relative form of Hupa *-t'a'* AMONG < Ath. *\*-t'ax* is *-t'au* < *-t'aw*, the regular Hupa development of Ath. *\*-t'aγ*, reduced from *\*-t'aγ-ě*).

5. I write *bay-ε* rather than *ba-yε*, though Legoff speaks of a suffixed *-yε*, because comparative evidence demonstrates the existence of the stem-form *-bay-* as well as *-ba'*. *-ba'-i* and Petitot's Montagnais *-ba-a* seem to presuppose Ath. *\*-mah-ě*. Navaho *-bai*, e.g. *gwi t-bai* GRAY HAWK, is Ath. *\*-may-ě*; cf. further Hupa *-mai*, Kato *-bai*. I am modifying Legoff's and Petitot's orthography and that of the Franciscan Fathers so as to bring them into harmony with current Americanist usage.

6. Goddard writes *dε-l-χεn* TO BE BLACK, but *naγiđε-χεn'* BLACK FOX (*Texts and Analysis of Cold Lake Dialect, Chipewyan*, APAMNH, X, 110). Does this mean that *-χεn'* is the relative form of *-χεn*? The relative form of the corresponding Navaho *-ju* BLACK is *-ji'n*, with lengthened vowel. The formation of the relative in Athabaskan has never been properly studied. It is one of the fundamental problems of the language.

substantive is hardly used except as sobriquets which men give one another or as names which people give to animals, in order to distinguish them. And then they are always followed by the word *yaʒε*, which means "little". As a matter of fact, the type is illustrated in other connections, e g. :

*dε-k'εδ* TO BE BALD : *tʰi-k'εδε* THE BALD-HEADED ONE, BALD-HEADED (Pet.)

(*b*)*o-rε-zur* 7 TO BE SLIPPERY (Pet.) : *t'an'-zurε* SLIPPERY ICE (Leg.)

These two examples differ in an important respect. In *t'an'-zurε* and numerous other compounds of its type the first member (ICE) designates the properly denominating concept of the group, which is then qualified by a relative form (*zur-ε*) of Legoff's "sobriquet" type. In *tʰi-k'εδε* the first member of the compound (HEAD) is not the properly denominating concept of the whole, though it is itself qualified by a relative form (*k'εδ-ε*), again of the sobriquet type. The group *tʰi-k'εδε*, taken as a unit, is to be understood as qualifying a third, understood, noun. We can express this by saying that while SLIPPERY is relative to ICE and ICE not relative to another concept, BALD is relative to HEAD and BALD-HEAD to PERSON. As far as such a form as *tʰi-k'εδε* is concerned, it makes no difference whether the qualified noun is expressed or not. Obviously the difference between *t'an'-zurε* and *tʰi-k'εδε* is analogous to the English difference between RED BREAST and (ROBIN) REDBREAST. Whether there is a prosodic difference (one of stress or pitch) between the two Athabaskan types does not appear from the evidence, but it is possible that they are not formally identical.

As there is no genuine line of demarcation in Athabaskan between "adjective" and "verb", one may expect that forms both of

the type *bayε* THE GRAY ONE and *t'an'-zurε* SLIPPERY ICE may be based on "verb stems". This is exactly what we find. A few examples are :

Mont. *-ʒi* TO MELT ; *dε-l-ʒi* TO BE MELTED (Pet.) : *dles ʒin-ε* GREASE EASY TO MELT, MELTABLE GREASE (Leg.)

Mont. *-ts'aγ* TO CRY : *ts'aγ-ε* THE WHIMPERING ONE, GRUMBLER (Pet.)

Hare *-k'wε* TO LIE HABITUALLY : *k'wε-ε* LIAR (Pet.)

It scarcely needs to be pointed out that Legoff's "sobriquets" are simply qualifying terms in the relative form, the noun referred to being unexpressed. It is not a far cry from compounds like *tʰi-k'εδε* THE BALD-HEADED ONE and *dles ʒin-ε* MELTABLE GREASE to such clipped forms, say, as *k'εδε* THE BALD ONE and *ʒinε* WHAT MELTS (EASILY). Such forms are in type identical with Legoff's *bayε* THE GRAY ONE. Of *ts'aγε* GRUMBLER, Petitot remarks that it is derived from *ts'aγ* TEARS; we would then have to interpret *ts'aγε* as THE ONE WITH TEARS rather than as THE WHIMPERING ONE. Petitot's analysis is perfectly credible, for forms of the type of *bayε* may be directly formed from noun stems, as I shall show from Navaho evidence. But I hope also to show that the difference between *-ts'aγ* TO CRY and *ts'aγ* TEARS is purely a matter of translation, not of intrinsic Athabaskan form.

In Navaho there are a great many prefixless or radical qualifying terms in relative form. They are freely used with or without preceding nouns and are based on "adjectival", "nominal", or "verbal" stems. They all denote permanent or characteristic attributes and easily take on the character of sobriquets or regular clan or personal names. Examples of "adjectival" origin are <sup>8</sup> :

8. My Navaho examples are taken from the *Vocabulary of the Navaho Language* of the Franciscan Fathers (2 vols., St. Michaels, Arizona, 1912).

7. Petitot writes *o-* for *ho-* (see Goddard and Legon). *-r-* is a postvocalic form of *d-* in Chipewyan.

*n-jun-i* NICE (relative form); *n-jp'* TO BE GOOD :  
*jun-i* NICE

*n-nε:χ* TO BE LONG : *nεs*, *nε:χ-i* LONG

*n-t'ε'l* TO BE WIDE : *t'εl* WIDE

*ti-ts'o* TO BE YELLOW : *tε ts'o'-i* YELLOW EARTH  
(place name)

*ti-jn* TO BE BLACK : *hwo' j'n-t* TOOTH-BLACK,  
DECAYED TOOTH; *ya' ji'n* BLACK LOUSE

*a-t'ł'sp's-i* TO BE SLIM (also *-t'ł'sp*, *-t'ł'sos-i*,  
*-t'ł'so's*): *ts'i' t'ł'so's-i* HEAD-SLIM, THE SLIM-  
HAired ONE (man's name)

*hwo' c-gi'j-i* TOOTH WHICH-IS-MISSING (*c*- assimila-  
ted from *s*-, "second modal" prefix): *hwo'*  
*gi'j-i* MISSING TOOTH; *bo-hwo' gi'j* HIS-TOOTH  
MISSING

*di-tc'oc-i* STUBBY (relative form): *ts'i' tc'o'c-i*  
HEAD-STUBBY, THE STUBBY-HAired ONE (man's  
name)

*a-gud-i* SHORT; Montagnard *i-gor-ε* (Pet.): *ga*  
*gud-i* ARM-SHORT, ARMLESS; *k'ε gud-i* SHORT-  
FOOTED

*ta-gai* TO BE WHITE: *ga' ts'o gai'* RABBIT-LARGE-  
WHITE, WHITE JACK-RABBIT

Examples of "verbal" origin are:

*-t'ło*, *-t'łp'*, *-t'łot* TO WEAVE: *t'łog-i*<sup>9</sup> GRASS-  
WEAVERS, SIA INDIANS

*-yε'd*, *hwud*, *-hwut* TO RUN: *t'o' hwut* RAPID  
WATER (place name)

This type is doubtless actually well repre-  
sented in Navaho, but the material is scanty or  
not easily accessible. To it belongs probably  
*Tucson* (Arizona place-name), said to mean  
BAD-SMELLING WATER; the Navaho (or Apache)  
form is probably something like *t'o tc'a* (cf.  
Nav. *-tc'in*, *-tc'a*, *tc'it* TO SMELL).

Examples in which the related word is a  
noun are quite numerous. The reference is not  
to the concrete content of the noun as such  
but to a person or object, expressed or implied,  
that is conceived as the possessor of or as in

some way related to the thing defined by the  
noun. Examples are:

*k'ai* WILLOW: *k'a'-i* THOSE WHO HAVE (OR ARE  
CONNECTED WITH) WILLOWS, WILLOW CLAN

*yo'* BEAD: *yo-o* THOSE WHO HAVE BEADS, BEAD  
CLAN

*t'ca'* HAT: *t'cab-i* HE WITH THE HAT (man's  
name)

*guc* CANE: *guc-i* HE WITH THE CANE (man's name)

*ca'c* KNOT: *ca'j-i* KNOTTY

*xε't* BURDEN, *bi-yε'l* HIS BURDEN: *yε'l-i* THE ONE  
WITH A BURDEN, HE WHO IS SLIGHTLY HUNCH-  
BACKED (man's nick-name)

*t'coc* WORM: *hwo' t'co'c-i* TOOTH-WORMY, A HOL-  
LOW TOOTH

*yεi* SUPERNATURAL BEING: *t'o yε'* WATER THAT  
HAS SUPERNATURAL BEINGS, DANGEROUS WATER  
(place name)

*t'o* WATER: *na' t'o'-ho* ENEMY THAT IS CONNECTED  
WITH WATER (?), ENEMIES AT THE WATER,  
ISLETA INDIANS

*cac* BEAR: *na' ca'c-i* ENEMY THAT IS BEAR, BEAR  
ENEMIES, HANO INDIANS

Relative forms like *t'cab-i* bear an obvious  
formal similarity to such English derivatives  
in *-ed* and *-y* as *bearded* and *knotty*. But the  
resemblance is more apparent than real. The  
relative form of the noun is not a true "adjecti-  
val" derivative of the noun, as is shown by  
the fact that morphologically parallel forms are  
built on stems conventionally set down as  
"adjectival" or "verbal". The genetic  
relation between these Athabaskan relative  
forms and the possessed form of the noun (e.  
g. Montagnais *t'sab-ε* HIS CAP [Leg.], *sε-t'sa-a*  
MY CAP [Pet.]; Hupa *hWun* SONG: *xo-hWun-[n]ε*  
HER SONG; Chasta Costa *c-mxn-ε* MY HOUSE) on  
the one hand and the subordinated form of the  
verb (e.g. Mont. *χε-yε* ONE GROWS UP: *χε-yε-*  
*hε* GROWTH, *nε-γ-i-l-dyεt* WE ARE AFRAID: *nε-γ-*  
*i-l-dyεd-i* WE WHO ARE AFRAID [Leg.]; Hupa  
*-lal* TO FLOAT CONTINUOUSLY: *na-na-t-lal-ε* IT  
FLOATING; Nav. *di-c-hwuc* I YELL: *di-la-hwuc-i*

9. Or directly to *t'ło'* grass?

ONE WHO YELLS MUCH, HOWLER) on the other is obvious. In Navaho the relative form with final vowel (generally *-i*; old *-ĕ* assimilated to *-o* after radical *o*) is probably no longer felt as identical with the possessed nominal form with final consonant (cf. *bi-yε'ł* HIS BURDEN with *yε'ł-i* above), but the general consensus of Athabaskan evidence makes it highly probable that such alternations as *-yε'ł* and *yεł-i* go back to Athabaskan alternations of type *\*γε'ł-ĕ*: *\*γεł-ĕ*. In other words, even in Navaho the possessed forms of the nouns are simply reduced relatives (perfectly analogous to *xε't*: *-yε'ł* is *dził* MOUNTAIN: *yo-t-gai' dzi'ł* SHELL-WHITE MOUNTAIN). We have already seen that there are analogous doublets in Navaho for the relative forms of "adjectival" stems (cf. *gi'j-i* and *gi'j* MISSING, *jin-t* and *ji'n* BLACK above).

It is not the purpose of this paper to discuss the functions and the fundamental significance of the Athabaskan relative. I hope to show in a future paper that it is a feature that goes back, both in general form and as an actual phonetic element, to the Nadene period and that it consists in essence of an old particle, probably a demonstrative stem, that could be freely added to any word or group of words to relate it to an expressed or understood person or thing. The primary function of the Athabaskan (and Nadene) relative is thus an exceedingly wide one, of which the particular usages listed in our grammars are but specific applications or rather English (or French) translations. The lengthening of the stem vowel and the voicing of a final voiceless spirant<sup>10</sup> are merely secondary phonetic phenomena due to the presence of

10. In part no doubt retention of originally final voiced spirant. I believe it to be probable that in such Athabaskan alternations as *\*ł'ł'ł* STRAP: *\*ł'ł'ł-e*, *\*ł'ł'ł-ĕ* STRAP OF (ONE) it is the *-l-* which represents the old consonant, preserved because of the following relative element, and that the *-t* of the absolute form is due to a secondary unvoicing of the old *-l*.

the relative element. As this element became reduced to zero, these secondary phenomena tended to take over the properly relative function.

Just as we have the alternation of final *-t*: *-l-*, of *-x* (*-'*): *-γ-*, of *-x* (*-'*): *-y-*, of *-c*: *-j-*, and of *-s*: *-χ-*, so also these alternations occur initially<sup>11</sup>; e. g. Mont. *luε* FISH: *sε-lluε* MY FISH (Pet.), Hare *xε'* BURDEN: *sε-γεł-ε* MY BURDEN, Hupa *tu* SMOKE: *m:[l]-l-[t]d-ε* HIS SMOKE, Nav. *sn* SONG: *bi-yi'n* HIS SONG (in Athabaskan terms *\*χĕn*: *\*-yĕn-ĕ*; cf. Mont. *cεn*: *-yεn-ε*, Hare *cĭ*: *-yin-ε*). Here too the alternation could only have been due to phonetic circumstances to begin with. If a word was closely connected, in thought and in position, with a preceding word or element, the voiced spirant (say *l*) was retained or the voiceless spirant was voiced. Athabaskan *\*xel* BURDEN: *\*cĕ-γel-ĕ* MY BURDEN thus originally meant no more than that two radical elements (*\*cĕ* ME and *\*xel* BURDEN) were united into a phrase with the help of a following denominating element *\*-e*, *\*-ĕ*: ME-BURDEN THE, i.e. MY BURDEN. The *\*-ĕ* preserved the *-l* of *\*xel*, ordinarily *\*xel*, while the voiceless *x* passed to *-γ-* in intervocalic position<sup>12</sup>. It is very doubtful if there was any specific function connected with the *x*: *-γ-* interchange. In time, however, there

11. In final position note also *-ŋ* (or nasalization): *-n-*.

12. Possibly an old *γ-* was here preserved, but passed to unvoiced *x-* when not protected by an immediately preceding vowel. The alternations listed in the text naturally apply to primary Athabaskan. In certain dialects some of these alternations ceased to operate freely because phonetic laws divorced the consonants that had originally belonged together. Thus, in Hupa the old Athabaskan interchange of *x-*: *-γ-* (preserved in Chipe-wyan, Hare, and Navaho) had ceased to be a live process because of the falling together of Athabaskan *x* and *k'* into Hupa *x* and the change of Athabaskan *γ* to Hupa *w*; the corresponding final alternation of *-x*: *-γ* lingered on as *-c*: *-w*, *-u*. Note also that in Pacific Athabaskan voiced sibilant spirants have been leveled with voiceless sibilant spirants.

can be no doubt that the voicing of initial spirants came to be felt as intrinsically, not merely mechanically, connected with the relative function. Hence such detached forms as \**γel-ě* THE ONE WITH A BURDEN (Nav. *yɛl-i*<sup>13</sup>), \**jun-ě* THE GOOD ONE (Nav. *jun-i*), \**jěn-ě* THE BLACK ONE (Mont. *zenn*). It is probably because of the intrinsically "relative" significance of "adjective" stems that these regularly begin with a voiced spirant if the initial consonant is a spirant.

Such forms as Hare *k'wɛ-ε* LIAR and Navaho *t'ɛ:l* WIDE bring home to us the highly important fact that the actual "radical elements" of Athabaskan verb and adjective forms are more freely isolated than one might at first believe to be possible. A careful study of all the available material would tend to show that these radical elements have a considerable mobility, that they are not far removed from the status of independent monosyllabic "words", and that the complex "word" of our Athabaskan texts and paradigms feels a great deal more like a closely knit phrase or sentence than has yet been suspected or, at any rate, explicitly demonstrated. I hope to show in due time what is the true nature of the various "prefixes" and "suffixes" that render the morphology of the Athabaskan verb so complex in appearance. It will appear that each and every one of these elements is a relatively self-contained unit in the sentence, either a determinative or an actually predicating element. Much of the "vagueness" of meaning or function that we feel to attach to many of these elements is simply an index of our inability to carry over the Athabaskan manner of expres-

sion into precisely equivalent English (or French) form<sup>14</sup>.

For the present I shall content myself with a few random examples suggesting the mobility and essential concreteness<sup>15</sup> of the verb stem. The Hupa verb stem for "to flow" is *-len*, *-lɛŋ*, which has numerous cognates in other dialects. Forms like *t'cɛweslɛnt'ɛ* IT WILL FLOW OUT and *nɛ'llɛn* IT ALWAYS FLOWS do not seem to suggest the possibility of combining the bare stem freely with other concrete elements. I have found no examples in Hupa of *-len* or *-lɛŋ* so used, though they may of course exist. But this stem (Athabaskan \**-lin*, \**-lɛŋ*) is clearly related to Athabaskan \**-li* (e.g. 'Mont. *γa-i-d-li*, Hare *yɛ-d-li* COULER A TERRE [Pet.]), probably also to Athabaskan \**-lej* (TEARS) FLOW (e.g. Mont. *dɛ-l-lɛz*, Hare *dɛ-l-lɛ'* [Pet.]). Athabaskan \**-li* appears in Hupa as *-lɛ* (reduced to *-l*); it is found, without formal prefixes of any kind, in certain compounds: *no-lɛ* DAM, WATERFALL (lit. DOWN-FLOW OR HALT-FLOW), *tɛ-l-d:ŋ* TOGETHER-FLOW-PLACE (village name). Similarly, *-xa(u)W*, an "indefinite" form of *-xa* LIQUID HAS POSITION, is directly compounded

14. Very much as one who tries to see in a French locution like *Qu'est-ce qu'il a ?* an exact equivalent of our English *What has he ?* would find it difficult to get the proper form-feeling of the elements *est*, *ce* and *qu'*.

15. In a large number of Athabaskan verb forms it is impossible to assign to the radical element (that is, the "verb stem" proper) the kind of concreteness that would in our eyes yield the actual concrete significance of the form. It does not follow that the stem has not a definitely concrete significance of its own, clearly apprehended by the native form-feeling. All that we have a right to say is that the summing of significances inherent in the theoretically independent elements of the complex does not seem naturally to lead to the precise idea that we express in such and such a way. The true difficulty from our naive standpoint is in such cases not that the stem is a « vague » element but that it seems inapplicable, just as to one unacquainted with English idiom the notion of "fall" in such a sentence as *The friends had a falling out* is inapplicable. As a matter of fact, I believe that there are few languages in America that feel their "stems", and elements generally, as definitely and as concretely as Athabaskan, Tlingit, and Haida.

13. Athabaskan *γ* is preserved in Navaho only before *a*. It appears as *y* before *i* and *ɛ*, labialized to *w* before *o*. The alternation *x : y*, however, leads one to suspect that this "y" is not phonetically identical with the *y* that corresponds to common Athabaskan *y*.

with *sa* MOUTH : *sa-xa(u)W* LIQUID WHICH HAS BEEN PUT IN THE MOUTH, ACORN SOUP. In Navaho, again, the verb stem *-na* TO LIVE (e. g. *xí-n-c-na* I LIVE) may be used as an unmodified element in a compound : *k'a'-na'-ni* ARROW-LIVE-PEOPLE, LIVING-ARROW PEOPLE (clan name). Such examples could be multiplied considerably.

If the monosyllabic "verb stem" may thus be isolated in practice as a more or less freely movable element, capable of conveying a definite notion in its own right, we cannot but conclude that the purely formal difference between verb (and adjective) stem and noun stem becomes a tenuous one. What is to prevent us from interpreting the *-lɛ* of Hupa *no-lɛ* as a noun meaning FLOWING OR CURRENT, *no-lɛ* and *lɛ-l-dvɪŋ* meaning properly DOWN-FLOWING (not a secondarily nominalized form of an inherently verbal TO DOWN-FLOW) and RECIPROCAL-CURRENT-LOCALITY? Might not the Navaho *k'a'-na'-ni* be just as well interpreted ARROW-LIFE-PEOPLE? As a matter of fact, I cannot see that anything seriously stands in the way of such an explanation, and its adoption would at once make clearer a number of morphological peculiarities. Among such peculiarities are : 1. the ease with which a great many evident nouns are transformed into "verb stems" (e. g. Hupa *k'a* DRESS : *-k'a* TO WEAR A DRESS ; Kato *djvɪŋ* DAY : *-djvɪŋ* TO BE DAY) ; 2. the frequency with which "verb stems" with a clearly defined verbal force, if we may trust all appearances, take on, when isolated, an abstract or concrete nominal significance (e. g. Athabaskan *\*-yan* TO PASS THROUGH LIFE : *\*xan* OLD AGE, MATURITY ; *\*-dlo'* TO LAUGH : *\*dlo'* LAUGHTER ; *\*-lo* TO SNARE, TO BE CAUGHT IN A NOOSE : Nav. *to*<sup>16</sup> SNARE, LOOP) ; 3. the fact that a number of verb stems refer not to specific activity but to a class of objects

(e. g. *\*-'an* TO HANDLE A ROUND OBJECT ; *\*-k'os* TO HANDLE A CLOTH-LIKE OBJECT). I hope later to take up this fundamental question and to show that in a verb form it is not the "verb stem" that is the distinctively verbal element but, where found, the "third modal" element ; that all "verb stems" are in fact nouns not only in theoretical origin but in actual usage ; and that verbs translated according to the forms TO DIE, TO BE SEEN, and TO KILL fall into patterns more accurately rendered by DEATH IS, SIGHT TAKES PLACE, and TO MAKE SLAUGHTER. If this interpretation is correct, an element like *-'an* is not properly a "verb stem" indicating some kind of activity or state with reference to a single round object but is actually a noun which means, or originally meant, A ROUND OBJECT. The three classes of verbal usage listed above would fall into a single category applicable to all other verb forms as well. Indeed, it will appear that this theory of the essentially nominal character of all "adjective" and "verb" stems simplifies enormously the whole aspect of Athabaskan (and Tlingit) morphology.

Meanwhile, whether or not we are willing to go so far in the present stage of our knowledge as to accept the nominal theory of verb radicals, it is clear enough that the Athabaskan relative forms discussed in this paper belong together. If a Navaho form like *l'cab-i* is to be interpreted as THE ONE HAVING (OR CONNECTED WITH) A HAT, we may venture to interpret a verbal derivative like Hare *k<sup>w</sup>ɛ-ɛ* as THE ONE HAVING FALSEHOOD, an adjectival derivative like Navaho *jun-i* as THE ONE HAVING GOODNESS. There is certainly no serious point of morphology that would make such an interpretation impossible. As it is, it is sometimes an arbitrary matter whether we assign a given relative form to an adjectival or to a nominal source. In Navaho *ga k'is-i* ONE-ARMED, ARMLESS, *k'is-i* SHORT, CRIPPLED, DEPRIVED OF may be looked upon as an adjectival (or verbal) formation (cf. *gud-i*

16. Voiceless spirants initially, voiced spirants in postvocalic, or originally postvocalic, position, according to the typical Athabaskan rule.

above). Identical, however, with Navaho *k'is*, which I have not found in its bare form, is Anvik Ten'a *k'xθ* PIECE (OF) (Athabaskan \**k'ēs*). Clearly it makes little or no difference, from the Athabaskan standpoint, whether we analyze *ga k'is-i* verbally as THE ONE WHOSE ARM IS CUT OFF (cf. Navaho verb *-k'ε*, *-kε'*, *-k'i* TO CUT WITH A KNIFE), adjectivally as THE ONE WHO IS SHORT OF AN ARM, or nominally as THE ONE WHO HAS AN ARM-PIECE, AN ARM-SEVERANCE. In

the same way, it seems an indifferent matter whether we interpret Montagnais *ts'aγ-ε* verbally as THE ONE WHO IS (ALWAYS) CRYING or nominally as THE ONE WHO (ALWAYS) HAS TEARS, WEEPING; or Navaho *yεl-i* (a sobriquet for a hunchback) verbally as THE ONE WHO IS WONT TO CARRY (A BURDEN) (cf. Navaho *-xε* or *-xεt*, *-yε'*, *-xε't*, TO CARRY ON ONE'S BACK, TO HANDLE A BURDEN), or nominally as THE ONE WHO (ALWAYS) HAS A BURDEN.

### Editorial Note

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## THE PHONETICS OF HAIDA

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### INTRODUCTORY

The following notes on the sounds of the Skidegate dialect of Haida are based on material which I was fortunate enough to secure from Peter R. Kelly, a well educated Haida Indian who is at present engaged in missionary work among the Indians at Nanaimo, Vancouver Island. Mr. Kelly visited Ottawa in March, 1920, as member of an Indian deputation to the Canadian Government and was too much occupied to give me more than a few hours. In spite of the brevity of my notes I believe the insight gained into Haida phonetics is sufficient to warrant this paper. I cannot, of course, give an adequate account of the Haida sound-

system, but purpose merely to present data supplementing Dr. Swanton's brief statement<sup>1</sup>. The phonetic system employed in this paper is explained in « Phonetic Transcription of Indian Languages » (Smithsonian Miscellaneous Collections, vol. 66, n° 6).

A remark or two on the general impression produced by Haida may be of interest. I took several opportunities to have Mr. Kelly speak Haida connectedly and was thus enabled to hear it long enough to form a definite image of its acoustic quality. It is one of the most remarkable languages that I have ever heard. Indeed, I cannot recall having at any time heard connected speech that appeared more definitely possessed of individuality. The great frequency of nasal consonants (*n*, *ŋ*), the constant occurrence of sonorous *g*-sounds, the profusion of *l*-syllables (see below, p. 152), and the musical cadences are probably the chief determinants of this individuality. Haida is very far from being a harsh language. On the contrary, it was voted a beautiful language by all who heard Mr. Kelly's recital of a Raven myth. Several of us in Ottawa heard connected Mohawk, Tsimshian, Nass River, Thompson River, Shuswap, and Danish at the same time. If we were asked to rate these seven languages on the score of acoustic appeal, I believe the consensus of opinion would be a division into four groups: Haida as an easy,

1. See pp. 210-215 of J. R. Swanton, *Haida, an Illustrative Sketch* (Bureau of American Ethnology, Bulletin 40, pt. 1, pp. 205-282 [1910]).

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first; Mohawk as a fairly pleasant, but none too close, second; Tsimshian, Nass River, and Danish as a moderately uneuphonious third; and Thompson River and Shuswap as an execrable last. These remarks are of no great scientific value, but they may be of some interest none the less as serving to bring home the fact that the « harshness » of certain West Coast languages results from the printed page rather than from their actual articulation.

### I. — CONSONANTS.

THE CONSONANT SYSTEM. — Swanton recognized 28 organically distinct consonants in Haida. I believe his table errs in two respects: in not including a number of sounds which he recognizes as existing but does not consider as elements of the fundamental sound pattern of the language; and in neglecting to take account of certain sounds that he did not hear. To the former class belong the anterior palatals and the labialized gutturals and velars. To the latter class belong the glottal stop<sup>1</sup> and a set of glottalized nasals and semivowels.

As to the anterior palatals, Swanton remarks, "An anterior palatal series might be added to these, but the sounds to be so characterized seem only palatals followed by a close [read "front"] vowel." I do not know if this is originally true or not, but I think there can be no reasonable doubt that the anterior palatals are felt as a primary series. They occur before *i*-, *u*-, and *a*-vowels, which last they color to *ä*. It is true that in such a form as *xäi* ARM one sometimes hears a slight *i*-glide (*x'iäi*), but I do not think we have the right to conclude that *xäi* is felt as a secondarily modi-

fied form of *xiai*, though it is of course possible that it may go back to such a form. At any rate, I prefer to consider the anterior palatal series as a phonetically well defined primary group of consonants and the *i*-glide, when it occurs, as the secondary fact. I do not hear *gia'da.i* THE BLANKET, for instance, but *gä'da.i*. As a matter of fact, Mr. Kelly's ear proved extremely sensitive on the difference between the *k*- and *k̥*-series. The word for EYEBROWS was at first recorded *sk'ä'dji*, but this pronunciation, in spite of the *ä*-vowel, did not satisfy him. The correct form is *sk̥'ä'dji*. There is even reason to believe, if my record is to be trusted, that there is a difference between the *k*- and the *k̥*-series before *i*-vowels. Thus, I heard *go'x̥g'l-gx* TO BE STARTING TO BURN, not *-g'l-* (misheard for *-g'l-* ?); *t'a'gi'gx* TO BE THROUGH EATING, not *-gi-* as in *gi'sdl'ŋ* TWO BLANKET-LIKE OBJECTS. However, I have not enough evidence on this point to be justified in speaking with confidence.

As regards the labialized gutturals and velars, Swanton sometimes writes according to the form *kwa* (i. e. *k'wa*) TO STRIKE, at other times, according to the form *sgoä'nsiŋ* (i. e. *sgwa'-nsiŋ*) ONE. Here again I think there is no reasonable doubt that we must look upon the labial element (whether written *w*, *u*, or *o* in Swanton's material) as a constituent element of a primary labialized *k*-sound. Counting the anterior palatals, the two sets of labialized *k*-sounds, and the new glottal and glottalized consonants, we have 47 primary consonants in Haida. They may be arranged as follows (see p. 145).

Of these consonants, I did not myself obtain an example of aspirated *p* but set it in the table because of Swanton's form *djA'pAt* TO SINK SUDDENLY, which I interpret as *djx'p'at*. It may, however, be really *djxp'at* (i. e. *djxp + 'at*; cf. *xzŋ'i* EYE), in which case *p'* would have to be removed from the table. Aside

1. I am not referring to the glottal stop, if it is a glottal stop, of Masset Haida, which corresponds to Skidegate velar *g*, but to a primary glottal stop in Skidegate itself.

	Intermediate Stop	Aspira- ted Surd Stop	Glottal- ized Surd Stop	Nasal	Glottalized Nasal	Voice- less Spirant	Voiced Spirant	Glottalized Voiced Spirant
Labial	<i>b</i>	<i>p'</i>		<i>m</i>	<i>'m</i>		<i>w</i>	<i>'w</i>
Dental	<i>d</i>	<i>t'</i>	<i>t'</i>	<i>n</i>	<i>'n</i>	<i>s</i>		
Palatal Sibilant (Affricative)	<i>dj</i>	<i>tc'</i>	<i>t'c</i>					
Anterior Palatal	<i>ɟ</i>	<i>k'</i>	<i>k'</i>			<i>ɕ</i>	<i>y</i>	<i>'y</i>
Guttural	<i>g</i>	<i>k'</i>	<i>k'</i>	<i>ŋ</i>	<i>'ŋ</i>	<i>x</i>		
Labialized Gut- tural	<i>gw</i>	<i>k'w</i>	<i>k'w</i>			<i>xw</i>		
Velar	<i>g</i>	<i>q'</i>	<i>q'</i>			<i>x</i>		
Labialized Velar	<i>gw</i>	<i>q'w</i>	<i>q'w</i>			<i>xw</i>		
Lateral <sup>1</sup>	<i>dl</i>	<i>lt</i>	<i>t't</i>			<i>l</i>	<i>l</i>	<i>'l</i>
Laryngeal						<i>h</i>		

from *w* and *'w*, which are common, and *m*, which is not rare as syllabic final, labials are very uncommon in Haida. Most, if not all, examples of initial *m* and *'m* may be suspected of occurring in Tsimshian loan-words. Besides the 47 primary consonants that I have tabulated, three secondary ones must be noted: syllabically final *p* and *t*, which are true surds but unaspirated, and spirantal velar *ɣ*; *p* and *t* are secondary forms of *b* and *d*, while *ɣ* is sometimes heard as a variant of *g* between vowels. It is barely possible that we should distinguish between guttural *ŋ* and velar *ŋ*, but I did not hear the latter sound.

THE INTERMEDIATES. — By “intermediates” are meant unaspirated “voiceless lenes,” consonants pronounced with the voicelessness of typical French surds (*p*, *t*, *k*) but with the lesser energy of our sonants (*b*, *d*, *g*). To the ears of English-speaking persons they are more apt to sound like sonants than surds, while Frenchmen would be almost certain to set them down as typical unaspirated surds. The Haida intermediates are identical with the corresponding series heard in Iroquois, Athabaskan, Takelma,

Yana, Achomawi, and Miwok. A recent opportunity to study Mandarin Chinese phonetics has made it clear that these typical American “intermediates” are absolutely identical with the unaspirated surds of Chinese, which sound distinctly “softer” than the surds of French or Italian. It is possible that the Haida intermediates are sonant at the moment of release, but their general effect, if carefully heard, is certainly not that of sonants. They are here written as sonants because it is convenient to adhere to established usage and because it is advisable to keep *p*, *t*, *k* for the “harder” secondary forms that may result from them under appropriate circumstances. The *w* of *gw* and *gw* and the *l* of *dl* are fully voiced. I suspect that the *d* of *dl* is at least partly voiced also. A word as to *g*. This is generally a very firmly pronounced stop, but it seemed to me that a faint uvular trill could sometimes be detected as a glide between the *g* and a following vowel.

Examples of intermediates are:

*a'bx* TO CHEW FOOD FOR A CHILD

*dxŋ* THOU

*sdz'nsvŋ* FOUR

*k'u'dz* LIP

*dji'dju'* TO BE SPLIT UP

1. First three laterals are affricative.

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*dja'dz* WOMAN  
*gu* EAR  
*di'gudjx'rga* MY DAUGHTER  
*t'a'gz* TO EAT  
*gwa'i* ISLAND  
*ga''na* BUCKET  
*ga'xa'* CHILD  
*gwa* SEA-BIRD (sp.)  
*dla'i* PEACE, QUIETNESS

After an accented short vowel Swanton heard a *t* before *dj* and *d*. Hence he writes *k!A'tdju* and *x!A'tdju* SMALL <sup>1</sup> for what I heard as *k'x'dju*; similarly, *k!A'tdAla* SMALL ONES <sup>2</sup>. The firm, voiceless attack of the *dj* after a markedly short vowel created the illusion of a syllable-closing *t*. As his classifiers *k!At-* and *x!At-* are illustrated only before *dj*, it is almost certain they should be read *k'x-* and *x-* (Swanton's *x* and *x*, it should be remembered, are my *x* and *x* respectively). He himself writes *x!A-* in *x!A'dAla*, the plural of *x!A'tdju* <sup>3</sup>. That our analysis is correct is demonstrated by *k'x'sgwan-sv*, ONE LITTLE OBJECT, *k'xsd'v*, TWO SMALL OBJECTS. The point is of some interest for Nadene, as it leaves Haida *k'x-*, classifier for small objects, identical with its Tlingit cognate *-k'x* TO BE SMALL.

THE UNASPIRATED HARD STOPS. — When *b* and *d* appear at the end of a syllable, they sound much more like our *p* and *t* than do the ordinary intermediate *b* and *d*. They impress the ear as the normal English *p* and *k* in which the breath release has been suppressed. Examples are:

*t'x'pdju* TO BE TALL AND STRAIGHT  
*d'x'pdju* TO BE VERY SHORT <sup>4</sup>

*di'gutga* MY CHILD  
*q'e't* SPRUCE (cf. *q'e'd-x* TO BE SPRUCE)  
*sget* RED  
*gi'xut* TO PICK UP (A CANOE)

That the final stops are not aspirated is a noteworthy fact in view of the common American Indian rule that final stops, whether intermediate or aspirated surd in origin, are released by a markedly audible breath (e. g. Ojibwa, Tlingit, Nootka, Comox, Takelma, Yana, Paiute). In this respect Haida differs from its remote relative Tlingit and is in accord, it would seem, with certain Athabaskan dialects.

Goddard writes, e. g., Hupa *Lit* SMOKE, while the Franciscan Fathers write *tid* in Navaho. It is likely that an unaspirated surd is meant in each case. If I may trust my memory of Chasta Costa, there too final stops are unaspirated, e. g. *t'at* TO GO TO PIECES.

THE ASPIRATED SURDS. — These are "hard" and markedly aspirated surds, much like our English *p*, *t*, *k* when initial before vowels except that they are even more strongly aspirated. They are identical in every respect with the aspirated surds of Athabaskan, Tlingit, Takelma, Yana, and Chinese.

Examples are:

*t'a* TO EAT  
*st'x* FROM  
*tc'inga* GRANDFATHER  
*tc'i'dju* TO BE A BIG, BLOWN-UP THING  
*k'daxw* OUTSIDE  
*k'un* POINT, NOSE  
*sk'a'dju* TO BE SMALL AND ROUNDISH  
*k'wa'i* HIP  
*q'a'dji* HEAD  
*q'v'rgxv* TO BE SEEING

sifier. Apparently there was some confusion between these rhyming classifiers.

1. *Op. cit.*, p. 231.  
 2. *Op. cit.*, p. 241.  
 3. *Op. cit.*, p. 276.  
 4. Swanton gives *!Ap-* as a classifier for short and protruding objects (*op. cit.*, p. 234), which does not correspond to my data. He does not give *dAp-* as a clas-

5. Swanton defines the classifier *tcī-* (*op. cit.*, p. 227) in terms of « such objects as full sacks and bags, pillows, etc. ». Mr. Kelly stated *tc'i'* referred primarily to the blown-up stomach of a seal used as a float in fishing.

*q'wa'i* ROPE  
*tta's* BRANCH  
*tc'a'ttdju'gɔ* TO BE FAT

Swanton remarks, "It is doubtful whether *d* and *t* [i. e. *t'*] and *dj* and *tc* [i. e. *tc'*] really exist as recognizedly separate sounds"<sup>1</sup>. I do not see how there can be any reasonable doubt on this point. *da'* THOU and *t'a'* TO EAT; *dji'*-, classifier for cleft objects (like hands), and *tc'i'*-, classifier for blown-up objects<sup>2</sup>, are as perfectly distinct as *g* and *k'* or *g* and *q'*. (Swanton does not list *dji'* as classifier. He either did not isolate it as a classifying element or he confused it with *tc'i'*-. Examples of its use, besides *dji'*-*dju'* already quoted, are *stla'i dji'-sgwa'nsvŋ* ONE HAND [literally, HAND CLEFT-ONE], *stla'i dji'-sd'i'ŋ* TWO HANDS, *k'u'dɔ dji'-sd'i'ŋ* TWO LIPS. There is no doubt that there are plenty of examples of *dji'*- in his material. Note, for instance, *dji'wAl* [Masset] ROOTS OF FALLEN TREES).

#### THE GLOTTALIZED STOPS AND AFFRICATIVES.

— These are the well known stops and affricatives pronounced with simultaneous glottal and oral closure and with glottal release following upon the oral release. Swanton says, "Some speakers bring these out very forcibly, while others pass over them with considerable smoothness"<sup>2</sup>. Mr. Kelly pronounced them quite as smoothly as any other consonants. Their essential nature is certainly not to be explained as due to "urging more breath against the articulating organs than can at once pass through"<sup>3</sup>. If there is a true "fortis" series in Haida and Athabaskan, it is the aspirated surds, which are indeed pronounced with an excess of breath.

Examples of glottalized surds are :

*t'a'gun* FEATHER  
*t'a'ŋɔl* TONGUE  
*st'a'i* FOOT  
*t'cu'* RED CEDAR  
*q'x'ni'cɔɔ* CHEEK  
*q'a'i'carŋ* TO BE GOING IN  
*k'ə'll* LEG<sup>4</sup>  
*k'i'dji'* SEAL-STOMACH  
*k'a't* DEER  
*k'u'dɔ* LIP  
*k'wa'i* TO WAIT  
*q'a'ŋ* HEMLOCK  
*q'e'sd'i'ŋ* TWO SPHERICAL-LIKE OBJECTS  
*q'wá'ŋ* TO BURST  
*t'ta'dɔn* GORGE  
*t'tl* WE<sup>5</sup>

I may note that *t'c* tends to move front in its position — either to that of an anterior palatal *c*-sound (*t'c*) or even to that of an *s*-sound (e. g. *i'hni'sdɔ dla' msdŋ* TWO GIGANTIC PEOPLE; but also *q'x'ni'cɔɔ* CHEEKS. Does *t'cɔɔ* correspond to Swanton's *-djit* (op. cit., p. 260)?

THE VOICELESS SPIRANTS. — These require no special comment. *x* is pronounced like *ch* of German *ich*. As Swanton remarks, *s* often interchanges with *dj*<sup>5</sup>, which does not normally occur as a syllabic final. Swanton states that "*s* becomes *dj* before most vowels". Inasmuch as both *dj* and *s* occur between vowels (e. g. *i'dji'* TO BE; *i'sdɔŋ* TO BE CAUSING TO BE; but also "participial" *-asi*, *-as*), would it not be better to say that *-dj-* becomes *-s* just as *-b-* and *-d-* become *-p* and *-t*? We would then have one final (*-s*) representing two distinct intervocalic consonants (*-s-* and *-dj-*).

Examples of voiceless spirants are :

*sda'nsɔŋɔ* EIGHT  
*a'k'osu* THIS THING  
*xäi* ARM

1. *Op. cit.*, p. 210.

2. *Op. cit.*, p. 210.

3. *Op. cit.*, p. 210.

4. See p. 152 regarding syllabic *l*-sounds.

5. *Op. cit.*, pp. 214, 215.

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*t'a'xidigx* TO BE ABOUT TO EAT  
*xa'ya* SUNLIGHT  
*xwi'* TO BE COLD  
*xa'* DOG  
*xʔ'ŋ'v* EYE  
*xɫ* NECK  
*xwa'tgo'* A THING THAT IS LOOSE  
*ta', ta, tɫ* 1  
*tgu'n'ut* THREE

THE NASALS AND VOICED SPIRANTS. — Of the three nasals, *n* and *ɕ* may occur as either syllabic initial or syllabic final. In such a word as *'la'ɣaŋa* THEIRS the guttural nasal *ŋ* must be considered as belonging to the final syllable, in such a word as *xʔ'ŋ'v* EYE to the first. *m*, as we have already seen, is rare as an initial but not uncommon as a final.

Examples of final *m* are :

*t'x'mdju'* TO BE SOMETHING THIN AND ROUNDED  
*t'xm* LICE (Mr. Kelly considered this word as connected with the classifier *t'xm-*. This may be only a folk etymology, however.)  
*dla'mdju'* TO BE A GIGANTIC PERSON  
*ga'mdju'* TO BE A WIDE THING  
*gäm'dju'* TO BE A LARGE (CANOE, BLANKET)

Several Haida syllables ending in *m* seem to belong to a set of classifiers :

*t'xm-* THIN AND ROUNDED  
*dla'm-* GIGANTIC, CORPULENT (?)  
*ga'm-* WIDE AND ROUNDED  
*gäm-* LARGE (in reference to canoes and blankets)  
*tgxam-* (Swanton) LARGE AND ROUNDISH (e. g. rattles)  
*k'xm-* (Swanton) SMALL AND ROUNDISH  
*ga'm-* (Swanton) LARGE AROUND (?)

*dla'm-*, *ga'm-*, and *gäm-* are not listed by Swanton. My *ga'm-*, however, may be the same as his *ga'm-* (op. cit., p. 235); I am certain of the velar *g*, for the element was also recorded as *ɣam-*, e. g. *gu' ɣam-sgwa'nsuŋ* ONE BIG EAR.

Although the evidence is far from complete, I would risk suggesting that this set, of which there are doubtless other members, contains a common element *-m-* indicating something like ROUNDED, ALL AROUND. This view is strongly supported by the fact that several of the *m-* classifiers are clearly related to other classifiers without *-m* or with final *-p*. Thus, to *t'xm-* may correspond *t'a-* (Swanton) COILED AND FLEXIBLE; to *ga'm-* evidently corresponds *ga'-FLAT* (e. g. *gu' ɣa'sgwa'nsuŋ* ONE FLAT EAR); *gäm-* is clearly related to *gi-* CANOE, BLANKET-LIKE (e. g. *thu' gi'sgwa'nsuŋ* ONE CANOE and *gä'at gi'sd'ŋ* TWO BLANKETS : *thu' gäm'djus* A LARGE CANOE, *thu' gäm'dxɫ sduŋ* TWO LARGE, SPREADY CANOES, *gä'at gäm'dxɫ gi'sd'ŋ* TWO LARGE BLANKETS); *tgxam-* probably belongs to *tga-* (Swanton) BRANCHING OBJECTS; *k'xm-*, as Swanton himself points out, is derived from *k'x-* SMALL; and *sita'm-* belongs with *sttxp-* (Swanton) SLIM.

Parallel to the *-m-* series is a *-p-* series (*t'xp-*, *dxp-*, *sttxp-* [Swanton], *t'txp* [Swanton], and *skxp-* [Swanton] = probably *sk'xp-*). Of these, *t'xp-* may go with *t'xm-*; *sttxp-*, as we have seen, with *sita'm-*; *t'txp-*, judging from Swanton's one example, which refers to the surface of the moon, goes well with his *L!*-THIN AND FLAT (as I shall show later, this must be interpreted as *t'tɫ-*, a reduced form of *t'tx-*, *t'ta-*); and *skxp-*, which in his one example refers to the curled tail of a dog, may go with *sk'a-* ROUNDISH (used of eyes, water-drops, berries). The meaning of the *-p-* series is more obscure than that of the *-m-* forms; possibly STUBLY PROTRUDING covers the case. One surmises that the complete set of Haida classifiers is a more complex subject than Swanton's data represent. Further, that the *t-* and *s-* which begin so many of the classifiers (and other noun and verb stems) are vestiges of an older classificatory system that was related to the *h-* and *s-* classifiers discovered by Boas in Tlingit. The

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whole subject of Haida classifiers needs a renewed and intensive study.

Examples of *n* and *ŋ* are so numerous in the forms scattered in this paper that I do not need to give further examples here.

Unglottalized *w* does not seem to be as common a sound as glottalized *w*. Examples of *w*, *y*, and *l* are :

*ha'wi't* HURRY !  
*t'si'wz'ga* TO BE A CEDAR-BOARD  
*yá'gaxaxŋ* ANCESTORS  
*ga'yü* SEA  
*q'a't'caya'gaxn* WENT IN  
*l'a'lx'ŋ* WE  
*xil* NECK  
*sk'a's'olaxŋ* A ROUND THING

THE GLOTTALIZED NASALS AND VOICED SPIRANTS.— The sounds coming under this heading are identical with the corresponding sounds in Kwakiutl, Nootka, Nass River, and Tsimshian. I have not heard the Kwakiutl sounds of this type, but the Nootka series (*'m*, *'n*, *'w*, *'y*), the Nass River and Tsimshian series (*'m*, *'n*, *'l*, *'w*, *'y*), and the Haida series (*'m*, *'n*, *'ŋ*, *'w*, *'y*), sound perfectly analogous to me. I hear no difference, for instance, between the *'w* of Nootka *'wa'yi* HIGH HILL, of Nass River *'w:* GREAT, and of Haida *'wxs:* THAT THING. I speak of this because Boas has differentiated the *'m*, for instance, of Kwakiutl from the *'m* of Tsimshian, which he writes *m!* and considers a “fortis” *m* analogous to “fortis” *p!* (our *p'*). In classifying these sounds with the glottalized stops and affricatives (“fortes”) of Tsimshian I believe he is perfectly correct, for they all belong together psychologically, but this grouping applies fully as well to Nootka. When I first taught a Nootka Indian to write phonetically and explained the meaning of such symbols as *p!* and *t!* (for which I now write *p'* and *t'*), I was interested to find that he wrote *m!* of his own accord where I was in the habit

of writing *'m*. He seemed puzzled to find that I was not using an analogous orthography for the glottalized stops and affricatives on the one hand and the glottalized nasals and semivowels on the other. This instance demonstrates pretty clearly, it seems to me, that the native phonetic feeling of Nootka finds the essential peculiarity of the “fortes” in their glottalization and not in their supposedly “increased stress of articulation,” for in such Nootka sounds as *'m* and *'n* there seems to be no increase of stress.

In the glottalized stops and affricatives the closing of the glottis lasts during the whole oral articulation of the consonant and beyond. In the glottalized nasals, semivowels, and voiced lateral, however, the glottis is closed simultaneously with the oral contact but released instantly thereafter, the voiced continuant thereupon becoming fully audible. The acoustic effect, therefore, of such a sound as *'m* is very nearly of a glottal stop followed by *m-*, yet not quite, for a conscious compounding of *' + m* nearly always fails to satisfy the Indian's ear. That the glottal element is felt to inhere in the consonant is clear from the syllabification. In such words as Haida *ga'na* BUCKET and *t'a'na'* CHILD the glottal stop belongs to the second syllable, not to the first. In neither Haida nor Nootka, as a matter of fact, can a syllable end in a glottal stop.

So far as I know, *'ŋ* has not yet been recorded for any other Indian language. It is not a common sound, nor are *'m* and *'n* frequent in Haida; *'m*, as I have already indicated, probably occurs mainly in Tsimshian loan-words. On the other hand, *'w*, *'y*, and *'l* are exceedingly common sounds, appearing in some of the most important stems in the language (e.g. *'wa*-THAT, *'yu'*-BIG, *'la* HE). How important is the distinction between *'y* and *y*, for instance, may be seen from the fact that when I pronounced Swanton's *yn'An* BIG as *yn'xn*, Mr. Kelly had not the remotest idea what it meant; it should

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have been 'yu''xn. The finding of these sounds in Haida was unexpected. They are not found in Tlingit and seem also to be absent in Athabaskan — with one interesting exception. In Navaho the Franciscan Fathers have recorded 'u. It is the regular correspondent there of an etymological *t* + *u*.

Examples of glottalized nasals and voiced spirants are :

- 'ma' (exclamation of pain)  
 'madjz' OCHRE (Probably borrowed from Tsimshian. Cf. Tsimshian *mES-* REDDISH, *mES-* *a'us* OCHRE ; perhaps Boas' *mES-* is to be read 'mzs-.)  
 ga'na BUCKET  
 'ra'g'z'ŋga'ŋ TO VIE WITH ONE ANOTHER  
 'wa'ngx TO LOOK FOR FOOD AT EBB TIDE  
 'wzst' THAT THING  
 'yu''xn BIG  
 'la' GOOD  
 'la', 'lx, 'll HE

THE LARYNGEAL CONSONANTS. Every stem that apparently begins with a vowel really begins, in all probability, with either a glottal stop or with *h*. Examples of glottal stops beginning syllables are :

- 'a'dja SMEARED WITH PREPARED SOAPBERRIES  
 'a'll PADDLE  
 'a'uga MOTHER  
 'a'tlgzn HERE (Swanton writes *a'LgAn*, but I heard *tl*, not *dl*. This may be a mishearing on my part.)  
 't'lgä'a OURS  
 'v'tŋ MAN  
 'l' i'tŋx q'e'dju'gx HE IS A STOUT MAN  
 na'g'a'i 'ŋa 'a IN THE HOUSE  
 'yu''xn BIG  
 tgu'nud THREE  
 tlŋu'n'ut SIX  
 tta''at TEN  
 sk'a's'olxŋ A ROUND THING

In a few cases the glottal stop was not record-

ed, e.g. *v'tŋt'sdx sdŋ* TWO MEN, *ga'xa i'tŋx* CHILD-MALE, BOY, but these are either mishearings or secondary slurrings on the part of the speaker.

There are, however, at least two important elements that begin, or seem to begin, with a vowel unpreceded by a glottal stop. These are the demonstrative *u*, *o* (*u'*, *o'*) and the verb *i'dii'*, *i'dji*, *is*. Examples of the demonstrative are :

- di' sk'ädj u' i'dji* IT IS MY EYEBROWS  
*gä'gxn na'i (y)u* MY HOUSE (Note the glide *y*, indicating clearly that no glottal stop has been slurred. *gä'gxn* is probably assimilated from *gä'gxn*, see Swanton, op. cit., p. 259, who writes *gia'gañ*)  
 'la'o' HE < 'la o'  
 ta'o' I < ta o'  
 'wz's' o go'xzg'l'gxŋ THAT IS STARTING TO BURN  
 na'gai 'v' o ta q'a'tcaŋ I GO INTO A HOUSE  
 a'k'os u THIS THING<sup>1</sup>  
 'wz'sga.i sdŋ o t's'wz'gx THOSE TWO ARE CEDAR BOARDS.

The reason for this absence of the glottal stop has been indicated by Swanton. The general demonstrative of reference is *hau* (Swanton's *hao*), often contracted to *u'*, *u*, *o*. The vocalic hiatus without glottal stop is thus the etymological equivalent of an old *h*.

Examples of the verb *i'dji*, *is* are :

- ta'o' na'i 'ŋa e'dj:ŋ I AM IN A HOUSE  
 tlŋw:' u tx sdzŋ I CAUSE IT TO BE AWAY, I PUT IT AWAY

See also the first example under demonstrative *u*, *o*. The consistent absence of the glottal stop in this verb may possibly be explained as a slurring, but I think it more likely that it is to be interpreted as due to an old *h* that has disappeared. I would suggest that *i'dji*, *is* is a

1. *a-* slurred from 'a-, the demonstrative stem THIS corresponding to 'wa- THAT.

later form of *hi'dji*, *hu*, and that this verb is to be understood as composed of a demonstratives stem *hi-*, *hi-* (cf. *hi'-dlł-gxl* COME HERE! and Swanton's *hi-t!A-gA'n* THEN, *hi-ñá'n* ONLY). Just as this *hi-* parallels *ha-* (cf. Swanton's *hx-n* LIKE, AS FOLLOWS; general demonstrative *hao* > *u*, *u*, *o*; "article" \**hai*, parallel to *gai*, in e. g. \**na hai* HOUSE-THE > *na'i*), so \**hi-dji*, \**hi-s* TO BE parallels an old \**ha-s*, preserved as Swanton's "participial" *-as*, *-és*, *-es*. Such a phrase as Swanton's *nañ gaxá'gas* ONE WHO WAS A CHILD is to be interpreted, it seems to me, as *nxᵛ gaxá'-g a-s* ONE CHILD-BE IT-IS, contracted from an older *gáxa'-ga ha-s*. Such endings as *-t-sí* (Swanton) are probably to be interpreted as *-tlᵛ* < *-t-xᵛ*, *t-asᵛ*, which occurs as phonetic parallel. See below on *l-* syllables.

Though *h* has demonstrably dropped out in certain cases in intervocalic position, it is a clearly articulated consonant when preserved, e.g. :

*hi'dllgxl* COME HERE!  
*haw't* HURRY!

SECONDARY CONSONANTAL PROCESSES. Final vowels are, as a rule, released without breath. This is in keeping with the phonetic forms *-p* and *-t* instead of *p'* and *t'*. A few cases of breath release have been noted, however, in absolutely final position :

*na'* HOUSE (but *na t'e'-sdvᵛ* TWO HOUSES)  
*go'gx'* (IT) IS ON FIRE  
*go'daxgx'* SETS FIRE TO

Rather frequent is the spirantal voicing of *g* to velar *γ* between vowels :

*dx'ᵛgäγa* YOURS  
*'la'γd'ᵛᵛa gäγa* THEIRS

*'wa'nγx* TO GO DOWN TO LOOK FOR FOOD AT  
EBBTIDE

*da' ta γo'dx* YOU START THE FIRE!  
*na'gai γi'* INTO A HOUSE

*ga-t'a'* 'lγai<sup>a</sup>γa SOMETHING-EAT KEEPER,  
EATER

*dju'go'γx* SEVEN

*gu' γx'sgwa'nsvᵛ* ONE (FLAT) EAR

*q'o'γa* ROCK

Less often *g* is spirantized and unvoiced after initial *t* :

*txa'* STONE (for *tga'*)

Before *s*, *t'c*, *n*, and *t* there is sometimes assimilation of *γ* to *n* :

*sdx'nsvᵛ* FOUR < \**sdxᵛ-sdvᵛ* TWO-TWO

*i'tmt'sdx dla'msdvᵛ* TWO GIGANTIC PEOPLE  
(cf. *i'tvᵛx* MAN)

*dxn tᵛ* I THEE... (from *dxᵛ tᵛ*)

*gä'gx n'a'i* MY HOUSE

But this rule is not invariable : *-γ* is preserved, e.g., in :

*'i'tvᵛ t'sdax dx'psdvᵛ* TWO STUBBY MEN

On the other hand, *n* does not assimilate to *γ* before *g* :

*tc'inga* GRANDFATHER  
*'llgx'nga* COUSIN

INITIAL CONSONANT CLUSTERS. — Every Haida syllable begins with one of the forty-seven consonants listed in the table, or with a cluster of two consonants, or with a vowel (originally preceded, it would seem, by *h*). The first element of the cluster is always *t-* or *s-*. The second element is an intermediate, aspirated, or glottalized stop or (after *s*) a *th*, never, I believe, a sibilant affricative or a spirant ; *tx-* is merely a secondary form of *tg-*. Examples are :

*tgi-* (classifier for fairly big, roundish objects)

*tga'* STONE

*tgu'n'ut* THREE

*ik'a'i* CHIN

*sdvᵛ* TWO

*sget* RED

*sgwa'nsvᵛ* ONE

*st'i'wai* THE SEA-EGG

*sk'a-* (classifier for round objects)

*sq'au* GROUSE

*st'a i* FOOT

*sq'a'-* (classifier for long objects)

I obtained no example of *t* before a glottalized stop; Swanton gives *tk!A'mAl* NEEDLE OF CONIFEROUS TREE. I suspect that his *tn̄-* is really *tl̄r-*, as it would be an isolated example of *t* (or *s*) + nasal. Swanton fails to distinguish initial *sd-* from *st'-*. He writes both *st-*. Another error is his group *sL!-*. It may exist, but his instrumental *sL!-* WITH THE FINGERS and *sL!āi* HAND are really *sttl̄-* and *stta'i*, probably related, with *s-* prefix, to *ttl̄-* TO TOUCH (Swanton's *L-*, p. 226).

Swanton's clusters with initial *l*, *dl*, *tl*, and *t't* do not really exist. These *l*-sounds are in every case to be interpreted as syllabic *ll̄*, *'ll̄*, *dll̄*, *ttl̄* and *t'tll̄* (see below).

## II. — THE SYLLABLE.

Before taking up the vowels, it will be convenient to define the Haida syllable. There is no doubt that the language, like Athabaskan, has a strong and well-defined feeling for the syllable as an integral phonetic and psychological unit of speech. It therefore becomes important to understand its structure. Aside from the secondary loss of *b* and the slurring of *'*, every syllable begins with a consonant or an *s-* or *t-* cluster of two consonants. It may end in a vowel (long or short), a diphthong (long or short, but I suspect that all long diphthongs are felt as the equivalent of two syllables of form *\*-ahai*, *\*-ahau*), an *l*-vowel, a consonant, or a cluster of two consonants ending in *t* or *s* (these clusters are likely, however, to be secondary forms of older disyllabic forms, e. g. *i'djins* [Swanton] < *i'djir̄xs*). The final consonant can be only *m*, *n*, *r̄*, *s*, unaspirated *p* or *t*, *l*, *t*, or *tt*. All of Swanton's examples of final *dl* and *t't* are to be interpreted as *dll̄* and *t'tll̄*. Swanton speaks of non-

vocalic stems like "L TO TOUCH" or "*sL* TO PLACE IN A CERTAIN DIRECTION." These elements are syllabic: *ttll̄*, *stll̄*. Many of his non-vocalic groups are even disyllabic, e. g. *t'tll̄tl̄* (Swanton's *L!t*).

SYLLABLES WITH L-VOWEL. — In normal English pronunciation the second syllable of a word like *metal* consists of a consonant followed by an *l*-vowel. In other words, there is no pure vowel in the syllable at all, not even a "mid-mixed" *ə*. The tongue does not release its stop position but merely adjusts itself on the spot to a lateral articulation. Such words as *metal*, *medal*, *flannel* are phonetically *mɛ'tll̄*, *mɛ'dll̄*, *flā'nll̄*.

The peculiarity of the Haida *l*-syllables, of which there are a vast number in the language, is that they always begin with a lateral consonant, voiced or unvoiced. The following table shows the relation between the simple laterals and the syllables with *l*-vowel:

Syllable with <i>ɹ</i> -vowel	Syllable with <i>l</i> -vowel
<i>lɹ</i>	<i>ll̄</i> ( <i>l̄</i> , <i>l̄</i> )
<i>'lɹ</i>	<i>'ll̄</i> ( <i>'l̄</i> , <i>'l̄</i> )
<i>dlɹ</i>	<i>dll̄</i> ( <i>d̄l̄</i> , <i>d̄l̄</i> )
<i>tɹ</i>	<i>tl̄</i>
<i>ttɹ</i>	<i>ttl̄</i>
<i>t'tɹ</i>	<i>t'tll̄</i>

The syllables in the second column are reduced forms of those in the first, with which they vary in Swanton's orthography (e. g. *Lga* or *LA'ga* LAND, both to be understood as *ttll̄ga*). They also interchange actually according to accentual or other phonetic circumstances with full syllables in *a*, *a*, *ɹ* (e. g. *'la*, *'la* in *'la' x̄ɹ'ɹ*: HIS EYES, *na'i'ɹ'la q'a'i'caɹ* HE IS GOING INTO THE HOUSE: *'l̄'i'lv̄ɹɹɹ t̄c'i'dju'* HE IS A BLOWN-UP (OBESE) MAN; *ta I*: *tl̄*; *-dɹlɹ* adjective plural: *-dɹll̄*). That Swanton too heard, though he did not explicitly record, *l*-

syllables is shown by such accentuations as  $L'$ -,  $t'$ -,  $L'$ - and  $L!$ -.

Examples of  $l$ -syllables are :

$k'ä'łł$  LEG

$dä'łł$  RAIN (recorded as  $däl$  by Swanton, which failed to satisfy Mr. Kelly's ear. This word is not only clearly disyllabic, but the accented vowel is higher in pitch than the  $l$ -syllable. Cf. Swanton's  $däla-gé'it-si$  RAIN FELL, BBAE 29 : 12, l. 8.)

$'a'łł$  PADDLE

$q'uł'$  FOREHEAD (should have been recorded  $q'ułł$  or  $q'uł'$ )

$'łłg'x'nga$  COUSIN

$'ł'a'i'a'ga$  KEEPER

$d'x'n łł$  YOU I... (not to be confused with  $d'xnt$  SWELLING)

$sg'e'łł$  TO CRY

$łł'łł$  TO RUB ONE'S HAND AGAINST

$łł'e'łł$  FIVE

$q'a'dłł$  TO GO ABOARD A CANOE

$hi'dłłg'xl$  COME HERE!

$łł'ga'$  EARTH

$łł'gw'$  AWAY

$łł'ł'u'n'ut$  SIX

$łł'ł'gä'$  TO SOAK (A DRY SALMON)

$'i't'łłgä'ga$  OURS

When an  $l$ -syllable beginning with  $l$ ,  $'l$ , or  $dl$  is pronounced with very weak stress, the length of the  $l$  is of course reduced, though it never loses its syllabic character. We may then write simply  $ł$ ,  $'ł$ ,  $dl$ . The syllable  $-łłr$  (reduced from  $-łłr$ ) was heard as  $-łr$ , with syllabic  $r$ , in  $łta''atłr$  (i. e.  $łta''at łr$ )  $sgwa'ns:r$   $gou$  TEN IT-IS ONE MISSING, NINE.

In interpreting the phonetics of Swanton's texts, there is no genuine syllabic ambiguity in the case of initial  $L$ -,  $L'$ -,  $L!$ -, and  $l$ - before consonants and of final  $-L$  and  $-L!$ , which necessarily represent  $l$ -syllables. It is different, unfortunately, with initial  $t$  before consonants and with final  $-l$ ,  $-t$ , and  $-L$ , which may represent non-syllabic or syllabic laterals. It is im-

possible to tell offhand whether such orthographies as  $łg'e'da-i$  and  $ga'łxwa$  represent  $łg'e'da.i$  or  $łłg'e'da.i$ ,  $ga'łxwa$  or  $ga'łłxwa$ . It is hardly conceivable that the morphology of Haida can be adequately understood without an exact knowledge of its syllabification, for the Haida "word" is essentially a group of significant syllables. The recognition of  $l$ -syllables is likely to put many points of grammar in a new light. Thus, we may surmise that the two forms of the first person plural (subjective  $'a-lx-r$  and objective  $'i'-t'łł$ ) are closely related,  $'i'-t'łł$  being a reduced form of  $*'i'-t'(x)la$ . The true basic forms would then be  $'a$  and  $'i'-t'a$ ,  $-la$  and  $-lx-r$  being pluralizing elements.

SYLLABIC NASALS. — It is quite possible that we should recognize also syllables of type  $ŋ$  and syllabic  $r$ , alternating on phonetic grounds with syllables of type  $m$  and  $r$ . The alternation of  $-r$  ( $-n$ ) and  $-r$  in cases like  $i't:r$  (or  $i't:n$ )  $ł'sudx sdvr$  TWO MEN and

$i'tvr$   $sgwa'nsiŋ$  ONE MAN

should perhaps be interpreted as an alternation of  $i'tvr$  ( $i'tvn$  by assimilation) and  $i'tvr$ . This consideration may explain the constant interchange in Swanton's material of forms like  $-gAn$  and  $-gAni$ ,  $-agAn$  and  $-agAni$ ,  $-gin$  and  $-gini$ , in which  $-i$  (i. e.,  $-i$ ) can hardly be a "perfective" element, as Swanton assumes. For the present, I cannot say whether Haida distinguishes final  $-n$  and  $-r$  from  $-ŋ$  and syllabic  $-r$ . All I can say is that I feel strongly that while Haida reduces the quantities of syllables freely (e. g., in such a gamut as  $'la'$ ,  $'la$ ,  $'lx$ ,  $'łł$ ,  $'ł$ ), it resists the extinction of syllables, and that if syllables are actually lost, they are lost phonetically but not psychologically.

### III. — VOWELS.

I am able to give only a preliminary idea

of the Haida system of vowels. The vocalic nuances seem to be due primarily to secondary phonetic causes rather than to basic etymological differences. It is quite probable that there are only three organically distinct vowels : *a*, *i*, *u*. Each of these runs through a gamut of quantities and qualities that give the language a far greater vocalic variety than the simplicity of the fundamental vowel scheme would argue.

QUALITATIVE CHANGES. — The *a*-vowel seems to be the most liable to phonetic change. Its fundamental quality is that of German *a* in *Mann*, e. g. *da'łł* RAIN, but when short, whether accented or not, it very frequently assumes the duller timbre of *α*. Thus, *-ga* TO BE and *ła* I vary with *-gα* and *ł* (i. e. *łz*) in :

*ła ga ł'a'ga* I AM EATING SOMETHING

*d'k'os u łł ł'a'γzsgα* I SHALL GO AND EAT THIS THING

The *α*-timbre is particularly common before nasals, e. g. *-gα-ŋ* (continuative of *-ga*) and *-gα-n(i)* (past definite of *-ga*), *ł'xm* LICE.

(It seems fairly evident to me that Swanton's temporal *-gan* [op. cit., p. 247], future *-sga* [p. 249], and continuative *-gan̄* are merely combinations of "declarative" *-ga* TO BE OR TO BE SO and certain particles that he has not properly isolated : *-ŋ*, *-ŋa* TO BE CONTINUOUSLY ; *-s*, *-sa* ABOUT TO BE ; and *-u* *-u* TO BE AT A GIVEN MOMENT OF TIME, TO HAPPEN. It is clear that they occur also without *-ga*. Boas has already pointed out the analysis of *-s-ga*- [see p. 249]. I hope to show at a future opportunity that the whole tense-modal system of Haida is nothing but a loose compounding of demonstrative elements and particle verbs and that the synthetic nature of this scheme is more apparent than real. Thus, Swanton's "infallible future" *-asañ* [p. 249] is merely a verb phase : *'a-sa-ŋ-* [a] THIS-WILL-BE [DURATIVELY]).

After anterior palatals and *y*, *a* (*α*) appears as *ä* (as in English *mat*), perhaps even as *ε* (as in English *met*), e. g. :

*k'ä'xwα* OUTSIDE

*k'ä'łł* LEG (also heard as *k'ε'l*)

*xäi* ARM

*ł'łłgä'* TO SOAK (A DRY SALMON)

*sk'ä'dji* EYEBROW

*gä'gxn* MINE

*gä'da.i* THE BLANKET

*gäm-* WIDE AND SPREADY (classifier)

*yä'gαłxŋ* ANCESTORS

After sibilant affricatives and also before *ŋ* there is a tendency for *α*, particularly if unaccented, to pass into *ι* (English *i* of *bit*). Before *ŋ* this seems to take place particularly after laterals (*ł*, *ł*) and sibilants. Examples are :

*sdvŋ* TWO (cf. *sdα'nsvŋ* FOUR, dissimilated from *sdα'n-sdvŋ* < \**sdαŋ* -*sdαŋ*)

*dahvŋgä'ŋa* YOURS (cf. *dαłx'ŋ* YE)

There is no doubt that many Haida syllables in *ι* are old *a*-syllables; as variants prove; e. g. *'i'łvŋx* MAN is evidently to be understood as an original *'i'łxŋx* (perhaps actually pronounced *'i'łłŋx*, as Swanton's variant *ilvŋx* seems to indicate), as shown by certain of Swanton's forms, e. g. *ilα'n-*, *ilα'n-*.

After anterior palatals there is good reason to believe that an original *a* is sometimes completely palatalized to *i'*, *i*. This is not a mere matter of nuancing, like the change of *a* to *ä* or of *α* to *ι*, but a definite phonetic process that disconnects the new vowel from its old category. Under what circumstances this change takes place I do not know. I suspect that an old *a'* is merely colored to *ä'* (*ä*) after anterior palatals, but that the corresponding short vowel was completely palatalized to *i* (secondarily also *i'*). A good example is *gi-* (classifier for blanket-like objects), which is almost certainly related to *gä'-*, *gä-* of *gä'-d-* BLANKET and *gä-m-* (see page 148). The original quantitative relations were probably as follows :

*ga-* > *gi-*

*ga-d-* > *gä-d-*

*ga-m-* > *gäm-* (closed syllable, hence with shortened vowel)

Again, *gi-w-ai* THE EAR : *gu* EAR can be best explained as palatalized from an old \**gaw-*, final *-au* of \**gau* contracting to *gu*. This interchange of *-i-w-* : *-u-* seems to take place also after *s*, e. g. Skidegate *sū* (Swanton) TO SAY : *sīw-As* (contrast Masset *sāw-*). A basic *saw-* best explains the alternations. Another alternation of similar form is that of *thu* CANOE : *tlw-d-i* THE CANOE (Swanton always writes *Lu-d-i*). This again is doubtless the reflex of an old *thau* : *tlaw-*.

For the *i*-vowel, *i*, *ɪ*, and *e* were heard as variant timbres. The *ɪ*-timbre is quite frequent, perhaps normal, for the long *i*-vowel, e. g. :

*ʔi-tl-gā-ŋa* OURS

*xʔ-ŋi* EYE

*tl-gw-* AWAY

*dji-go-ŋa* SEVEN

*ʔi-ŋa* MAN

Examples of the less common *e*-timbre are :  
*e-dji-ŋ* IS

*xel* REGION OF THE NECK (cf. *xel neck*).

The characteristic timbre of the *u*-vowel is *ɔ* (as in English *put*), here written *u*. The corresponding long vowel was heard partly as *o* (e. g. *go-dx* TO START A FIRE), partly as *u* (as in English *fool*). The latter seems to occur chiefly after sibilants and anterior palatals (e. g. *-dju* TO BE SO AND SO, *gu* EAR, *ʔyu* BIG).

A glide *a* was noted in *ʔi-d-i-ŋa* KEEPER. In *gä-at* BLANKET, the long *a* vowel, modified to *ä* after *g*, reasserts its proper quality before the final *t* and thus appears as a broken vowel.

VOCALIC QUANTITY. — Quantity is a difficult matter in Haida. It is likely that there are etymological quantitative distinctions, but it is impossible to be certain, as the actual quan-

titative variations are clearly largely due to secondary lengthenings and shortenings of the fundamental vowel. Thus, as already pointed out, *ʔla* HE may be shortened to *ʔlx*, *ʔll*, *ʔl* or lengthened to *ʔla*. The determinants of this quantitative variation are probably phonetic rather than morphological, but I doubt if stress accent is the only or even the decisive factor, as both the long and the short vowel may occur in an accented or unaccented syllable. I suspect that the distribution of quantities is the resultant partly of inherent quantitative distinctions (e. g. long *a* in *yä-gxlxŋ* ANCESTORS : short *a*, *x* in *kʔ-dju* TO BE SHORT), partly of a tendency to establish a rhythmic equilibrium. This equilibrium seems to depend on several factors, chief among which are the nature of the syllable (a closed syllable tends to be short, an open one long), the place of the accent, and the grouping of the syllables in phrases. It is impossible to give rules at present; the subject is evidently complex. At the same time I do not feel that the quantities are distributed *ad libitum*, rather that they remain to be discovered.

The Haida type of quantitative variation is somewhat similar to that of Athabaskan, if I am not mistaken. Presumably the Tlingit feeling for quantity is analogous to that of Haida. Boas merely remarks that "the quantitative value of Tlingit vowels varies considerably"<sup>1</sup>. In the body of his grammar he unfortunately pays no attention to the subject of quantity. The quantitative peculiarities of the Nadene languages are in striking contrast to those of the neighboring languages. In Eskimo, Wakashan, and, I believe, in Tsimshian as well, the inherent quantitative value of a vowel is clearly felt and, on the whole, rigidly preserved. In these languages vocalic quantity

1. F. Boas, *Grammatical Notes on the Language of the Tlingit Indians*, Univ. of Pa. Anthr. Publ., vol. VIII, no. 1, 1917, p. 11.

is as much a matter of etymology as is the consonantal framework of the word. Phonetic variations in the quantity of vowels such as are found in Haida would be well nigh unthinkable in Nootka.

Examples of quantitative alternations are :  
*a* — *ga'xa'* CHILD : *ga'xx i't'rx* CHILD  
 MALE, BOY ; *ga'xx tja'dx* CHILD FEMALE, GIRL  
*sk'ä'dji'* EYEBROWS : *di' sk'ädj u' i'dji'*  
 IT IS MY EYEBROWS

*sda'nsarxx* EIGHT : *sdx'nsr* FOUR  
*na'* HOUSE ; *na'gd'i ya'a* IN THE HOUSE :  
*na l'e' 'sgwa'nsr* ONE HOUSE  
*sgwa'nsr* ONE ; *q'a'dji q'e'sgwa'nsr* ONE  
 HEAD ; *k'un dji'sgwa'nsr* ONE NOSE ; *k'un  
 k'xsgwa'nsr* ONE LITTLE NOSE, POINT ; *gu'  
 ya'sgwa'nsr* ONE (FLAT) EAR : *gu' amsgwa'n-  
 sr* ONE BIG EAR ; *gu' k'xsgwansr* ONE LITTLE  
 EAR ; *gä'da'i gi'sgwa'nsr* ONE BLANKET, SHAWL  
*i* — ; *q'a'dji'* HEAD, HAIR OF HEAD : *q'a'dji  
 yi* — ; *la'o na'gai yu' q'a'l'car* HE IS GOING  
 INTO A HOUSE : *na'i yu' la q'a'l'car* HE IS  
 GOING INTO THE HOUSE

*dji'dju'* TO BE SPLIT UP, CUT UP : *sta'i  
 djisgwa'nsr* ONE BAND ; *sta'i djisd'r* TWO  
 HANDS

*i'dji'* TO BE, *e'djcr* TO BE (duratively) ;  
*ta' sdxr* I CAUSE TO BE, PUT

*u* — *sk'a'dju'* TO BE SMALL AND ROUNDISH ;  
*gi'dju'gx* (IT) IS LONG AND MASSIVE, SPREADY ;  
*tl'wa'i u gämdju'gzn* THE CANOE IS LARGE :  
*xil k'u'dju* NECK IS SHORT ; *dx'pdju* VERY  
 SHORT ; *tu' gämdjus* A LARGE CANOE

*di'sk'ädju'* MY EYEBROWS ; *ta'o' la'gä'ya na'i  
 go'dxgz'* I PUT HIS HOUSE ON FIRE ; *a'kos  
 u tl' l'a'gx* I AM EATING THIS ; *wx's' o go'xx-  
 g'l'gxr* THAT IS STARTING TO BURN

DIPHTHONGS. — There are two diphthongs in Haida, *ai* and *au*. Each of these exists in two quantitatively distinct forms — short (*ai*, often contracted to *e* ; *au*, *u*) and long (*a'i*, *a.i*, sometimes heard simply as *ai* ; *a'o*, *a'o*, *ao*). The latter type seems to result from contraction.

The uncontracted short *ai* is well illustrated by the enclitic articles *-ai* (probably < \**hai*), when appended to a stem ending in a consonant, and *gai*, e. g. :

*st'i'wai* THE SEA-EGG

*na'gai yu' o* INTO A HOUSE

According to Swanton<sup>1</sup>, the Skidegate *ai* appears in Masset as *e*, but Mr. Kelly, a Skidegate Haida, pronounced a number of *ai*-forms with *e*-vowel, e. g. :

*q'e'*- classifier for large roundish things (cf. Swanton's *qlai-*, p. 232)

*yä'ge'* PARENT < *yä'gai* (cf. plur. *yä'gxlxr*)

*t'e'*- classifier for bulky lying objects (cf. Swanton's *t'ai-*, p. 227)

*q'e't* SPRUCE (cf. Swanton's *qait* TREE, p. 271)

*tte'tl'* FIVE (probably contains *tta-* ; cf. *tlx*, *tlt-* TO TOUCH, *s-tta* HAND)

Possibly the Masset-like *e*-forms are gaining currency among the younger people at the expense of the older *ai*-forms. The contracted *e* is, of course, not to be confused with the *e* which is merely a variant of *i*.

The long *a'i* (*a.i*) probably always results from the contraction of *a + ai*, e. g. :

*na'i* THE HOUSE < *na-(h)ai*

*st'a'i* FOOT < *st'a-(h)ai* (cf. Swanton's instrumental *stla-* BY KICKING)

*dla'i* QUIETNESS < *dla-(h)ai*

Just as the primary *ai* may contract to *e*, so it is likely that *a'i* may contract to *ai*. Thus, it seems probable that *gä'da.i* THE BLANKET is to be understood not as *gä't + ai* but rather as contracted from *gä'da-(h)ai* ; *q'o'ya'i* THE ROCK, as contracted from *q'o'ya* ROCK + *(h)ai*. Similarly, *xäi* ARM < *xä'i* < old \**xa-(h)ai* ; \**xa* itself passed to *xi* (Swanton's *xi*<sup>2</sup>) as \**ga* passed to *gi*<sup>3</sup>.

The short *au*-diphthong is written *ao* by

1. *Op. cit.*, p. 213.

2. *Op. cit.*, p. 226.

3. See page 155.

Swanton. I heard it as an ordinary  $a + u$  and did not feel that the labial element was lowered to  $o$ -position. Examples are :

'*auga* MOTHER (Swanton's *aoga*)

*sq'au* GROUSE (Swanton's *sqao*)

It seemed to me that it was rather the  $a$  that tended to become modified in the direction of  $u$ ; thus, I heard *gɔu* TO BE WANTING (in *tta''atɪ sgwa'ns:ɪ gɔu* NINE) and '*o'uga*, almost '*o'ga*, as variant of '*auga*. This tendency of  $au$  to contract to a monophthong is carried through, e.g., in *ga'yū* SEA (cf. Swanton's *gā'yao*, p. 272), *gu* EAR (\**gaw*, \**gau*, and in  $u$ ,  $o$ ,  $u$ ,  $o$  as reduced form of demonstrative *hau*).

The long  $a'o$ , also heard as  $a'o'$  and  $ao'$ , is markedly distinct from short  $au$ . It seems to result always from the contraction of  $a + (h)au$ , e.g. :

'*la'o*, '*la'o* HE (emphatic form; < '*la-[h]au*)

*ta'o*, *tao* I (emphatic form; < *ta-[h]au*)

#### IV. — STRESS AND PITCH.

I was not able to arrive at definite conclusions in regard to Haida stress and pitch and their interrelations. It is clear that a given word is regularly accented on a certain syllable. Generally this is the first, e.g. *i'htɪx* MAN, *go'xɪgɪɪ* (IT) IS FLAMING. '*yū'dju* TO BE LARGE; but the accented syllable does not need to be the first, e.g. *ga'xa'* CHILD, *ha'w't* HURRY! Further, it is evident that the stressed syllable may lose its stress, as it reduces its quantity, in a given setting in the sentence or when the addition of one or more syllables changes the rhythmic pattern of its syllables. Thus, beside *go'xɪgɪɪ* we have *go'xɪgɪ'ɪgɪ* (IT) IS BURNING, *go'xɪgɪ'lgɪ* (IT) IS STARTING TO BURN; beside *t'a'gɪ* TO EAT and *a'k'os u t' t'a'xidigɪn* I WAS ABOUT TO EAT THIS we have *tu ga t'a'gi'gɪn* I HAVE FINISHED EATING. These alternations of

stress may be purely rhythmic phenomena for the most part, but I doubt if they are entirely so. Functional alternations seem to be illustrated in *ga'yū* SEA : *ga'yū* SMOKE; *q'a'dji* HAIR OF HEAD : *q'a'djɪ* HAIRY. The same  $-a'$  PROVIDED WITH is found in '*madja'* OCHRE and *ma'dɪ* HAVING MOUNTAIN-SHEEP, but we find also '*a'dja* SMEARED WITH SOAPBERRIES.

The question of stress is complicated by that of pitch. The stressed syllable is higher in pitch than the other syllables of the word. At the same time it seemed to me that a low-pitched syllable might very well bear a secondary stress so strong as to bring up the question whether, after all, what I have been making stress in this paper is not primarily a matter of relatively high pitch, only secondarily one of stress. Though I should not like to commit myself at present, I consider it very likely that pitch alternations are a primary factor in the dynamics of Haida, though it is perfectly clear that a given syllable is not uniformly high-pitched or low-pitched. The actual musical effect of Haida is so marked and the sonority of the more weakly stressed syllables so great that the operation of a pitch principle is to be looked for. Yet I cannot say that I succeeded in finding one beyond doubt.

A few sentences will have to do for the present to illustrate the alternations of pitch observed. A high pitch is indicated by an acute accent over the vowel ( $\acute{a}$ ), a low one by a grave accent over the vowel ( $\grave{a}$ ). A falling tone ( $\hat{a}$ ) was observed only in '*má*' (exclamation of pain). If there are significant pitch alternations in Haida, they are probably of the simple Tlingit high-low type observed by Boas. In the following examples, the unmarked syllables following a high-pitched syllable did not impress the ear as being as definitely low-pitched as the one so marked. The pitch of unmarked syllables after a low-pitched syllable is low. A stressed syllable whose tone was not markedly high or low is

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indicated by an acute accent after the vowel (a').

'la'gā'ʔa na'i gē 'la q'ā't'caya'gʒn HE WENT INTO HIS HOUSE

gā'gan na'i (y)u gō'gʒ' MY HOUSE IS ON FIRE

'lā'o' gūgʒn na'i gō'dʒgʒ' HE PUTS MY HOUSE ON FIRE

'lā'o' 'la'gā'ʔa na'i gō'dʒgʒ' I PUT HIS HOUSE ON FIRE

dā la ʔō'dʒ YOU START THE FIRE!

gō'ʒʒgʒgʒ IT IS BURNING

gō'ʒʒgʒgʒ IT IS STARTING TO BURN

'wʒsī' ò gō'ʒʒgʒgʒ THAT IS STARTING TO BURN

nā'gāi ʔā 'u IN THE HOUSE

tāo' nā'i ʔa e'djʒʒ I AM IN A HOUSE

nā'gāi ʔi' o tā qā't'cʒʒ I GO INTO A HOUSE

'lā'o nā'gāi ʔi' q'ā't'cʒʒ HE IS GOING INTO A HOUSE

nā'i ʔi' 'la q'ā't'cʒʒ HE IS GOING INTO THE HOUSE

tā ga t'ā'gā I AM EATING

a'k'os u t'ā'gā I AM EATING THIS

t'lgwī' u tʒ'isdʒʒ IT PUT IT AWAY

'wʒsga.i sdʒʒ o t'si'wʒgʒ THOSE TWO ARE CEDAR BOARDS

t'wāi u dj'ʒgʒʒ THE CANOE IS LONG

ʒ'! sq'ā'sdʒʒ TWO (LONG AND NARROW) NECKS

## Editorial Notes

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There are two, highly divergent dialect areas of Haida: Northern Haida, a group of closely related dialects spoken in the northern Queen Charlotte Islands, particularly at Masset, and in adjacent parts of Alaska; and Southern Haida, a dialect chain, the best attested member of which is Skidegate. Sapir's informant spoke Skidegate, which was the focus of Swanton's study (1911) and has more recently been the subject of extensive work by Levine (1977). The Masset-Alaskan dialects (Lawrence and Leer 1977; Enrico 1986) have a markedly different phonology from Southern Haida, including phonemic tone and two pharyngealized consonants (see Krauss 1979: 839-840).

Sapir's ms. corrigenda to his copy are as follows (note that we use the character g for Sapir's slashed or underlined g):

<i>Original</i>	<i>For:</i>	<i>Read:</i>
p. 144, col. 2, l. 41	djəp'at	djəp'at
p. 146, col. 1, l. 19	remembred	remembered
p. 147, col. 2, l. 16	we <sup>1</sup>	we <sup>4</sup>
p. 147, col. 2, l. 21	q'ánt'cída	q'ánt'cída
p. 148, col. 1, l. 11	n and c	n and ŋ
p. 148, col. 1, 2nd last	ɣam-sɣwa'nsuŋ	ɣam-sɣwa'nsuŋ
p. 148, col. 2, l. 36	stubly	stubby
p. 148, col. 2, l. 36	On	One
p. 149, col. 1, l. 11	g	ɣ
p. 149, col. 1, l. 16	sk'a's'oləŋ	sk'a's'oləŋ
p. 149, col. 2, l. 26	and t'á'na'	and Nootka t'á'na'
p. 150, col. 1, l. 15	ɣa'na	ɣa''na
p. 150, col. 1, l. 36	na·g <sup>a</sup> ...	na·ga...
p. 150, col. 1, l. 38	ɫɣu'nul	ɫɣu'nul
p. 151, col. 1, l. 23	haw't	haw't
p. 153, col. 1, l. 14	'llɣα'nga	'llɣα'nga
p. 153, col. 2, l. 18	syllabie	syllabic
p. 153, col. 2, l. 25	v'luŋα	v'luŋα
p. 154, col. 1, 2nd last	'a-sa-ŋ-	'a-sa-ŋ-
p. 154, col. 2, l. 25	il'ŋα	il'ŋα
p. 155, col. 1, l. 19	'v'tɫ... 'll,	'v'tɫ... 'll,
p. 155, col. 2, l. 5	he	the
p. 155, col. 2, l. 23-24	they remain	they obey rules which remain
p. 156, col. 1, l. 13	t'e's...	t'e's...
p. 156, col. 1, l. 20	i—;	i—
p. 156, col. 1, l. 21	ɣi—,	[delete]
p. 156, col. 1, l. 25	one band	one hand
p. 156, col. 1, l. 27	(duratively);	(duratively):
p. 156, col. 1, l. 34	di·s...	di·s...
p. 156, col. 1, l. 34	la'·o'·la'...	la'·o'·la'...
p. 156, col. 1, l. 35	fire;	fire:
p. 158, col. 2, l. 2	qà't'cəŋ	q'àt'cəŋ
p. 158, col. 2, l. 9	it put	I put



# PITCH ACCENT IN SARCEE, AN ATHABASKAN LANGUAGE,

## INTRODUCTORY

In the summer of 1922 the author of this paper undertook a field study of the language of the Sarcee Indians, now located at a reserve near Calgary, Alberta, Canada. The Sarcee and the Kiowa Apache were the only Athabaskan (Déné) tribes that descended into the Great Plains and assimilated the distinctive buffalo-hunting culture of that area. Both of these tribes were affiliated with more powerful neighbors — the Kiowa Apache with the Kiowa, the Sarcee, in a less formal way, with the three Blackfoot tribes. Like other Athabaskan languages, Sarcee shows practically no influence from neighboring languages of alien stock. The number of Blackfoot, Cree, or Stoney (Assiniboine) loanwords in Sarcee is practically *nil*, while the morphological influence exerted by these languages is entirely *nil*. Sarcee is thoroughly Athabaskan in its sound-system, its morphology, and its vocabulary. It has developed distinctive dialectic peculiarities, but these do not remove it appreciably from the linguistic companionship of Navaho, Hupa, Carrier and Chipewyan.

Perhaps the most interesting fact that emerged from the summer's study was the presence in Sarcee of a well-developed system of pitch accent or tone. The interest of this fact far transcends Sarcee itself, for so fundamental is tone to the phonetic and morphological understanding of Sarcee that it is inconceivable that it should not be shared by the other Athabaskan dialects as well. As I propose to show in a moment, we have some good evidence in the literature on this point, though very little explicit information has been given on tone in the large body of Athabaskan grammatical, lexical, and text material so far published. That Athabaskan is a tone language is of great comparative interest because of the existence of tone in Tlingit (S. Alaska),<sup>1</sup> a language to which Athabaskan is genetically related, though only remotely so<sup>2</sup>.

1. See F. Boas, *Grammatical Notes on the Language of the Tlingit Indians* (University of Pennsylvania Museum, Anthropological Publications, vol. VIII, no 1, 1917).

2. See E. Sapir, *The Na-dene Languages, a Preliminary Report* (American Anthro-

As early as 1876, Father E. Petitot<sup>1</sup> remarked of certain apparent Chipewyan monosyllabic homonyms: « Tout dépend de l'accent ou esprit que l'on donne aux consonnes et du ton qui accompagne la prononciation. Par exemple, *sha* [i. e. *θa*], prononcé sur un ton élevé, signifie *longtemps*, tandis qu'il veut dire *martré* lorsqu'on le prononce sur un ton plus bas. » This is clear and suggestive enough, but unfortunately Father Petitot ignores tone in his grammatical sketch and dictionary. A later student of Chipewyan, Father L. Legoff<sup>2</sup>, is even more explicit. He states: <sup>3</sup> « Tout mot, même toute racine, en montagnais, a sa note ou son ton bas ou élevé qui en détermine la signification. Et ces mots, ces racines conservent ce ton, même lorsqu'ils s'allient à d'autres mots, à d'autres racines, à d'autres éléments pour former des mots composés. Il faut donc, de toute nécessité, en suivant les conversations, s'efforcer de saisir cette note ou ce ton, afin de ne pas détonner soi-même en parlant, et de ne pas s'exposer ainsi ou à n'être pas compris, ou à faire entendre tout le contraire de ce qu'on voudrait dire. Car il y a des mots, et beaucoup, qui se prononcent tantôt sur un ton bas, et tantôt sur un ton élevé, et qui, de la sorte, servent à nommer deux choses, à rendre deux idées *contradictoires*, suivant le ton qui accompagne la prononciation. » But Father Legoff too contents himself with a general statement and neglects to provide his Chipewyan syllables with their appropriate tones. Hence it is impossible to gather from his material anything definite as to the tone-system of Athabaskan. Here and there in his grammar he throws out a suggestive hint, but that is all. Thus, he notes that *nan*-[i. e. *nā*-] as a verbal prefix meaning "across" is pronounced with a high tone, but that as an independent low-toned word it means "thy mother"<sup>4</sup>. Again, the verb stem *kkez̄h* [i. e. *-k'ε̄ʒ*] is high in the present ("imperfective") forms, low in the past ("perfective") forms<sup>5</sup>.

It is a pity that Fathers Petitot and Legoff, who evidently had considerable feeling for Chipewyan, did not treat tone with the detail that it

pologist, N.S., vol. 17, 1915, pp. 535-558). I hope to publish fuller studies on the Nadene languages (Athabaskan-Tlingit, Haida) in the future. Since the preliminary report was published much new evidence has come to light.

1. In his monumental *Dictionnaire de la Langue Dènè-Dindjîé, dialectes Montagnais ou Chippewyan, Peaux de Lièvre et Loucheux*. See p. xiii of the "Avant-Propos."

2. See his *Grammaire de la Langue Montagnaise*, Montreal, 1889. The French missionaries use the term "Montagnais" for the more current Chipewyan. This Athabaskan "Montagnais" is not to be confused with the Algonkian Montagnais, of the lower St. Lawrence.

3. *Op. cit.*, pp. 10, 11.

4. *Op. cit.*, p. 120.

5. *Op. cit.*, p. 321.

deserves. As it is, most other recorders of Athabaskan have either overlooked it or made light of it, so that at this late day it probably comes as a surprise to most linguists that Athabaskan is indeed a tone language. Father A. G. Morice, our authority for Carrier, is not entirely unaware of the existence of the tone problem. "Change of meaning by intonation or vocal inflection", he remarks, "obtains also among some — not all — of the Déné tribes. Some of these intonations are even proper to fractions of tribes only. Thus *ya* which means 'sky' in almost all the dialects becomes 'louse' to a Southern Carrier when pronounced in a higher tone. Northern Carriers have another vocal inflection which is combined with the final hiatus and is also peculiar to them".<sup>1</sup> This passage suggests dialectic variability in tone. As Father Morice gives no further information on Carrier tone, I asked my colleague Mr. C. M. Barbeau, who was carrying on ethnological researches in 1921 among the Gitkshan Indians near Hazelton, B. C., to try to secure some linguistic material from the neighboring Carrier Indians of Hagwelgate. Mr. Barbeau kindly furnished me with a small amount of Carrier material in which the attempt was made to note the high tones. Very suggestive, among others, are the following forms:<sup>2</sup>

<i>g'ès'á·l</i>	I am eating
<i>g'én'á·l</i>	you are eating
<i>g'ò'á·l</i>	eat ye!
<i>g'ès'á·l</i>	I have eaten
<i>g'én'á·l</i>	he has eaten

The tones of these forms are no doubt accurate in the main, for they have close Sarcee analogues. Sarcee too has a large number of verb stems whose present or "imperfective" form is high-toned, perfective low-toned (Father Legoff's Chipewyan *-k'èè* : *-k'èè* and Mr. Barbeau's Carrier *-á·t* : *-à·l* correspond to the Sarcee pattern *-ts'ós* : *-ts'ò·χ* "to handle a cloth-like object"; *-χit* : *χi·l* "to be warm"; *-k'ás* : *-k'á·χ* "to be cold weather"; *-lá* : *-lá* "to do"; *-tc'ó* : *-tc'ò* "to take, get hold of"). Again, the high tone on the first syllable of "you are eating" is undoubtedly correct, for in Sarcee, as we shall see, and in other Athabaskan dialects as well, the second person singular of the verb frequently demands a high tone on the syllable preceding the stem.

1. A. G. Morice, *The Déné Languages* (Transactions of the Canadian Institute, vol. I, 1889-90, pp. 170-242; see p. 182). In Sarcee, "louse" (*ya*) has the low tone with a final glottal stop, as in Northern Carrier.

2. ' = high tone; ˘ = low tone; ˉ = long vowel.

Dr. P. E. Goddard's extensive and fundamental researches in Athabascan linguistics (comprising materials for Hupa, Kato, Chipewyan, Sarcee, Beaver, Apache, and other dialects) nowhere include a treatment of tone <sup>1</sup>. Dr. Goddard has recently informed me, however, that upwards of fifteen years ago, when working on Rousselot tracings of Hupa words, he found that in apparently homonymous forms for the second and third person singular (e. g. *l'cɛnɔɣai* "you have gone out" or "he has gone out"; *mɛnɔtxɛ* "you are finishing" or "he is finishing" <sup>2</sup>) the second person has a higher tone on the syllable preceding the verb stem than the third person. This important observation of Dr. Goddard's has apparently not been published before.

The Franciscan Fathers have given us an excellent dictionary of Navaho, <sup>3</sup> but not a word is said about tone in their introductory grammatical notes. However, they are careful to mark the main stress of each word. It seems very likely that many, perhaps most, of these stressed syllables are really high-toned (the English and German speech habit associates greater stress with higher tone and tends to consider the former the primary factor). It is remarkable that in a great many verbs the stem is stressed in the present, unstressed in the perfective. These stress alternations are analogous to, and probably identical with, the tonal alternations of Sarcee (and of Chipewyan and Carrier) verb stems. To take but one instance, the Sarcee alternation of imperfective *-ts'ós* with perfective *-ts'ò:ɣ* is clearly the same phonetic and morphological fact as the Navaho alternation of stressed *-ts'os* (present) with unstressed *-ts'o's* (perfective), e. g. *na'nists'o's* "I give you (a buckskin)": *na'n'tis'o's* "I have given you (a buckskin);" *xasts'o's* "I take out (a blanket)": *xa'tis'o's* "I have taken out (a blanket)" <sup>4</sup>. Again, the verbal paradigms given by the Franciscan Fathers indicate that, as in Sarcee and Hupa, the second person singular sometimes differs from the homonymous third person in bearing a stress (i. e. high tone) on the syllable preceding the verb

1. For a passing reference to the possible significance of tone in Chipewyan, see P. E. Goddard, *Analysis of Cold Lake Dialect, Chipewyan* (Anthropological Papers of the American Museum of Natural History, vol. X, pt. 2, 1912), p. 83.

2. See P. E. Goddard, *The Morphology of the Hupa Language* (University of California Publications in American Archaeology and Ethnology, vol. 3, 1905), pp. 117, 150.

3. The Franciscan Fathers, *A Vocabulary of the Navaho Language*, 2 vols., Saint Michaels, Arizona, 1912.

4. *Op. cit.*, vol. I, sub "give" and "take". I have adapted the orthography of the Franciscan Fathers to my own. In my orthography accents following vowels are indicative of stress; when placed on the vowel, of tone.

stem, e. g. *iyε* "you marry": *iyε* "he marries;" *txadi'gus* "you wash yourself": *txa'digus* "he washes himself" <sup>1</sup>.

I shall now proceed to a brief discussion of the Sarcee tone system. It is impossible in a brief compass to do justice to the subject, which is difficult and involved. Sarcee tone cannot, properly speaking, be discussed as an isolated chapter of the phonology. It interpenetrates each and every aspect of Sarcee morphology. None of the elements of the language, whether radical, prefixed, or suffixed, can be accurately understood without a consideration of its tone and of the tone shifts which it undergoes in combination with other elements. All that I can attempt here is a preliminary treatment, designed to give some insight into the tonal peculiarities of an Athabaskan language. I hope to give a full and systematic study of Sarcee tone in a later work on the phonology and morphology of this language. My method at the present time will be, in the main, to list and discuss a series of apparently homonymous sets of forms. This informal and inductive method will probably convey more to a public necessarily but little acquainted with Athabaskan morphology than a more compact and generalized style of treatment. It will be convenient at times to refer to the general or reconstructed Athabaskan form of a word. My reasons for the reconstructions <sup>2</sup> can hardly be given here but must be reserved for later comparative studies. In any event, the Athabaskan dialects do not differ greatly on most points; the degree of differentiation is comparable to that of Romance, Slavic, Semitic, or Bantu rather than of Germanic, Indo-Iranian, or Hamitic.

### Phonetics.

A few preliminary remarks on Athabaskan phonetics are required. The Sarcee sound system does not reflect the original Athabaskan system as well as do those of Chipewyan, Hupa, and Navaho. There have not only been important shifts of vowels and consonants, but levelings of certain consonants (e. g. the old *s*-sounds and *c*-sounds <sup>3</sup> have combined into a single *s*-series, the Sarcee *c*-series being, in the main, of anterior

1. *Op. cit.*, vol. I, pp. 13, 14.

2. In my comparative Athabaskan researches I have used chiefly the following dialects and authorities: Chipewyan (Petitot, Legoff, Goddard); Hare (Petitot); Loucheux (Petitot); Beaver (Goddard); Sarcee (Goddard, Sapir); Kutchin (Sapir); Ten'a of central Alaska (Jetté<sup>1</sup>); Ten'a of Anvik, lower Yukon (Chapman, Sapir); Carrier (Morice); Hupa (Goddard); Kato (Goddard); Chasta Costa (Sapir); Navaho (Franciscan Fathers); and Jicarilla Apache and Apache proper (Goddard).

3. My *c* is Lepsius' *š*.

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palatal origin; Athabaskan  $y$  and  $\gamma$  are distinguished only before original  $a$  and vowels (e. g. old  $i$  and  $\check{e}$ , the pepet vowel, have become leveled to  $\iota$ ); weakenings or disappearances of certain syllabically final consonants (e. g.  $-n$  drops if preceded by a short vowel, which was probably nasalized at one time;  $-g$  and  $-d$  are weakened to  $-'$ , the glottal stop), with resulting interchange of lost, or weakened, and retained consonant (e. g. Ath.  $*\check{e}n$ :  $*\check{e}n\text{-}\epsilon$  > Sarcee- $\iota$ :  $-un\text{-}a$ ; Ath.  $*\text{-}\epsilon d$ :  $*\text{-}\epsilon d\text{-}\check{e}$  > Sarcee- $a'$ :  $-ad\text{-}\iota$ ); and contraction of vowels (e. g. Ath.  $-a'\check{e}\text{-}$ ,  $-\epsilon'\check{e}\text{-}$ ,  $-\check{e}'a\text{-}$ ,  $-\check{e}'\epsilon\text{-}$ ,  $-\check{e}'\check{e}\text{-}$  may all now appear in Sarcee as  $-a'a\text{-}$ , see below). Once the phonetic changes peculiar to Sarcee have been worked out, however, it is seen that this dialect is a perfectly regular, if somewhat disturbed, representative of its prototype.

The Sarcee sounds are :

## I. VOWELS :

- a. Short:  $a$  ( $\alpha$ ),  $a$ ,  $\iota$ ,  $u$  ( $o$ )
- b. Long (or half-long) :  $a'$ ,  $a'$ ,  $\iota'$ ,  $o'$  ( $u'$ )
- c. Over-long (with glide-like rearticulations) :  
 $a^a$ ,  $a^a$ ,  $\iota^i$ ,  $o^u$  ( $u^u$ )
- d. Diphthongs (<original vowel +  $-y$ ,  $-\gamma$ ):  
 $a(\cdot)i$ ,  $a(\cdot)i$ ,  $u(\cdot)i$

## II. CONSONANTS :

- a. Stops and Affricatives :  
 Intermediates :  $b$  (very rarely),  $d$ ,  $g$ ,  $d\check{z}$ ,  $dj$   
 Aspirated Surds :  $t'$ ,  $k'$ ,  $ts'$ ,  $tc'$   
 Glottalized Surds :  $t'$ ,  $k'$ ,  $t's$ ,  $t'c$
- b. Spirants :  
 Voiceless :  $s$ ,  $c$ ,  $\check{x}$ ,  $x$ ,  $x$ ,  $w$ ,  $h$  ( $-'$ )  
 Voiced :  $\check{z}$ ,  $y$ ,  $\check{z}$ ,  $\check{\gamma}$ ,  $\gamma$ ,  $\check{\gamma}$ ,  $w$  ( $\gamma^w$ )
- c. Laterals :  $l$ ,  $l$ ,  $dl$ ,  $tl$ ,  $l't$
- d. Nasals :  $m$ ,  $n$

Of the vowels,  $\alpha$  is a duller form of short  $a$  and is pronounced very much like  $u$  of English *but*;  $a$  is a velarized, dark-timbred  $a$  with  $\gamma$ -glide after preceding stopped consonants (aside from'), affricatives (including  $dl$ ,  $tl$ ,  $l't$ ), and sibilant spirants ( $s$ ,  $\check{z}$ ,  $c$ ,  $j$ );  $\iota$  is open, as in English *it*;  $u$ , open as in English *put*, varying with close  $o$  (French *eau*). Of the two  $a$ -sounds, which are difficult to distinguish only in certain positions and which must be clearly kept apart in theory,  $a$  generally corresponds to Ath.  $\epsilon$  (open) and to Ath.  $a$  in certain cases,  $a$  nearly always to Ath.  $a$

(e. g. Sarcee  $-t'a$  "to be so" < Ath. \*  $-t'\epsilon$ , Sarcee  $t'a'$  "feather, wing" < Ath. \*  $t'ax$ ). Vocalic series  $c$ . is particularly common in open syllables and results either from contraction (e. g.  $sa^a t k' a'$  "my brother or sister" <  $s_i - a t k' a'$ ) or from short vowel + syllabically final  $-l$  (e. g.  $x a^a n$  "it tastes" <  $x a - l - n$ , cf. Nav.  $h a - l - n i$ ).

The "intermediate" stops ( $b, d, g$ ) and the stopped part of the intermediate affricatives ( $d\zeta, dj, dl$ ) are essentially voiceless, or voiced only at the moment of release, unaspirated, and of lesser stress than the normal voiceless stops of French or Slavic; they probably correspond to the "tonlose Medien" of many German dialects. The aspirated surds are more strongly aspirated than the voiceless stops of English. The glottalized surds, affricatives, and lateral ( $t', k', t's, t'c, t't$ ) are pronounced with synchronous oral and glottal (or epiglottal) closure and with a sudden oral release which precedes by a perceptible moment of time the release of the closure in the larynx. The intermediates and aspirated surds seem respectively identical to the surds ( $t, k, ts, tc$ ) and aspirated surds ( $t', k', ts', tc'$ ), of Chinese; the glottalized consonants (sometimes known among Americanists as "fortes") are peculiar to many aboriginal languages of America.

In this system  $c$  and  $j$  are used to indicate the voiceless and voiced sibilants of French *choix* (English *shoe*) and *joie*;  $dj, tc', t'c$  are the corresponding affricatives of the series. The voiceless series of spirants  $\dot{x}$ ,  $x$ ,  $\dot{x}$ ,  $w$  and, correspondingly, the voiced series  $\dot{y}$  ( $y$ ),  $\gamma$ ,  $\gamma$ ,  $w$  ( $\gamma^w$ ) are conditioned by the preceding vowel.  $\dot{x}$  (as in German *ich*) and  $\dot{y}$  (close to English *y*, yet not strictly identical with it before  $i$ , where it is more definitely spirantal than English *y*; I have written  $y$ , however, as there is no possibility of confusion) occur before  $i$ ,  $y$  also before  $a$ ;  $x$  and  $\gamma$  (mid-guttural spirants) occur before  $a$ ;  $\dot{x}$  and  $\dot{y}$  (velar spirants) before  $a$ ;  $w$  (approximately like English *wh* in *when* as pronounced in America, but with more nearly spirantal:  $^xw$ , almost  $xw$ ) and  $w$  (properly, labialized  $\gamma$ :  $\gamma^w$  or  $\gamma w$ ) before (and after)  $u$ .  $t$  represents a voiceless spirantal  $l$ , much like Welsh *ll*.

In pronouncing Sarcee, or any Athabaskan language, it is important to give each syllable its due weight. The syllable as such has a more clear-cut phonetic distinctness and a more individual morphological significance than the syllable of English or French, even if it is not always possible to assign it a concrete meaning. The syllables of a word do not generally differ greatly in stress, though the stress is of course not uniform. Certain elements, like third person plural  $g_i$ - "they" and the radical syllable of the verb, are more strongly stressed than others (e. g. in  $k' a g u t s' a'$  "they cease to cry",  $g_i$ - and the stem  $-t s' a'$  are more strong-

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ly stressed than *k'a-* "off" > "to cease", which, however, must not be slurred over). Variations of stress do not seem to be coordinated with differences of tone.

Sarcee syllables are of five types :

- a. Open syllables ending in a short vowel (e. g. *ni*, *t'a*).
  - b. Closed syllables with short vowel followed by a voiceless consonant or, far more rarely, by two voiceless consonants (e. g. *nił*, *t'a'*; the only finals allowed are *-t'*, *-łs'*, *-łc'*, *-'*, *-s*, *-c*, *-x*, *-č*, *-ł*, *-st'*, *-ctc'*, *-łlc'*; more rarely *-k'*, *-t's*, and *-t'ł*).
  - c. Heavy syllables with long, or half-long, vowel followed by a voiced consonant (e. g. *nił*, *t'a'z*; the only finals allowed are *-z*, *-j*, *-l*, *-n*; historically speaking, syllables in *-v* [ $<$  Ath. *\*-i'γ*, *\*-i'y*, *\*-ε'y*, *\*-č'γ*], in *-o'* ( $<$  Ath. *\*-o'γ*), and in *-a'i*, *-a'i*, *-u'i* [ $<$  Ath. *ε*, *a*, *o*,  $+$   $-γ$  or  $-y$ ,] also belong here)
  - d. Heavy open syllables with over-long vowel (e. g. *ni:i*, *t'a'a*) resulting from contraction of vowels or reduction of type a  $+$  l.
  - e. Heavy syllables with over-long vowel followed by a voiceless consonant (e. g. *ni:is*, *t'a'as*) resulting from contraction of type a  $+$  type b.
- The first three types of syllables are old Athabaskan types, the last two are largely of dialectic origin.

The point of syllabic division of a non-final, open syllable, particularly if the vowel is short, lies *in* the following consonant, which thereby becomes geminated. Thus, the form *k'xguts'a'* given above is to be read *k'xg'ut's'a'* (*-g' = -kg-*, i. e. unaspirated voiceless *k* releasing in intermediate *g*). We shall not indicate these purely mechanical geminations. A final glottal stop, whether an old Athabaskan element or of Sarcee origin, is absorbed in the following geminated consonant, e. g. *a'asdiynn'* "he has said to him"  $+$  inferential particle *la* becomes *a'asdiynn'ł'a*. There are other important rules of sandhi which we must neglect here.

### Tone

The tone system followed in this paper is that used by Father Schmidt in "Anthropos" and by Westermann and other Africanists. In this system *á* indicates a high tone, *à* a low tone, and *â* a tone of intermediate pitch. The inflections are indicated by combinations of these symbols: *á* represents a tone falling from high to low, *â* falling from high to middle, *â* falling from middle to low, *ǎ* rising from low to high, *ǎ* rising from low to middle, *ǎ* rising from middle to high. In writing Sarcee I have found it convenient to leave the middle tone unmarked (*a = â*); my *a*

therefore does not mean an indeterminate or unknown tone, but one that is midway between *á* and *à*.

The primary Athabaskan tone system may prove to be one of register alone, possibly recognizing but two grades, high and low. In Sarcee, however, it was found absolutely necessary to distinguish also a middle tone and inflected tones. The middle tone may have originated as a phonetic compromise between two conflicting tone principles, one of which demanded that the syllable receive a high tone, the other that it be pronounced on a low tone. However that may be, there are many verbs which require that in certain aspects the radical element be pronounced on a middle tone, e. g. *dìs'ya* " I have gone ", in which the *-ya* " to go " falls from the preceding high syllable but does not drop to the low tone of a syllable like *-tlá* in *ástlá* " I have done ". With *dìs'ya* contrast also *dìc'á* " I shall go " < \**dì-s-yá*. Here the *-yá* has a definitely high tone, maintained throughout the " imperfective " forms (cf. *dì'yá* " he will go ", but *dì'ya* " he has gone ").

The syllables of the language belong to two tonal categories. Certain syllables have a fixed or inherent tone value of their own ; e. g., *'i:l* " pine bough with needles ", *xá:l* " burden ", *dá:l* " crane ", *mít* " moth, sleep ", *ts'in* " dirt ", *thi* " dog ", *ts'i* " red clay ", *ts'á* " rock ", *t'ó* " water ", *ts'i:l* " snowdrift ", *zái* " saliva ", *ló* " sore ", *-dà:l* " several go " (perfective), *-t'á:z* " two go " (perf.), *-yá* " one goes " (imperfective), *-'i* " to act " (imperf.), *ná-* " again, repeatedly ", *k'ú-* " inside, into ", and *á-* (demonstrative prefix with verbs of doing, being, becoming, and saying) have a fixed high tone ; *t'ás* " powdered charcoal ", *t'si:z* " a boil ", *thá:s* " clay ", *k'ú'* " fire ", *thi* " smoke ", *màs* " hoop ", *dlò* " laughter ", *yá* " louse ", *mà'* " war-raid ", *džá* " gum ", *sò* " star ", *ts'á* " ordure ", *mít* " snare ", *-dàt* " several go " (imperf.), *-t'às* " two go " (imperf.), *-i'n* " to act " (perf.), and *dà-* (prefix indicating distributive subject of verb) have a fixed low tone ; and *-la* (inferential suffix), *-i'* (suffix of relative clause implying absence of subject), *-ya* " to go " (perf.), *-zi* " to call " (continuative), *-k'ú'* " to throw a cloth-like object " (perf.), and *-ni* " to use the hand " (imperf.) have a fixed middle tone. Othersyllables have no inherent tone of their own, but adopt a tone in a particular form in accordance with certain rules of contrast or of morphology. These syllables have no assignable tone as such, but this does not mean that they do not possess a defined tone in a given word. On the contrary, the intonation of syllables with variable tone is important, but the rules governing their tone are not always easy to define. Thus, such elements as perfective-durative *st-*, perfective *yt-*, and possessive-objective *st-* " my, me ", vary their tones from word to word, but not optionally. This is illustrated by the three forms :

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- sít'í* " the calf of my leg "   
*sít'í* " you are lying (in position) "   
*sít'í* " he is lying "

The syllables *-t'í* " calf of the leg " and *-t'í* " to lie " (perf.) have inherent tones, low and high respectively. The syllables *sí-* " my " of the first form and *sí-* (perfective-durative) of the other two have no tones of their own. In *sít'í* the high tone of *sí-* " my " is due to the contrastive influence of the low tone of the radical element (examples of other tones for *sí-* " my " are *sí-áhá* " my grease ", *sílá* " my brother [woman speaking] ", contrast *sílá* " my hand "). In *sít'í* the high tone of perfective-durative *sí-* is due to the fact that the subject of the verb is a second person singular. The old personal prefix *\*-n-* (Ath. *\*sě-n-* > Sar. *sí-*), which has been lost in Sarcee, seems regularly to have required a preceding high or, in other forms, relatively high, say middle, tone, although the synonymous prefix *\*ně-* (> Sar. *n-*), which is used in certain forms, is itself variable in tone (e. g. *ánílá* " you do ", *níts'v* " you are crying "). In *sít'í* the *sí-* is just low enough to bring out the inherent high tone of the stem *-t'í*. Just what tone a variable syllable takes cannot be foretold on the basis of simple rules; the various syllables of this type do not all follow identical patterns. The tones so far illustrated belong, then, to three categories: inherent or fixed tones, tones controlled by definite grammatical requirements, and tones controlled by contrastive requirements. It is naturally impossible to draw a hard and fast line between the last two categories.

All, or nearly all, primary syllables have a level tone. This applies to syllables with a long vowel as well as to short-voweled syllables; e. g., in forms like *níts'v* " you are crying " or *gudisy'z* " they have run off " or *wúct'ó* " leg-big " or *yt'á'n* " it has lain " the long vowel of *-ts'v*, *-yt'z*, *-tc'ó*, *-á'n* must be pronounced on a fixed register — middle, high, or low — without the slightest upward or downward inflection. The numerous inflected tones<sup>1</sup> of the language arise from the contraction of two, rarely three, vowels of different registers. The theory of these inflected tones is simple enough. The vowels melt into a single long (over-long) vowel without losing their tones, which thus combine into inflections whose tendency and range is determined by their component elements. Hence, *á + a* becomes *á'* (half-falling from high level), *á +*

1. Yet far less numerous than in Chinese or in certain other American languages, e. g. Takelma, in which we have primary rising and falling inflections. The quick change from level to level, with comparatively few slurs, is highly characteristic of the general flow of Sarcee speech.

$\grave{a}$  becomes  $\acute{a}$  (full-falling from high level),  $a + \acute{a}$  becomes  $\grave{a}$  (half-falling from middle level),  $a + \acute{a}$  becomes  $\check{a}$  (half-rising from middle level),  $\grave{a} + \acute{a}$  becomes  $\check{a}$  (full-rising from low level,  $\grave{a} + a$  becomes  $\check{a}$  (half-rising from low level))<sup>1</sup>. If the contracting vowels have the same tone there results a long (over-long) vowel of level tone (( $\acute{a}^a$ ,  $a^a$ , or  $\grave{a}^a$ ); long level-toned vowels of the same phonetic type result also from vowel + l. Only a few examples are needed to illustrate these tonal rules :

$t'sd\acute{i}$   $us't'sv:\zeta$  blanket I-wear >  $t'sud\acute{i}$   $st'sv:\zeta$ <sup>2</sup>

$k'\acute{a}$   $ad\acute{i}$  moccasin without, barefoot >  $k'\acute{a}d\acute{i}$

$n\acute{a}$ - $\acute{i}$ - $c'$   $atc$  again-it (indef.)-I-keep-handling-one-object, I handle a certain object time and again >  $n\acute{a}c'atc$

$s\acute{i}$ - $\acute{i}\zeta un\grave{a}$ ' my sickness >  $s\acute{a}\zeta un\grave{a}$ '

$da^a$   $\acute{i}tc\acute{o}$ ' here I-seize-it >  $d\acute{a}\acute{i}tc\acute{o}$ '

$gu\grave{a}$ - $s$ - $tt\acute{a}$  thus-I-do >  $gw\check{a}$   $stt\acute{a}$

$\acute{i}$ - $n\acute{i}$ - $\acute{i}$ - $n$ - $\acute{i}$  it (indef.) -he-admires-the, the one who admires >  $\acute{i}n\acute{i}$   $n\acute{i}$ '

$k'\acute{u}$ '  $\acute{a}stt\acute{a}$  fire(wood) I-do, I make a fire >  $k'w\check{a}$   $stt\acute{a}$  (note disappearance of -' in crasis)

$n\acute{s}g\acute{o}\gamma w\acute{i}s\acute{i}$ '  $\acute{a}n\acute{a}$  downward he-becomes, he stoops >  $n\acute{s}g\acute{o}\gamma w\acute{i}s\acute{a}$   $n\acute{a}$

$m\acute{i}t'$   $\acute{i}w\acute{a}$ '  $us\acute{i}t$  his-water I shall-heat >  $m\acute{i}t'$   $\acute{i}w\check{a}$   $ss\acute{i}t$

$t'\acute{a}\zeta\acute{a}$ - $\acute{a}$ - $y\acute{i}$ - $s$ - $\acute{i}$ ' grief-thus-him-treats, he is in mourning >  $t'\acute{a}\zeta\acute{a}$   $y\acute{i}s\acute{i}$ '

$t's\acute{a}$ - $\acute{i}$ - $s$ - $s\acute{i}$  noise-he-is-sounding, crow >  $t's\acute{a}$   $ss\acute{i}$

$t'\acute{u}$ - $\gamma w\acute{i}$ - $\acute{i}$ - $\acute{a}$  water-in-it (indef.) -he-handles-one-object, he gets water >  $t'\acute{u}$   $\gamma w\acute{i}$   $\acute{i}$   $\acute{a}$ .

The only certain example of an inflected tone in Sarcee that I know of which cannot be analyzed into two simple tones is the low falling tone,  $\grave{a}$ -, of the first person plural subjective, e. g.  $gum\acute{a}$   $t'\acute{o}j$  "we suckle them",  $n\acute{s}\acute{a}$   $\acute{x}\acute{o}$  "we get moist". Full historical knowledge would probably indicate that this element is contracted from two simpler elements of middle tone and low tone respectively.

It goes without saying that the high, middle, and low levels have no absolute fixation. Nor are they definitely fixed relatively to each other. The interval between high and middle or between middle and low or between high and low varies widely according to the care or emphasis of articulation. What under some circumstances constitutes a movement from high to low may under others be equivalent to no more than a half fall.

1. These formulae do not refer to vocalic quality. The quality of the contracted vowel is dependent on a number of factors, which do not concern us here.

2. As several of these examples show, the rules of contraction apply not only within the "word" (a somewhat elusive concept in Athabaskan) but in sandhi between words ("crasis").

Each level and each inflection must be judged or intuitively felt in the context of the preceding and following tones. Now one of the most characteristic and also one of the most puzzling things about the Sarcee tone system in practice is the tendency, within a phonetic phrase or breath group, to gradually lower the absolute register. This means that a high tone following on a low or middle tone that is itself preceded by a high tone tends to be a little lower than the first high tone and to be perceived by the ear as a middle tone. Many of the "middle" tones that I have recorded in running text or in specimen sentences or even within the single word are really pseudo-middle tones — "dropped high tones", as we might call them. I feel that they are not normally identical with true middle tones but keep above the normal middle register. The form *án:lá* "you do" already quoted was often recorded as *án:la*, with a secondary middle tone, instead of the theoretically required high tone, on the last syllable, yet, unless my ear deceives me, the tone cadence of this word is not identical with that of words like *dí:tódja* "it is flabby", *dis:wúga* "it is velvety", *nít:'it'ca* "it is tiny", in which the diminutive *-a* falls regularly on the middle tone (cf., with another tone cadence, *nídó'ta* "it is light in weight", *sísówa* "it is a little sour"). In other words, the "dropped high" really falls between the high and the true middle level. Where there is an immediately adjacent middle tone to serve as a standard of comparison, this difference can frequently be directly perceived. In the phonetic group *ayà t'úmbi* "the one who wrings out water" the cadence of the second word is not adequately suggested by the orthography. In making the record I noted that the group *t'úmbi* was really *t'úmbi* on a high register (i. e., not equivalent in cadence to forms like *án:la* with true low *-ni*). In *t'úmbi*, in other words, the *-m* is a true middle and the *-bi* a "dropped high". The analysis is not difficult here, because we have an immediately preceding *-yà* with a clearly marked low tone to serve as gauge; moreover, we have the analogy of other related forms in middle-tone *-m* and of hundreds of analogous relative (or participial) forms in *-í*.

A good example of the progressive fall in register is the sentence *k'iyidji yicá* "coat in-I-go, I put on a coat", in which *í* indicates a lower tone than the normal low tone fixed by the preceding word. The theoretically correct form of the sentence is *k'iyidji yicá*, but actually no two tones are quite alike in it. Neither of the "middle" tones as the sentence was recorded (*-dji* and *-c'á*) is a true middle, but merely a "dropped high", the second a trifle lower than the first. Thus, the three high tones of the sentence are graduated downward, and the two low tones are also graduated downward in a parallel curve. Functional register

changes are compounded, in other words, with a rhetorical register change. Just as there is a "dropped high" tone, there is also not rarely a "dropped middle" (or secondary low) tone, further a "raised middle" or secondary high tone. These niceties can hardly be properly studied with the unaided ear. They require the assistance of mechanical devices<sup>1</sup>. In any event, however, it would be a great mistake to lay too much stress on variability of tone in Sarcee. It is probably no more disturbing a factor in the understanding of the basic tone theory of the language than in Chinese or any other tone language, each of which has its special laws or tendencies of tone sandhi.

### Tone differences in otherwise identical words.

We shall devote the rest of this paper to a brief analysis of a number of cases of forms which differ only in tonal respects. In this way we shall gain a cumulative idea of the importance of tone in the study of Sarcee structure. In many cases the forms in question originally differed also in other respects and fell together completely in the consonantal and vocalic framework because of the operation of various phonetic laws. Thus tone was left as the last reflex of outward distinction between such forms. One must beware of making the error, which is so commonly made with Chinese and other tone languages that possess numerous near-homonyms, of supposing that the tone differences arose *for the purpose* of keeping apart words which would otherwise be indistinguishable. As a matter of fact, perfectly analogous tone distinctions prevail in groups of non-homonymous forms, where tone is not "necessary" as a grammatical device. Furthermore, there are many examples in Sarcee of true homonyms, of two or more words which belong to distinct form categories but are identical in all phonetic respects, tone included.

1. a.  $\gamma a^{\cdot 2} d\acute{a} \cdot l$  he has eaten the berries
- b.  $\gamma \hat{a}^{\cdot} d\acute{a} \cdot l$  we have eaten the berries

Form a. goes back to  $*\gamma a l d\acute{a} \cdot l$ , in Athabaskan terms  $*\gamma \varepsilon - l - d\acute{e} \cdot l$ ,<sup>2</sup> in

1. I hope to secure phonographic samples of other Athabaskan dialects, so as to be able to work out some of the more elusive tone problems with the help of strictly objective material. [Since this article was written such material has been secured from a Kutchin informant].

2. These Athabaskan reconstructions, it is hardly necessary to say, do not imply that we are certain that precisely such forms were in early use, but merely that, if they existed, they probably had such a phonetic form. The reconstructions are practically Athabaskan formulae for the dialectic forms.

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which \*yε- is contracted from \*yě-γě-. Form b. goes back to \*γâ·ldá·l, in Ath. terms \*γ-ê·-l-dé·l (perhaps contracted from \*γě·i·-l-dé·l). -l-dá·l is perfective of imperfective -l-dàl "to eat berries". In form a. \*γα- < \*yε- consists of third person objective \*yě- (Sar. yu-) and perfective prefix \*γě- (Sar. -yu-); as usual, forms without specific subjective pronominal prefix are used as definite 3 d personal forms. In form b. γ-â·- consists of perfective γ(ě)- and first person plural subjective -â·-. Transitive verbs with first or second person or indefinite person as subject have no expressed, but clearly implied, third personal definite object in many forms, but in verbs with definite third person as subject third personal definite objects must be expressed. All that remains in Sarcee of the marked phonetic difference between Ath. \*yě·γěldé·l and \*γěldé·l is the fact that in the latter form the voice sinks by a slight interval, perhaps no more than a semi-tone, before leaping to the high-toned verb stem.

2. a. k'ú·sdàt I have many (e. g. buffalo) coming in
- b. k'ú·sdàt he has many coming in
- c. k'ú·<sup>u</sup>sdàt you have many coming in

Form a. is contracted from k'úsdàt, Ath. \*k'wěn-ě-c-t-dé·t, literally : in (k'wěn-) I (c-) cause (t-) a certain one (or certain ones, 'ě-, indefinite object) to go in a group (-dé·t). -dàt is imperfective, -dá·l perfective; cf. no. 1. Form b. reconstructs to Ath. \*k'wěn-ě-t-dé·t. In Old Sarcee, the older form of the language still spoken by the oldest men and women of the tribe, forms a. and b. are still distinguished as k'ú·sdàt and k'ú·tdàt (contracted form k'ú·tdàt) respectively. In the former of these forms the element -t- dropped out after the sibilant, as in so many Ath. dialects (e. g. Navaho c- for theoretical c-t-; Chasta Costa has c-t- but -t- may have been restored because of the analogy of the other forms). In New Sarcee, as spoken by my chief informant and most of the other Indians, syllabically final -t- has shifted to -s-; hence in form a. -s- represents older Sarcee -s- < -c- < -c-t-, but in form b. -s- represents older -t-. Form c. goes back to Ath. \*k'wěn-ě-n-t-dé·t.

Syllabically final -n- (here "thou") has disappeared after a short vowel (there was doubtless nasalization of the preceding vowel, oldest Sarcee \*-i-, as in Chipewyan, before all trace of the old -n- was lost) and, as in a. and b., u + i or older u + ě has contracted to an over-long u-vowel. k'ú- has fixed high tone. Objective -t- is variable in tone; in c. it takes the high tone because of the second person singular subject (cf. p. 194).

3. a. nı́γá he will grow up
- b. nı́γá you will grow up
- c. nı́γá he has grown up

Forms a. and b. correspond to Ath. \**ně-yé* and \**ně-n-yé* respectively ; cf. *ncγá* " I shall grow up ". Form c. is a perfective in *-s-*, cf. *nístγá* " you have grown up, " *nícwγá* (*-cw-* assimilated from *sw-*<sup>1</sup>) " I have grown up ". Moreover, *-γá* of c. has lost a final *-n* (contrast *nì-γán-í* " the one who has grown up " with *n-γá-hí* " the one who will grow up "). Hence c. reconstructs to \**ně-γ-yén*. Perfective \**-yéñ*, however, is modified from the normal Ath. \**-yán* by the analogy of imperfective \**-yé* (cf. Chipewyan imperfective *-yε* : perfective *-yan*) ; the older \**-yán* is preserved in Sarcee in the causative : *-c-cá* < \**-t-yán* " to cause to grow up, to raise ". Note that imperfective *-γá*, perfective *-γá (n-)* belongs to the type of verb stem with fixed tone in all aspects ; cf. also continuative *-γát*. The prefix *n-*, however, of variable tone, is only one step lower than the stem in the imperfective forms, but two steps lower in the perfective forms (contrast *ncγá* " I shall grow up " with *nícwγá* " I have grown up "). In other words, even where the stem is invariable in tone, other elements in the verb complex are not necessarily treated in a uniform tonal manner in the varying aspects. It is quite probable that originally the difference between *n-* of a. and *nì-* of c. was purely mechanical. The aspect prefix (\**sě-*, \**γě-*) tends to adopt the middle tone and, if the stem is high-toned, a prefix of variable tone which precedes the aspect prefix generally takes the low tone (the cadence *nícwγá* is very typical). It is likely, therefore, that form c. is reduced from an old trisyllabic Ath. form of type \**ně-sě-yán*, while a. goes back to a disyllabic form \**ně-yé*. Now, in Sarcee, where forms a. and c. have come to have the same syllabic structure, the difference of tonal approach to the stem reflects the old difference in phonetic build.

4. a. *goγ<sup>w</sup>ádìmsts'í* ' I shall punch a hole (with an awl)  
 b. *goγ<sup>w</sup>ádìmìsts'í* ' I have punched a hole  
 5. a. *goγ<sup>w</sup>ádìní'ts'í* ' you will punch a hole  
 b. *goγ<sup>w</sup>ádìní'ts'í* ' you have punched a hole  
 6. a. *goγ<sup>w</sup>ádì'ts'í* ' he will punch a hole  
 b. *goγ<sup>w</sup>ádì'ts'í* ' he has punched a hole

In these forms the momentaneous aspective prefix *n-* is used in both perfective and imperfective forms, so that the only difference between the

1. In perfective forms in which the pronominal subject " I " is directly followed by the stem or by the element *-t-*, Ath. \**-c-* is regularly replaced by \**-i-*, reflexes of which occur in most of the dialects, but in certain dialects, such as Sarcee and Chasta Costa, the \**-c-* is used by analogy with the imperfective forms.

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two aspects, for each of the three persons, is in the tonal treatment of the syllable or syllables following the first three syllables (- $\gamma\acute{a}$ - "hole, through", labialized to  $-\gamma^w\acute{a}$ - because of preceding *o*, has a fixed high tone, to which the variable elements *go*- "it, indefinite locality" and *di*-accommodate themselves). In 5 and 6 the  $i^{\cdot}$  is due to the loss of an old *l* after the  $i$ , in 4 the *l* dropped out after *s* without leaving a trace. The element  $-ni < *n\check{e}$ - became reduced to  $-n$ - in 6 and eventually disappeared. Aside from the first two syllables, these forms reconstruct to Ath. :

4. a.  $*d\check{e}-n\check{e}-c-l-ts^{\cdot}\acute{e}d$   
 b.  $*d\check{e}-n\check{e}-c-l-ts^{\cdot}\acute{e}d$   
 5. a.  $*d\check{e}-n\check{e}-n-l-ts^{\cdot}\acute{e}d$   
 b.  $*d\check{e}-n\check{e}-n-l-ts^{\cdot}\acute{e}d$   
 6. a.  $*d\check{e}-n-l-ts^{\cdot}\acute{e}d$   
 b.  $*d\check{e}-n-l-ts^{\cdot}\acute{e}d$

In 4 the prefix  $-n\check{e}$  keeps one step below the stem, hence middle tone in a., low tone in b. In 5 the  $-n\check{e}$ - needs the high tone because of the second person singular subject. The verb stem, which means "to handle a pointed object (like an awl)", is  $*ts^{\cdot}\acute{e}d$  in the imperfective,  $*ts^{\cdot}\acute{e}d$  in the perfective (the final  $-d$ , reduced to  $-^{\cdot}$  in Sarcee, reappears in certain forms, e. g.  $go\gamma^w\acute{a}di^{\cdot}i^{\cdot}ts^{\cdot}i^{\cdot}di$  "the one who will punch a hole"  $go\gamma^w\acute{a}di^{\cdot}i^{\cdot}ts^{\cdot}d^{\cdot}i$  "the one who has punched a hole"). It is probably a denominative in  $-d$  from the noun stem  $*ts^{\cdot}\acute{e}$  (Sarcee  $ts^{\cdot}\acute{a}$ ) "stone". There is evidence to show that the imperfective aspect uses the more primary form of the verb stem and that the stem forms appearing in other aspects are secondary formations. It is therefore no accident, in all probability, that imperfective  $*ts^{\cdot}\acute{e}d$  is identical in tone with  $*ts^{\cdot}\acute{e}$ . It should be remarked that a large number of the Athabaskan verb stems are either identical with noun stems or clearly derived from them.

7. a.  $i\acute{d}i\acute{n}s^{\cdot}i$  I shall hide myself  
 b.  $i\acute{d}i\acute{n}s^{\cdot}i$  he hid himself

Form a. uses the imperfective form of the verb stem,  $-i^{\cdot}$ , "to hide;" form b., the perfective form,  $-i^{\cdot}$ ;  $-l$ - has dropped out after  $-s$ - in both a and b. The reconstructed forms are  $*\acute{e}d\check{e}-n\check{e}-c-l^{\cdot}i\acute{n}$  and  $*\acute{e}d\check{e}-n\check{e}-s-l^{\cdot}i\acute{n}$ . The third person corresponding to a. is  $i\acute{d}i\acute{n}^{\cdot}i^{\cdot}i < *\acute{e}d\check{e}-n\check{e}-l^{\cdot}i\acute{n}$ ; the first person corresponding to b. is  $i\acute{d}i\acute{n}s^{\cdot}s^{\cdot}i < *\acute{e}d\check{e}-n\check{e}-s\check{e}-c-l^{\cdot}i\acute{n}$ . Hence  $-s$ - of a. is a pronominal element, while  $-s$ - of b. is an aspective prefix. With the reflexive prefix  $i\acute{d}i$ - as well as with the perfective stem  $-i^{\cdot}$  contrasts the

low-toned *-ni-* of b. In a. the *-ni-* takes a middle tone as a transition between the high *ídi-* and the low-toned imperfective *-í*.

8. a. *zísγá* I shall kill him  
b. *zísγa* kill him !

These are imperfective forms based on *-γá* " to kill one person or animal )". The middle tone in b. is organically a high tone which has been depressed to accentuate the high tone of *zí-* (cf. also *sízisγa* " kill me ! ") used in verbs of killing and probably referring to " death. " It is variable in tone. In a. it is one step lower than the stem, in b. it is raised to the high tone because of the second person singular subject. In perfective forms, based on *-γí* < Ath. *\*-γén*, the *zi-* sinks to a low tone (e. g. *yízisγí* " he has killed him "). The Ath. prototypes of a. and b. are :

- a. *\*zě-c-t-γé*  
b. *zě-n-t-γé* (or *-γε* ?)

9. a. *yít'sí:z* you have worn it  
b. *yít'sí:z* he is wearing it

Form a. is based on the perfective form of the stem, *-t'sí:z* (cf. *yíst'sí:z* " I have worn it ", *yíyút'sí:z* " he has worn it ").

Form b. is based on the continuative form of the stem, *-t'sí:z*, with middle tone. The imperfective is *-t'síst'*, e. g. *íst'síst'* " I shall wear it ", *yít'síst'* " he will wear it ". In a. *yí-* is an aspective prefix ; the old pronominal *-n-* has dropped out (*yí-* < *\*γě-n-*), but the *yí-* is not raised to the high tone, as it is already high relatively to the stem. In b. *yí-* is the definite third personal object, Ath. *\*yě-*. Its high tone, as contrasted with the low *yí-* of equivalent forms in other aspects (*yíyút'sí:z* " he has worn it ", *yít'síst'*, " he will wear it ") is characteristic of certain continuative forms, which demand a high tone for the pronominal object ; analogous to form a., as compared with imperfective *yít'síst'*, is *sísγas* " he is throwing (bags) at me " : *sísγás* " he will throw (a bag) at me ", *yísk'a'* " he keeps hitting him (with a cloth) " : *yísk'á'* " he will hit him ", *yígá'* " he is poking him " : *yígá'* " he will poke him ", *yízí* " he is calling him " : *yízí* " he will call him " (perfective *yínízí* " he has called him "). Observe that a. and b. are identical in cadence but differ in register.

10. a. *nàyízúdi* the one who stood  
b. *nàyízúdi* he will stand later on

Form a. is a relative (or participial) in *-í* formed from the perfective

*nàyi'zi'* (-*zud-*). The stem, -*zud-*, means "to become", the idea of "standing" being contributed by the low-toned prefix *nà-* "erect, on the ground". The imperfective form of this important verb stem is high-toned, -*zi'* (-*zid-*), e. g. *nà'zi'* "he stands". *yi-* is perfective and takes the high tone by contrast with the preceding prefix and the following stem. Form b. is a "delayed future", characterized by aspective *yi-* and the middle-toned suffix -*i* (analogous forms are *áyisi'táh* "I shall do it after a while", *yis'dám* "I shall drink it later on", *t'ú'γ'wí'iyis'áth* "I shall get water later on"). Besides the relative suffix -*i* and the delayed future -*i*, there is a low-toned -*i* which makes gerundives. It is not properly a suffix, however, but an enclitic particle attached to the pause-form of the preceding verb, e. g. *nàyi'zi'* + *i*, whence, with contraction, *nàyi'zē'* "he having stood."

11. a. \**ná'yi'sk'i'* he threw it (a cloth-like object) away
- b. *ná'yi'sk'i'* I threw it down
- c. *ná'yi'sk'i'* you threw it down

All three forms are perfectives, based on the perfective form, -*'k'i* of the stem; its imperfective is -*ká'*, continuative -*k'a'*. The Ath. proto-types are:

- a. \**ná-γ'ē-s-t-k'ε'y*
- b. *ná-γ'ē-c-t-k'ε'y*
- c. *na-γ'ē-n-t-k'ε'y*

Form a. is really of a very different pattern from b. and c. It has a high-toned prefix *ná-* "away" that requires \*-*s(ē)-* as a following perfective element, whereas the *na-* of b. and c. is a prefix of variable tone, generally low, *nà-* "down", which is followed in perfective forms by \*-*γ(ē)-*. The -*yi-* of a. is the definite third personal object, contrasting in tone with the high-toned prefix and the middle-toned stem. In the other persons the -*yi-* must be replaced by an objective -*i-*, which contracts with *ná-* to *ná'-*, e. g. *ná'sisk'i'* "I threw it away", *ná'sisk'i'* "you threw it away" (Ath. \**ná-'ē-sē-c-t-k'ε'y*<sup>16</sup> and *ná-'ē-sē-n-t-k'ε'y*). Contrast *nxyiyisk'i'* "he threw it down" (Ath. \**ná-γ'ē-γ'ē-t-k'ε'y*). Note that the only difference in tone between b. and c. is that the latter form begins a step lower. This has the effect of accentuating the height of the following syllable, dependent, as usual, upon the second person singular subject.

12. a. *xà'ysdlá'* I pulled it out quickly
- b. *xà'ysdlá'* you pulled it out quickly
- c. *xà'ysdlá'* he will pull it out quickly

The verb stem is  $-dl\acute{a}'$  ( $dl\grave{a}d-$ ) in the imperfective,  $-dl\acute{a}'$  ( $-dl\grave{a}d-$ ) in the perfective.  $\acute{x}\acute{a}-$  "out" has a fixed low tone. Form b., having a second person singular subject, has a higher tone on the perfective prefix  $-y\acute{i}-$  than form a., in which  $-y\acute{i}-$  takes the middle tone, transitional between the low-toned prefix and the high-toned stem; cf., for a parallel cadence, form 4 a (last 3 syllables). Form c. assigns a middle tone to the variable syllable  $-y\acute{i}-$  (definite third personal object, Ath.  $*-y\acute{e}-$ ) by contrast to the fixed low tones which precede and follow.

13. a.  $n\acute{a}d\acute{i}\acute{x}\acute{i}'$  you will disappear  
 b.  $n\acute{a}d\acute{i}\acute{x}\acute{i}'$  he will disappear  
 c.  $n\acute{a}d\acute{i}\acute{x}\acute{i}'$  he disappeared  
 d.  $n\grave{a}d\acute{i}\acute{x}\acute{i}'$  he will appear  
 (e.  $n\grave{a}d\acute{i}\acute{x}\acute{i}'$  you will appear)

I have put form e. in parentheses because I have no actual record of it under my hand at the moment, but the general analogy of numerous other forms makes it a safe enough form to accept. The stem, "to become", is high-toned ( $-x\acute{i}'$ ) in the imperfective forms (b., d., e.), middle-toned ( $-x\acute{i}'$ ) in the perfective (c.); cf. no. 10. Form a. is remarkable. It is an imperfective parallel to b., yet it seems to have a middle tone on the verb stem, as in form c., where a middle tone is justified. The reason is simple. The form  $n\acute{a}d\acute{i}\acute{x}\acute{i}'$  is a secondary development of  $n\acute{a}d\acute{i}\acute{x}\acute{i}'$ , with fixed high tones on  $n\acute{a}-$  "away" (cf. no. 11) and  $-x\acute{i}'$  and with a high tone on the prefix  $-d\acute{i}-$  because of the second person singular subject. Certain elements with a fixed high tone, like our  $n\acute{a}-$ , depress the following syllables to a slightly lower register, so that an immediately following high tone takes what seems to be a middle position. (A similar effect is often produced by the common demonstrative prefix  $\acute{a}-$ , e. g.  $\acute{a}st'\acute{a}$  "I am thus" <theoretical  $\acute{a}st'\acute{a}$ ). I strongly suspect that the  $-d\acute{i}\acute{x}\acute{i}'$  of a. is not in a true middle position but is midway between high and middle (cf. the "dropped high" tones, discussed on p. 196, which arise in another way); while I often noted tones that fell between high and middle or low and middle, I did not fully realize in the field the theoretical importance of these secondary "dropped" and "raised" tones. Thus, the syllable  $-x\acute{i}'$  of these five forms probably occurs on three registers — high, "dropped high", and middle, but not low. The element  $n\grave{a}-$  of forms d. and e. is a totally distinct prefix from the  $n\acute{a}-$  of a., b., and c. In b. and c. variable  $-d\acute{i}-$  has contrastive tone, in d. it has transitional tone (cadence as in 12a.), in a. and e. it has functional tone. Form c. is one of the curious third personal perfective forms in  $-s-$  in which this element has disappeared

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(cf. 3 c) ; analogous forms are found in other Athabaskan dialects. The reconstructed Ath. forms are :

- a. \*ná-dě-n-žěd
- b. \*ná-dě-žěd
- c. \*ná-dě-žěd
- d. \*ná-dě-žěd
- e. \*ná-dě-n-žěd

It must not be imagined that the examples which we have selected are in any way exceptional. The number of such homonymous sets — homonymous except for tone — is legion in Sarcee and our difficulty has been to reject rather than to find examples in the recorded material. But enough has been given to indicate the nature of the tone problem in Sarcee. Tone is not a matter entirely of the inherent pitch of a given word or element nor is it entirely a matter of grammatical symbolism. Both types of tone function are inextricably interwoven in Sarcee in a system of considerable complexity, from a morphological standpoint. Phonetically the complexity is only moderate.

What is the fundamental nature of this tone system ? It is much too early to speak with assurance, as comparative material bearing on tone has still to be gathered from other Athabaskan dialects. It is already reasonably certain that the inflected tones of Sarcee are of secondary origin and cannot be credited to the original Athabaskan tongue. In other words, Athabaskan is in all probability a tone language of varying registers (high, middle, and low ; or, possibly, fundamentally high and low), not of inflections. The ultimate theory of Athabaskan tone would have to take account of three important problems : 1. How are the syllables with variable tone to be explained ? Did these syllables originally have fixed tone and did they later, having sunk to the status of relatively weak proclitic or enclitic elements, lose their tone and take on new tones according to certain rules of tone sandhi ? 2. How did tone come to have grammatical function (e. g. the high tone, or relatively high tone, so often found on the syllable preceding the stem in second person singular forms ; the high tone on the objective pronominal elements in certain continuative paradigms) ? Are these functional uses the consequence of merely mechanical tone principles and not directly symbolic in origin ? 3. How explain the characteristic changes of tone in the verbal aspects ? Why do certain verbs allow of no tone changes in the stem, while others have one in the imperfective, another in the perfective or continuative ? May we suppose that originally a verb stem had only one inherent tone, preserved say in the imperfective stem, and that the other aspects developed secondary tones on certain mechanical principles, say the amalga-

mation of the stem with other elements that have disappeared as such but have left their trace behind in tone alterations ?

It is not likely that all of these questions can be answered from the standpoint of Athabaskan alone. The same questions, particularly 1. and 3., arise in Tlingit as well, whence it follows that the ultimate explanation of Athabaskan tone will be given by the comparative study of Athabaskan and Tlingit, possibly also of Haida. Should it appear that Tlingit-Athabaskan tone originally depended entirely on the inherent tone value of independently significant syllables, we should still have to ask what were the determinants of these tone values. But we are very far from having arrived at the point where such a question is profitable.

### Editorial Note

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The Sarcee tone system is more complex than that of most tonal Athabaskan languages, which normally have only two tones (high and low). The Sarcee mid tone apparently results from the partial lowering of an original high tone in certain phonological circumstances, a fact that may be historically connected with a similar lowering (from high to low) in Navajo and the other Apachean languages (Krauss and Golla 1981: 85-85). The most recent work on Sarcee is that of Eung-Do Cook, who has carried out extensive field work. He has published a reanalysis of the Sarcee tonal system (Cook 1971, 1984), but does not challenge the essential correctness of Sapir's description.

Sapir's ms. corrigenda in his copy are as follows:

<i>Original</i>	<i>For:</i>	<i>Read:</i>
p. 190, IIb	y,	j,
p. 190, IIb	[second z]	[delete]
p. 191, l. 22	ḡ,	ḡ,
p. 195, l. 1	a + a becomes a	a + à becomes ä
p. 195, l. 15	ìní·ní·	ìní·ní·
p. 195, l. 19	mít'u'wa·ssít	mít'u'wǎ·ssít
p. 197, l. 2	ia	is
p. 202, l. 14	*náyǐsk'ṭ·	náyǐsk'ṭ·
p. 202, l. 17	-·,k'ṭ	-k'ṭ·,
p. 202, l. 18	-káṭ	-k'áṭ
p. 202, l. 20	*ná- . . .	ná- . . .
p. 202, l. 31	[1st form]	[delete final superscripts]
p. 202, l. 31	náyǐyǐsk'i	náyǐyǐsk'ṭ·
p. 204, l. 22	credtied	credited



## The Similarity of Chinese and Indian Languages

New light has been thrown on the ancestry of the American Indian by Dr. Edward Sapir, the Canadian anthropologist now on the faculty of the University of Chicago. Dr. Sapir said that his research work on Indian linguistics has convinced him of the identity of the language of certain Indian tribes with that of the primitive Chinese.

The similarity of the two tongues and the linguistic distribution of tribes scattered at random over the Americas have convinced Dr. Sapir that these groups must have entered this continent as a wedge from Asia. By a close comparison of the primitive Chinese, Siamese and Tibetan, all in the same language category, with the language of the "Nadine group" of North America, Dr. Sapir has found the same peculiarities of phonetics, vocabulary and grammatical structure on both sides of the Pacific Ocean.

The American Indian groups speaking the language of the Nadine group are found in all parts of the North American continent from northern Mexico to the southern boundary of Alaska, widely distributed among other Indian tribes whose language and customs are entirely different.

With minor changes the Navajo of New Mexico speaks the language of the Sarcee in Alberta, and the linguistic stock of the Tlingit, just south of the Eskimos in Alaska, is much the same as that of the Hupa in California.

It is probable, according to Dr. Sapir, that the migration of Asiatics speaking primitive Chinese or Tibetan took place at some time in the past, and that these immigrants settled or moved over the mountains and plains, some remaining in northwestern Canada to become the Tlingits, and others moving out to the Queen Charlotte Islands off the west coast to form the Haida group, and still others penetrating to the deserts of the Southwest.

From the modern Chinese, which in academic circles is considered relatively simple, students of linguistics can reconstruct primitive Chinese which is far more complex than any of the dialects known to the Mongolian layman of today. Dr. Sapir has discovered not only that the Indians of the Nadine groups speak with a tonal accent, raising or lowering of the voice to give certain meaning to words, in a manner similar to the tonal peculiarities of the early Chinese, but also that the meanings of certain words are identical. Further, he has disclosed the fact that the Indians have retained certain prefixes and suffixes that long ago have disappeared from the Chinese speech, but which are clearly discernible in the early forms.

## Editorial Note

Originally published in *Science* 62 (1607), supplement of 16 October, xii (1925). Reprinted by permission; copyright by the American Association for the Advancement of Science.

This anonymous, and somewhat shoddy, piece of scientific journalism seems to have been based on a brief interview with Sapir shortly after his move to Chicago in the fall of 1925. Certain phrases sound like Sapir's, but most of the text must have been reconstituted from hasty notes (hence "Nadine," "Tibetian," and other gaffes). The article appeared in the separately paginated *Science Supplement* section of the journal, indicating that it was not intended as a formal announcement of scientific results, but rather as news of work in progress.

## Review of Berard Haile: A Manual of Navaho Grammar

*A Manual of Navaho Grammar.* Arranged by Father Berard Haile, O.F.M., of the Cincinnati Province of St. John the Baptist. Santa Fe, New Mexico: Santa Fe Publishing Co., 1926. Pp. xi + 324. \$6.00.

This is an invaluable work, useful both to the practical student of Navaho and to the scientist interested in comparative Athabaskan linguistics, emanating from the enthusiastic band of Franciscan missionaries to whom we owe the excellent *Ethnological Dictionary of Navaho* and *Navaho Vocabulary*. It is a cruelly difficult language that Father Berard treats in this "manual," and if a number of statements or formulations seem doubtfully correct from the standpoint of the comparative linguist, it should always be remembered that the author's point of view is distinctly dialectic and descriptive, and not at all comparative or historical. It is very interesting to observe that Father Berard explicitly recognizes the necessity of noting the pitch of the various syllables of the Navaho word, though the record in the book is extremely fragmentary on this point. This statement corroborates Father Legoff's remarks on pitch in Chipewyan, and E. Sapir's field data on Sarcee and Kutchin pitch.

### Editorial Note

Originally published in *American Journal of Sociology* 32, 511 (1926). Reprinted by permission of the University of Chicago Press.

Sapir's references are to the Franciscan Fathers (1910, 1912) and to Legoff (1889). Father Haile later published a considerably more sophisticated introductory grammar of Navajo (Haile 1941-48) and a stem dictionary (Haile 1950-51), both reflecting Sapir's influence.



## A Summary Report of Field Work among the Hupa, Summer of 1927

Dr. E. Sapir spent the end of June, July, August, and the beginning of September, 1927, in a linguistic investigation of the Hupa Indians, who occupy a reservation in the valley of the Trinity river in northwestern California. This work was done under the auspices of the [360] Department of Sociology and Anthropology of the University of Chicago. A number of good informants was secured, chief among them being Sam Brown, who served as the most important source of material and as interpreter of everything obtained from him and others. The information gathered was chiefly linguistic in character but a large body of ethnological material was also obtained, partly in the form of texts and partly as notes directly communicated in English.

The linguistic material was chiefly obtained as part of a programme for the comparative study and reconstruction of the Athabaskan languages. A careful study was made of the grammatical structure of Hupa, which offers many difficulties, and a reasonably complete vocabulary was obtained. The texts, which number about seventy-five, were so chosen as to duplicate as little as possible the valuable material already published by Dr. P. E. Goddard. They are pre-eminently ethnological in content.

Some of the main results secured from the study of the Hupa language may be mentioned here. The sound system, as might have been expected, proved to be much more complex than hitherto represented and more in accordance with the typical Athabaskan patterns worked out for Sarcee, Kutchin, and Navaho. The old Athabaskan k-series (intermediate g, aspirated k', and glottalized 'k) is represented in Hupa by a velar series (g, x, and 'q), but the old prepalatal series (g, k', 'k) is preserved as such. Curiously enough, Hupa has also developed a new series of k-sounds which are neither velar nor prepalatal but mid-palatal (g, k', 'k). These do not represent the old Athabaskan series of k-sounds but are the diminutive form of the prepalatal set. The sounds s, ts', 'ts represent not only the old Athabaskan s-sibilants but also the diminutive form of the Athabaskan c-series (in Hupa terms: voiceless w, tw', 'tc). Vocalic quantity proved to be of fundamental importance for the understanding of Hupa morphology. This is true also of the use of the glottal stop and of final aspirations. Many final consonants are glottalized and there is a characteristic and probably archaic difference between non-syllabic final consonants and consonants which have half-syllabic value. This difference is responsible for the parallelism of "light" and "heavy" syllables, a distinction which had already been worked out for other dialects.

The old Athabaskan tone system, which can be reconstructed in large part from striking resemblances in the tone patterning of Sarcee, Kutchin, Navaho,

and no doubt by many other northern and [361] southern dialects as well, no longer appears in Hupa. Mr. Li's researches prove the same loss of tone for Mattole and Wailaki. Later investigation may disclose the fact that the absence of tone is one of the distinguishing characteristics of the Pacific (or perhaps only southern Pacific) group of Athabaskan dialects. There are, however, interesting tone cadences in the relative forms of Hupa verbs which are most easily explained as survivals of older forms with a high tone on the final syllable, such as we actually find in Sarcee and Navaho.

The morphology was completely overhauled. Owing to a faulty phonology the details and some of the fundamentals of Hupa structure had not been fully grasped in former works on Hupa. The relative forms of the verb, which are as important here as elsewhere in Athabaskan, had not been properly kept apart from the non-relative forms. Owing to this fact the whole verbal system needs to be presented in a new light. The so-called "past definite" is merely a special use of the relative form of the perfective (Goddard's "present definite") and is paralleled by analogous relative forms based on the imperfective ("present indefinite") and on the continuative. The aspect system of Hupa needs to be revised also in other respects. The formation of the continuative (as part prefix and stem form) is entirely analogous to its formation in other dialects. A distinct permissive paradigm must be recognized not only for the third person but also for the first. A distinct potential mode was discovered. There are also special modal forms for the verbal abstract and for the prohibitive. In none of these cases is reference merely had to the use of certain prefixed or suffixed particles. As in Navaho, a number of verbs distinguish durative and momentaneous stem forms of the imperfective.

Since this report was first written, P. E. Goddard has published a paper entitled, *Pitch Accent in Hupa* (Univ. of Calif. Publ. Amer. Arch. Ethn., 23:333-338, 1928), in which it is shown that a study of Hupa tracings fails to show that Hupa syllables have inherently high or low tones. This is entirely in accord with Sapir's auditory record for Hupa and quite opposed to his auditory record for certain other languages of the Athabaskan groups, particularly Sarcee, Kutchin, and Navaho. A small amount of independent material obtained on Anvik (Chapman's "Ten'a," also known as Ingalik) indicates that here too tone is lacking.

### Editorial Note

Originally published in *American Anthropologist* 30, 359-361 (1928). Reprinted by permission of the American Anthropological Association.

References to Goddard's earlier work are mainly to his *Morphology of the Hupa Language* (1905).

Sapir's Hupa notebooks and lexical files are now in the Library of the American Philosophical Society (manuscript 497.3 B63c Na20a.4; cf. Kendall 1982: 56, item 4369). The texts, with linguistic and ethnographic notes, have been edited for publication in Volume XIV. The circumstances of Sapir's and Li's 1927 "expedition" to northwestern California are described informally by Sapir (1927b, Volume IV).

Golla's Hupa grammar (1970) was based on Sapir's materials, supplemented by Golla's own field work. Sapir's lexical data are incorporated into a comprehensive Hupa dictionary now being prepared by the Hupa tribe.



Excerpt from  
 The Concept of Phonetic Law as Tested  
 in Primitive Languages by Leonard Bloomfield

Bloomfield's experience with the Central Algonkian dialects is entirely parallel to my own with the Athabaskan languages. These constitute an important linguistic stock which is irregularly distributed in North America. The northern group occupies a vast territory stretching all the way from near the west coast of Hudson Bay west into the interior of Alaska. To it belong such languages as Anvik (in Alaska), Carrier (in British Columbia), Chipewyan, Hare, Loucheux, Kutchin, Beaver, and Sarcee. We shall take Chipewyan and Sarcee as representatives of this group. The geographically isolated Pacific division of Athabaskan consists of a number of languages in southwestern Oregon and northwestern California. We shall take Hupa as representative. The southern division of Athabaskan is in New Mexico and Arizona and adjoining regions, and is represented by Navaho, Apache, and Lipan. We shall take Navaho as representative of the group. In spite of the tremendous geographical distances that separate the Athabaskan languages from each other, it is perfectly possible to set up definite phonetic laws which connect them according to consistent phonetic patterns. Navaho, Hupa, and Chipewyan are spoken by Indians who belong to entirely distinct culture horizons, yet the languages themselves are as easily derivable from a common source on the basis of regular phonetic law as are German, Dutch, and Swedish.

TABLE VI

	<i>Ath.</i>	<i>Hupa</i>	<i>Chipewyan</i>	<i>Navaho</i>	<i>Sarcee</i>
I.	1. s	s	θ	s	s
	2. z	s	δ	z	z
	3. dz	dz	dδ	dz	dz
	4. ts	ts	tθ	ts	ts
	5. ts'	ts'	tθ'	ts'	ts'
II.	1. c	W	s	c	s
	2. j	W	z	j	z
	3. dj	dj	dz	dj	dz
	4. tc	tcw	ts	tc	ts
	5. tc'	tc'	ts'	tc'	ts'
III.	1. x	W	c	s	c
	2. y	y	y	y	y
	3. gy	gy	dj	dz	dj
	4. ky	ky	tc	ts	tc
	5. ky'	ky'	tc'	ts'	tc'

Table VI shows the distribution in Hupa, Chipewyan, Navaho, and Sarcee of three initial consonantal sets, each of which consists of five consonants. In other words, the table summarizes the developments of fifteen originally distinct Athabaskan initial consonants in four selected dialects. Each of the entries must be considered as a summary statement applying to a whole class of examples.<sup>4</sup> The table merits study because of its many implications. It will be observed that no one dialect exactly reproduces the reconstructed Athabaskan forms given in the first column. Series I is preserved intact in Navaho and Sarcee and very nearly so in Hupa, but has been shifted to another series in Chipewyan. Series II is preserved intact in Navaho, but has been shifted in Sarcee to identity with the series that corresponds to original I, while Hupa has introduced several peculiar dialectic developments and Chipewyan has shifted it to the original form of I. Series III is nowhere kept entirely intact but nearly so in Hupa, while in Chipewyan and in Sarcee it has moved to the original form of Series II, in Navaho to a form which is identical with the original and the Navaho form of Series I. It is clear from the table that a Sarcee *s* is ambiguous as to origin, for it may go back either to Athabaskan *s* or Athabaskan *c*. On the other hand, a Sarcee *s* which is supported by either Navaho or Hupa *s* must be representative of an original Athabaskan *s*. Sarcee *tc* is, in the main, unambiguous as to origin, for it corresponds to the original Athabaskan *ky*. It is curious and instructive to note that, of the four languages given in the table, Hupa and Chipewyan are the two that most nearly correspond as to *pattern* but never as to actual *sound* except in the one instance of *y* (III, 2).

Let us take a practical example of prediction on the basis of the table. If we have a Sarcee form with *tc*, a corresponding Navaho form with *ts*, and a Chipewyan form with *tc*, what ought to be the Hupa correspondent? According to the table it ought to be *ky*.

TABLE VII

<i>Ath.</i>	<i>Hupa</i>	<i>Chipewyan</i> *	<i>Navaho</i> *	<i>Sarcee</i> *
* <i>kyan</i>	...	<i>tcq</i>	<i>n-l-tsq</i>	<i>tcq</i>
'rain'			'there's a rainfall'	

\**q* represents nasalized *a*, as in French *an*. Sarcee *q* is a peculiar *a* with velar resonance, regularly developed from Athabaskan *a*.

Table VII shows the distribution in three dialects of the Athabaskan sound *ky* (III, 4) in the word for 'rain'. When I first constructed the Athabaskan prototype, I assumed an initial *ky*, in spite of the absence of the test form in Hupa, on the basis of the dialectic correspondences. Neither an original *ts* nor *tc* could be assumed in spite of the fact that these sounds were actually illustrated in

4. The apostrophe symbolizes a peculiar type of consonantal articulation, characterized by simultaneous closure of the glottis and point of contact in the mouth, with glottal release preceding oral release. *J* is the French *j* of *jour*; *dj* is the *j* of English *just*; *x* is the *ch* of German *ich*; *W* is approximately the *wh* of English *what*; *θ* is the *th* of English *thick*; *ð* is the *th* of English *then*.

known dialects, whereas *ky* was not. The Hupa column had to remain empty because the cognate word, if still preserved, was not available in the material that had been recorded by P. E. Goddard.

In the summer of 1927, however, I carried on independent researches on Hupa and secured the form *kyan-kyoh*,<sup>5</sup> meaning 'hailstorm'. The second element of the compound means 'big' and the first is obviously the missing Hupa term corresponding to the old Athabaskan word for 'rain'. In other words, an old compound meaning 'rain-big' has taken on the special meaning of 'hailstorm' in Hupa. The Hupa form of the old word for 'rain' is exactly what it should be according to the correspondences that had been worked out, and the reconstruction of the primitive Athabaskan form on the basis of the existing forms was therefore justified by the event.

TABLE VIII  
DIALECTIC FORMS FOR 'RAIN'

Anvik (Alaska) .....	<i>tcɔN*</i>
Carrier (B.C.) .....	<i>tcən</i>
Chipewyan .....	<i>tcq</i>
Hare .....	<i>tcq</i>
Loucheux .....	<i>tcien</i>
Kutchin .....	<i>tscin</i>
Beaver .....	<i>tcq</i>
Sarcee .....	<i>tcq</i>
Navaho .....	<i>n-t-tsq</i>

\*ɔ represents open *o*, as in German *voll*; *q* is nasalized *o*. *N* is voiceless *n*.

Table VIII gives the chief dialectic forms that were available for the reconstruction of the Athabaskan word for 'rain'. Observe that not one of these has the original sound *ky* which must be assumed as the initial of the word. This is due to the fact that the old Athabaskan *ky* and related sounds shifted in most dialects to sibilants but were preserved in Hupa and a small number of other dialects, some of which are spoken at a great remove from Hupa. In other words, in working out linguistic reconstructions we must be guided not merely by the overt statistical evidence but by the way in which the available material is patterned.

### Editorial Note

Originally published in Rice, Stuart A. (ed.), *Methods in Social Science: A Case Book*, pp. 297-306. Chicago: University of Chicago Press (1931). Reprinted by permission of the University of Chicago Press. Only pp. 302-306 are reprinted here; footnote and table numbers are as in the original.

5. *ŋ* is the *ng* of English *sing*.

This discussion of comparative Athabaskan phonology forms part of a longer paper on comparative linguistic methodology (printed in full in Volume I). Although Sapir's methods are irreproachable, his reconstruction of the Proto-Athabaskan affricates is almost certainly incorrect, as Krauss has shown (1964). Sapir gave little weight to forms in his own Kutchin and Anvik notes that are now generally interpreted as retaining the Proto-Athabaskan contrast between retroflexed (or flattened) and non-retroflexed palatal affricates (\*tšʳ : \*tš). Sapir apparently believed that the retroflex/non-retroflex contrasts in Kutchin and Anvik (and — had he known — several other Alaskan languages) were of secondary origin. The retention of the contrast in Tsetsaut with quite different phonetic realizations, and a corresponding contrast in Eyak, make this an unlikely explanation. The Tsetsaut data were available to Sapir (Boas and Goddard 1924), and Krauss has commented that "why or in what way Sapir ignored that important material remains a dark mystery" (1986: 162).

## Two Navaho Puns

It is a well known fact, often stressed by Boas, that the American Indians do not go in for riddles and proverbs. What few exceptions have been found serve only to emphasize the rule. If to riddles and proverbs we add puns, as it seems we have a right to do, it begins to appear likely that the American Indian has a generalized lack of interest in light verbal fancy. There is plenty of metaphor in his rituals, there is considerable etymologizing *ad hoc* in his legends, and his oratory is famous, but the zest in quick, irresponsible reinterpretation of familiar words or phrases which lies at the bottom of the pleasure that we experience in the telling of riddles, proverbs, and puns seems strangely un-Indian, whatever may be the reason.

Yet puns are not entirely absent, as the two following Navaho examples show. They were collected in the summer of 1929 at Crystal, New Mexico.

In a council held some time ago the leader of one of the two contending parties said,<sup>1</sup> *xàct'è' nòhònò'á* 'You people decide on one thing!' A cripple who was present whispered to one near by, *nácidì'á* 'Pick me up!' The latter, catching on at once, picked up the cripple and, holding him in his arms, asked, *xá·dìc nòhònc'á* 'Where am I to put him down?' Everybody laughed. This is said to be a favorite anecdote among the Navaho and depends for its point on the double meaning of the verb *nò-hò-nì- . . . -'á*, which may mean either 'to decide on the matter' or 'to put him down'.

A close analysis of this pun shows that it is more subtle than appears on the surface and that to enter fully into its humor requires sensitiveness to no less than three changes of linguistic front. The fundamental pun is simple and would hardly be enough by itself to raise a laugh, one suspects. This is the use of the verb stem *-'á* 'to handle the "round" object' in the transferred sense of 'to handle the affair, words, plan, date, decision'. The secondary use of *-'á* (*-'á*) in an abstract sense is very common in Navaho, e. g. *tc'ó-hò-nì- . . . -'á* 'to tell'; *nò-hò-nì- . . . -'á* 'to make the decision'; *nà-hà- . . . -'á* 'to make plans', *- á-nà-hò- . . . -'á* (= *-d-'á*) 'a date is being set for one'. The tingling moment in the anecdote comes with the cripple's whispered [218] request; for, in addition to the very general transfer of meaning already noted, there is the added point that one does not normally use the verb *ná-dì- . . . -'á* 'to pick it up' (and its correlative *nì-nì- . . . -'á* 'to put it down') of an animate being, but only of such inanimate 'round' objects as a potato, or apple, or watch, or rock. In other words, the wily cripple, turning his helplessness to humorous account, classifies his hunched up body as a 'round object', *nácidì'á* substitutes for *nácidì-txè'á* and *xá·dìc nòhònc'á* substitutes for *xá·dìc nòhònc'txè'á* (*-t-txè'á* 'to handle the animate being'). Had a little boy of normal physical health made the request,

1. Grave accent (*à*) represents low tone, acute (*á*) high tone, circumflex (*â*) falling tone.

the pun would have seemed a bit far-fetched, for he could not easily be thought of as lifted up and put down like an inanimate object. The quick understanding by the second punster of the cripple's use of *-à-* socializes the pun and kindles it into something like satire of the ponderous doings of important people. Finally, the climax of the pun, 'Where am I to put him down?', reinterprets the *-hò-*, which in the first usage has the meaning of something like 'the affair, circumstance', while in the second it is a personal pronoun referring to 'this one'. These two uses of *-hò-* are historically distinct in Athabaskan. Briefly, then, the first element of the pun is impersonally contributed, as it were, by the language itself; the second is the creation of a masochistic cripple; the third is the echoing understanding of his friend, who equates 'the great business at hand' with 'this poor chap'.

The second pun is much simpler. It is told as a joke rather than as an anecdote. 'So and so has gone over there', one says. 'What for?' *xwòjdò·txàl*, apparently 'he is going to give one a kick' (future of semelfactive verb *yì·ctxàl* 'I give it a kick'), actually 'he (the medicine-man) will perform a ritual "chant"' (future of *xàtxà·t* 'I perform a "chant"', a denominative verb based on *xàtxà·t* 'a ritual "chant"'). Here again the *xwò-* (= *-hò-* above) changes from an impersonal to a personal application. It adds to the flavor of the joke if one remembers that Navaho medicine-men are often hired to come from great distances in order to direct curing rituals and that the spaces between the scattered Navaho hogans are wide indeed.

The great number of homonymous elements in Navaho, due largely to the leveling influence of phonetic laws, and its peculiarly intricate structure, which derives quite definite meanings from the assembling of elements that are generalized and colorless in themselves, combine to make Navaho a peculiarly tempting language for the punster.

### Editorial Note

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## Problems in Athapaskan Linguistics

The Athapaskan languages, in spite of their essential uniformity in phonetic type and morphology, are richly ramified and we need many more dialectic studies than we have yet had in order to understand the group as a whole and to reconstruct it adequately. The dialects of the Southern division are comparatively well known, though less has been published about these dialects than about the chief languages of the other divisions. Even here, however, much important dialectic work remains to be done. Manuscript materials on Navaho, Mescalero Apache, Chiricahua Apache, Jicarilla and Lipan are probably abundant and accurate enough to be called satisfactory. Further work remains to be done on Kiowa Apache and on San Carlos and other Western Apache dialects.

In the Pacific area the manuscript and published record is probably adequate for Hupa, Mattole and Wailaki. The languages in this area which need careful study are Kato, Lassik, Chasta Costa, Galice Creek, and Upper Umpqua. Kwalhioqua and Tlatskanai, which seem to have belonged to the Pacific group, are probably extinct. It is particularly important to try to determine if there are any survivals of the early Athapaskan tone system in the languages of the Pacific group. That there was such an early archaic system follows from a comparison of the Southern languages with most of the languages of the Northern group. So far, however, no Pacific dialect has been found with a tonemic system, though there is an interesting survival of such a system in certain grammatical forms of Hupa.

The greatest complexity prevails in the north. Carrier, Chipewyan, Hare and Kutchin are relatively well known though only a part of the material which has been obtained is in print. Kutchin, however, probably needs a careful overhauling in the field because of its great complexity and the necessity of getting fuller grammatical material. The Kutchin group of dialects is one of the most specialized and needs careful attention. Carrier may be considered reasonably well known because of Father Morice's monumental work but the tonal peculiarities of the Carrier group of languages still remain to be worked out. We have some published material on Beaver and Ingalik but it is altogether unsatisfactory and needs to be completely overhauled. The Athapaskan dialects which are either not known at all or only fragmentarily include: Chilcotin, Tahltan, Tanaina, Tanana, Han, Copper River, Koyukukhotana, Slave and Dogrib.

Owing to the many intricate problems of phonology set by the task of reconstructing Athapaskan, we cannot have too much dialectic evidence. The treatment of original final consonants is particularly intricate. Another problem is the adequate reconstruction of the tone system. Certain languages, like most of the Pacific languages and Ingalik, seem to have lost the old tone system; others

like Chipewyan and Navaho possess a two-register system; still others, like Sarcee, have a three-register system, which may either be archaic or, more likely, a secondary development of an earlier two-register system. In certain Athapaskan languages, such as Hare and Kutchin, there is a tonal complication due to the fact that the tonemic structure of a word differs according to whether it is in final or absolute position on the one hand, or protected by an immediately following word. All these differentiations suggest the importance of getting as much dialectic material as possible.

An important task in comparative Athapaskan is the recovery of the entire vocabulary which is basic to the stock as a whole. Because of differentiations of meaning in different dialects and the partial survival of many words in scattered dialects, we cannot afford to do without the testimony of all or most of the recoverable dialects.

### Editorial Note

From a typescript with Sapir's ms. revisions, now in the American Philosophical Society Library, manuscript 497.3 B63c Na.1. Published by permission of the American Philosophical Society.

The original of this short statement is a short typescript, edited and signed by Sapir but bearing no date or other indication of its origin. It was perhaps prepared for the American Council of Learned Societies or a similar source of research funding. Morris Swadesh donated the typescript to the American Philosophical Society Library in 1946.

Review of  
A. G. Morice, *The Carrier Language*

*The Carrier Language (Déné Family), a Grammar and Dictionary Combined.* A. G. Morice. (2 vols., I: xxxv, 660 pp.; II: 691 pp. RM 80. Anthropos Linguistische Bibliothek, IX u. X Band. Mödling bei Wien: Verlag der Internationalen Zeitschrift "Anthropos," 1932.)

This magnificent work, as its sub-title indicates, is not an ordinary grammar but also a dictionary, the lexical materials being skilfully disposed under appropriate grammatical rubrics. The "Vocabulary" at the end of the second volume, with its page references, helps the student to find his way in these materials. There is no confusion, only a mutually fertilizing treatment of the complex grammatical forms of the language and its lexical content. Not only is such an interweaving of grammar and dictionary allowable for Carrier and its cognate languages, it is in many respects necessary, at least if the grammatical survey is to be complete and definite. In all the Athapaskan languages many complicated grammatical rules apply only to single "words" or to small sets of words. One cannot, therefore, give as adequate a notion of the more intimate structure of Carrier or Kutchin or Navaho with a schematic statement of processes and categories as is possible in such languages as Yokuts or Arabic or Jabo (in Liberia), in which grammatical principles, once mastered, [501] can be applied with a high degree of confidence to the words or word elements. It is not, of course, a question of the relative complexity of the grammar as of the relation of the grammar to the vocabulary. Father Morice's "Carrier Language" deserves to rank as a real contribution to linguistic method. So far as I know, the problem of handling grammar and vocabulary as a formal unity has never before been attacked in so original a manner nor with so sure an instinct. Incidentally, this single attack on a dual problem seems not unsuited to the genius of English, different as its grammatical contours are from those of Carrier.

The body of the work consists of a preliminary treatment of Phonetics; Part First, "The normally non-verbal Parts of Speech" (subdivided into "The Noun," "The Adjectives," "The Pronouns," "The Postpositions, Conjunctions and Interjections," and "The Adverbs"); Part II, "The Verb morphologically considered" (subdivided into "The Verbal Stems," "The Verbal Prefixes," and "The Incorporating Verbs"); Part III, "The Verb grammatically considered" (subdivided into "General Notions," "The chief irregularities of the Verbs," "Grammatical Divisions," "Personal Divisions," "Modal Divisions," "Morphological Divisions," "Temporally incomplete Verbs," "Divisions based on Endings," and "Verbs with number-indicating Endings"); Part IV, "Syntax and Linguistic Peculiarities" (subdivided into "Syntactic Notes" and "Linguistic Peculiarities"); Part V, "Texts" (five texts with interlinear and free translations);

and Part VI, "Vocabulary" (an English check list). This list of the main headings will serve to give some idea of the scope of the work. Details are hardly in place here.

It should be remembered that the strength of Father Morice's grammar lies in its wealth of descriptive detail, not so much in its ultimate configurative analysis. A comparative student of Athapaskan may want to reassemble much of the detail and redefine some of the fundamental outlines but he will always be grateful to Father Morice for the facts, of which he has an obvious mastery. One weakness of the work — which is, however, not an important drawback in practice — is that the orthography is not sufficiently systematized from the phonemic point of view. Thus, both *t* and *d* are used for what is obviously a single phoneme, a lenis stop, while the corresponding aspirated fortis stop is written *th*. One might write these phonemes, with advantage to economy and phonemic accuracy, either *d:t* (defining *d* as a voiceless lenis, varying to the ear between French *d* and *t*, and *t* as a strongly aspirated stop) or *t:t'*. Either method is justifiable and adequate, whereas *d:t:th* corresponds only vaguely to the true facts; *d:th* would be better but uneconomical. It is time that linguists realized that one of their first and most fundamental problems is to interpret the mass of purely phonetic data in terms of a phonemic symbolism that is as simple, as economical, and as powerful as possible. This ideal is rarely attained, yet its realization is implicit in the phonetic facts themselves.

There are many ethnological remarks and implications scattered in the book. The anthropologist's attention should be called to the list of ethnological references on pages xxix-xxxv of the first volume.

### Editorial Note

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## Internal Linguistic Evidence Suggestive of the Northern Origin of the Navaho

**I**NTERNAL linguistic evidence for inferences as to cultural antecedents is not in much favor among cultural anthropologists at the present time, and this for two reasons. Such linguistic evidence is often, if not generally, tricky as to what of a factual nature can be gathered from it, for words may change their meanings radically and, furthermore, it is often difficult to tell whether community of nomenclature rests on early linguistic relationship or on linguistic borrowing attending cultural diffusion. In the second place linguistic evidence is difficult to handle, full of phonologic pitfalls, requiring a closeness of knowledge that is often out of proportion to what little can be obtained from it for tangible cultural inference. Nevertheless, at its best linguistic evidence, properly controlled, may throw an unexpected light on remote cultural perspectives. There is reason to think that as our descriptive and comparative knowledge of unwritten languages increases, their value for cultural reconstructions and other kinds of inference—not least among which is elimination of theoretically conceivable possibilities—will grow in importance. It is natural that in the Americanistic field linguistic evidence has as yet yielded but a scanty return to the historian of culture, but this need not continue to be the case indefinitely.

I shall try to show that there is tangible evidence in Navaho itself for the secondary origin of apparently fundamental elements of Navaho culture, such as agriculture, and that such evidence seems to point to an early association of the culture of these people with a more northern environment than their present one. It may be said—and with justice—that the distribution of the Athapaskan languages is such as to make this historical theory as good as certain, but dialectic distribution is external, rather than internal, linguistic evidence. It is conceivable, if not plausible, that the Athapaskan-speaking tribes were originally massed in the Southwest and gradually rayed out to the north in successive waves of migration. One might argue that the Navaho and, to a greater degree, the various Apache tribes present the non-Pueblo aspect they do, not because of their relative recency in the area of Pueblo cultural development but because, like the Walapai and other Yuman tribes of Arizona, they represent a simpler and more archaic Southwestern culture, which proved impervious, aside from a late Pueblo veneer, to the influence of the more elaborate cultures in their neighborhood. It is true that the linguistic homogeneity of the Southern Athapaskan dialects is such and the dialectic cleavages in the northern

Athapaskan area are so profound that the suggested theory fails to carry conviction either to the linguist or to the ethnologist, but here again we are dealing with external linguistic evidence. This external evidence is far more compelling than can be any evidence derived from details of dialectic structure or vocabulary, for it is more direct and sweeping. None the less, the more elusive internal linguistic evidence has its place in giving confirmation to a hypothesis based on linguistic distributions.

There is undoubtedly a large amount of relevant cultural evidence packed away in the vocabularies of Navaho and Apache. For the present I must content myself with considerations based on the study of four words or groups of words.

1. The Navaho word for "gourd" is 'àdè'.<sup>1</sup> The word is used both for the plant and for the "gourd dipper, ladle."<sup>2</sup> The "gourd rattle," on the other hand, is otherwise named ('àγá:ł).<sup>3</sup> But 'àdè' means not only "gourd ladle" but "dipper, ladle, spoon" in general, the gourd ladle being the ladle or spoon *par excellence*. Hence we find the earthen spoon called "mud 'àdè'" or "earth 'àdè'," while the modern tablespoon is called "metal (<flint) 'àdè'".<sup>4</sup> Now the term 'àdè' (in form a possessed noun -dè' with indefinite possessive prefix 'à- "somebody's" or "something's") means not only "gourd," "gourd ladle," and "ladle, spoon" in general, a natural family of words, but also "horn" or rather "somebody's, some animal's horn" (dé "horn" as absolute; 'à-dè' "an animal's horn," parallel to bì-dè' "his [animal's] horn"). In no other Athapaskan dialect does 'àdè' or its dialectic equivalent mean "gourd" or "gourd ladle," while, so far as I can discover, it is only in Apache that it means not only "horn" but also "ladle" in general. In Chiricahua Apache<sup>5</sup> we have possessed -dè' "horn (of animal)" and 'idè' "cup, dish, dipper"; in Mescalero Apache -dè' "horn (of animal)" and 'idè' "cup, dish, dipper." In both Navaho and Apache 'àdè', 'idè', 'idè', in its meaning of "gourd ladle" or "dipper," keeps its indefinite possessive prefix 'à-, 'i-, when itself possessed, e.g., Nav. bè-'èdè' (assimilated from \*bì-'àdè') "his gourd ladle," Chiricahua Apache bì-'idè' "his dipper," Mescalero Apache bì-'idè'. This does not in the least prove

<sup>1</sup> See, e.g., Franciscan Fathers, *A Vocabulary of the Navaho Language* (2 vols., St Michaels, Arizona, 1912), Vol. 1, p. 99, sub "gourd;" Vol. 2, p. 13, sub 'àdè', where it is defined as *Cucurbita*.

<sup>2</sup> See Franciscan Fathers, *An Ethnologic Dictionary of the Navaho Language* (St Michaels, Arizona, 1910).

<sup>3</sup> *Ibid.*, p. 401.

<sup>4</sup> *Vocabulary*, Vol. 1, p. 186, sub "spoon."

<sup>5</sup> My Chiricahua and Mescalero Apache forms are quoted from manuscript material kindly put at my disposal by Dr Harry Hoiyer.

that Navaho 'à-dè' "one's horn" and 'àdè' "gourd ladle" are unrelated words, for we have other examples in Southern Athapaskan of double possessives of type "his-one's . . ."; e.g., Navaho bì-t'à' "his (i.e., bird's) feather," 'à-t'à' "a (bird's) feather," but bè-'èt'à' "his-one's-feather," i.e., "his (secondarily owned) feather, his plume (used in hair decoration)." All this suggests that Navaho 'àdè' "gourd ladle" originally meant "ladle" in general and that this word in turn originally meant "an animal's horn," reinterpreted as "horn spoon," very much as our musical instrument, the "horn," originally a "ram's horn" used for blowing, is now a brass instrument with no obvious relation to an animal's horn. The semantic history of 'àdè' would, then, be: (1) an animal's horn; (2) ladle made of horn; (3) any ladle; (4) gourd ladle; (5) the gourd, *Cucurbita*, of which ladles are made. Stage 1 would be proto-Athapaskan; 2, a dialectic Northern and Pacific, and presumably early Southern, development based on the widespread use of horn for spoons; 3, a Southern Athapaskan transfer of meaning due to the fact that spoons were no longer made of horn; and 4 and 5, a specific Navaho (in part perhaps also Apache) development. Inasmuch as stage 2 no longer has validity in Navaho, the meanings of the word group into two disconnected sets (1; 3-5), so that 'àdè' is now felt to be two distinct and unrelated words, the more so as it is tabooed among the Navaho to use the horn of the deer for the making of spoons. My interpreter Albert Sandoval once volunteered surprise that identically the same Navaho word meant both "a horn" and "gourd, gourd ladle."

If we turn to other than Southern Athapaskan dialects, we find that the absolute \*dé "horn," the possessed \*-dè' "horn of . . .," and the form with indefinite possessive prefix \*k̄ě-dè' "an animal's horn" are found in both of the two other Athapaskan areas. Corresponding to Navaho dé we have, e.g., Kutchin ží "horn" and Hupa -de- (in compounds); corresponding to Navaho -dè' we have Carrier -de, Chipewyan -dé (Li) (Chipewyan high tone = Athapaskan [Navaho, Apache, Sarsi, Kutchin] low tone), Hare -de, Loucheux -ži, Kutchin ži', Beaver -de', Sarsi -dà', Hupa -de', Kato -de', and Mattole -de'; while Navaho 'à-dè' has an exact correspondent in Chipewyan 'è-dé, Hare e-de, Loucheux e-ži, Kutchin č'í-žì', Bâtard Loucheux e-d'ye, and Hupa k̄i-de', all meaning "an animal's horn." The early use of horn for spoons, which can only be inferred for Southern Athapaskan, is linguistically reflected in Hupa k̄ide-kin', literally "a horn's handle," whence "spoon," and in Hare ede-k̄'a "cuiller en corne" (Petitot: k̄'a "plate, bowl") and Sheep Indian (esbatahot'ine) ede-ka "corne aplatie" (Petitot), whence "spoon." Obviously, to the Navaho mind 'àdè' in its meaning of "gourd" must be referred to the beginning of things, for the

term is used in ritual and mythology, for example in the compound term Gourd Children,<sup>6</sup> but the feeling of the Navaho is of no more importance in the historic problem than their conviction that *łi'* always meant "horse" (though we can easily prove from comparative evidence that its original meaning was "dog") and that their ancestors became acquainted with the horse not too long after the Emergence, as indicated by the origin legend for the creation of the horse in the four cardinal points out of the four ritualistically proper materials.

Our linguistic analysis, in short, points unmistakably to two things of historical interest: that the gourd is not an original element of Southern Athapaskan culture; and that horn spoons, not directly given by present-day Navaho culture, must be assumed to have been known to the remoter Athapaskan-speaking ancestors of the Navaho or, at the least, to early Southern Athapaskan culture. These inferences go well with a theory of immigration of the Navaho and Apache from the north (or east) into the Southwest. Even if one goes no further than to infer the absence of the gourd and the presence of horn spoons in an early phase of the culture of the Navaho-Apache tribes, the illumination brought by a close analysis of Navaho *'ädè'* and its Apache cognates is useful for the reconstruction of the period antedating the massive influence of the Pueblos on the Navaho and the Apache tribes.

2. The Navaho verb for "seed lies" is *-sàs*, a perfective neuter, e.g., *sisàs* "the seed lies," *ńsàs* "the seed lies in a row." The original meaning of these forms is obviously not specifically "the seed lies" but, more generally, "the mass of finely divided particles (e.g., grain, sand) lies." A corresponding active verb, *nà'sàs*, means, for instance, not merely "I scatter the seed,"<sup>7</sup> but also "I let the mass (of grain, sand) spill (e.g., out of a bag); I sprinkle it (e.g., sand, water)." I can find no cognate for these verbs in the material available to me from other Athapaskan dialects, and the inference—as so often in analogous Athapaskan cases of apparently isolated verbs—is that we probably have here a dialectic denominative formation, i.e., a secondary set of verbs based on a noun.

Now it is perfectly clear from Navaho phonology that all verb stems beginning in *s* (after vowels) are contracted products of a "classifier" *-l-* and either *z* or *y*; in other words, *-sàs* must go back to either *-l-zàs* or *-l-yàs*. The perfective neuter *\*sì-l-zàs* or *\*sì-l-yàs* is analogous in form to such a perfective neuter verb as *sìlcò'z*<sup>8</sup> "the fabric lies." But what is the

<sup>6</sup> An Ethnologic Dictionary, pp. 351, 353.

<sup>7</sup> See, e.g., Vocabulary, sub "broadcast (in sowing)."

<sup>8</sup> *c = ts.*

underlying *zàs* or *yàs*? Quite obviously, "snow," Navaho *zàs*, *yàs* (these two forms, of which the latter is the more archaic, constitute one of the few cases of dialectic difference within Navaho). Hence the verb *sìsàs* must have meant, originally, "it lies like (flakes of) snow," whence "the seed lies"; the derived active verb *nà·sàs* originally meant "I scatter it about (so that it lies) like snow," whence "I sow the seed broadcast."

As in the preceding case, while the present cultural term is not widespread in Athapaskan but is confined to Navaho (or Southern Athapaskan), it is not difficult to establish a close connection with a universal Athapaskan term of differing cultural connotation. Athapaskan \**yáxs*<sup>9</sup> "snow" is found in the majority of Athapaskan dialects: Ingalik *yìθ*, Babine *yìs* (Jenness), Carrier *yəʃ*, Chipewyan *yàθ* (Li), Slave *žah*, Hare, Dogrib *ž'yah*, Loucheux *ziow*, Kutchin *žáh*, Kaska *zàs* (Jenness), Beaver *yas*, Sarsi *zas*, Kwalhioqua *yaxs*, Hupa *yahs*,<sup>10</sup> Kato *yas*, Mattole *yas*, Jicarilla Apache *zas*, Mescalero, Chiricahua *zàs*. The original meaning of the Athapaskan word is not "snow" in general but specifically "snow lying on the ground;"<sup>11</sup> another common Athapaskan term, represented by Navaho *č'ì·l*, means "snowdrift" or "falling snow." This restricted meaning, "snow lying on the ground," is clearly the prototype of the present Navaho term for "the seed lies." To summarize, a non-agricultural term ("snow lying on the ground") takes on a transferred and more general meaning in a classificatory verb ("the finely divided particles lie [snow-like] on the ground") and, in a secondary, agricultural environment, advances to the technical meaning of "the seed lies." No other sequence of meanings fits the linguistic facts.

3. The Navaho word for "corn" is *nà·dá·'*. The second element, *-dá·'*, occurs in a number of compound nouns referring to plants in which it tends to be translated "corn" by Navaho interpreters, e.g., *hà·ščé·'dá·'* "boxthorn," approximately "god-corn" (*hà·ščé·'* is a familiar Navaho god name and, in slightly abbreviated form, is the first element in the native term for the Talking God); *čí·'dá·'* "buckthorn," perhaps "bitter corn" (cf. *dí·čí·'* "it is bitter"); *mà·'ì·dá·'* "cedar-berries," literally "coyote-corn;"

<sup>9</sup> My reason for reconstructing to high-toned \**yáxs* rather than low-toned \**yàxs* is too technical to give here.

<sup>10</sup> The Hupa word means not "snow" but "white frost (on trees)."

<sup>11</sup> See, e.g., Fang-Kuei Li, A List of Chipewyan Stems (International Journal of American Linguistics, Vol. 7, 1933), p. 146: "*yàθ* snow on the ground;" similarly, for Chipewyan, L. Le Goff, Dictionnaire Français-Montagnais (Lyons, Marseilles, and Rome, 1916), sub "neige tombée;" for Carrier see A. G. Morice, The Carrier Language (2 vols., Mödling bei Wien, 1932), Vol. 1, p. 25, where *yeš* (our *yəs*) "snow" contrasts with *cel* (our *šəl*) "snow (heavy and not yet settled)."

gàhcòhdá' "winterfat," literally "jackrabbit-corn." The reason why, in compounds such as these, -dá' is translated "corn" rather than "food," which is obviously more logical in such terms as "coyote-food" and "jack-rabbit-food," is probably the use of the abbreviated -dá' for "corn" in possessed forms (e.g., šìdá' "my corn") instead of the fuller nà·dá' of the absolute. But it is quite easy to prove that -dá' is not, in any true sense, abbreviated from nà·dá' "corn" but, on the contrary, is an old term for "food" which lingers, somewhat disguised, in such compounds as have been quoted and in possessed forms for "corn" (šìdá' "my food" *par excellence*, whence "my corn"). This interpretation, not clear to the Navaho himself because the word in actual use for "food" is èi·yá'n and he therefore feels that the primary meaning of -dá' is, or should be, "corn," is at once made plausible from within Navaho when we compare -dá' with the medio-passive imperfective neuter verb -dá "to be eatable" (e.g., yìdá "it is eatable"), itself closely related to the durative transitive verb -yá "to eat it" (from which èi·yá'n above is independently derived). It looks, therefore, as if -dá' originally meant "what is eatable," i.e., "food," secondarily "corn" in possessed forms.

The nà·- of nà·dá' is quite obscure to the Navaho. It seems to follow no obvious analogy and cannot be equated with the common nà·- "about, here and there" of continuative verbs. One might venture nà·dá', originally "corn is here and there," whence "planted corn, standing corn," finally generalized to "corn." This is to be taken no more seriously, however, than an attempt to see our common word tide in the -tide of eventide, whereas every historical student of English knows that this compounded -tide is a survival of an old word tide synonymous with time and cognate with Danish tid and German Zeit. Our problem cannot be considered completely solved until we have done more than plausibly surmise that -dá' originally meant "food" and have found a linguistically unforced explanation of nà·-. The former requirement is met by a consideration of Athapaskan cognates, which reconstruct to \*dán-ě (itself reduced from \*dě-hán-ě "that which is eaten, food," relative form in \*-ě of \*dě-hán, whence \*dán, "to be eaten, to be eatable"), possessed form \*-dán-è', \*-dán-è' "food of . . ." Chipewyan dānè (Li), possessed -dānè, Sarsi dānī, Mescalero Apache dán, possessed -dán and -dá', Chiricahua Apache dán, possessed -dán (also -dá' in nà·dá' "corn," perhaps borrowed from Navaho), Hupa possessed -da·n' in -da·n' sa'a·n "food of . . . is lying" = ". . . is saving with food," Mattole possessed -da·ne' "possession, property" (presumably a meaning enlarged from "food"). These forms enable us to understand the exact status of Navaho -dá'. It is not the reflex of the primary \*dáně

“food” but of its possessed form \**-dáně* “food of . . .”; the former (exemplified by Chipewyan *dānē*, Sarsi *dāní*, and Apache *dán* [read *dání*, for an old Southern Athapaskan \**dán*, monosyllabic, would have yielded Navaho, Apache \**dān*, while an old Athapaskan \**dán* would have given Navaho, Apache \**dá*]) would have resulted in Navaho \**dání*, \**dání*. The Apache possessed forms in *-dání* are merely generalized from the absolutive *dání*, the variant Mescalero *-dá*’ “food of . . .” being the true reflex of Athapaskan *-dán-ě* and an exact cognate of Navaho *-dá*’ “corn.” We see, therefore, that on strictly linguistic grounds such Navaho forms as *mà’ì-dá*’ mean, not “coyote-food,” but “coyote’s food.” This makes it doubly impossible to interpret *nà-dá*’ as “corn here and there,” which form, if it ever existed, would have had to yield \**nà-dání* in Navaho. We are driven to infer that *nà-dá*’ originally meant “food of *nà-*,” whatever *nà-* may be.

Once we see that *nà-* must have referred to certain beings, human or animal, whose food was corn, we advance rapidly to a satisfactory linguistic solution. Many Athapaskan dialects have reflexes of an old word for “enemy, aliens,” occurring in two forms (\**nà*’, *nà-* in compounds, and, with indefinite possessive prefix, \**ǰě-(dě-)nà*’, \**ǰě-na-* in compounds). These words are frequently used to refer to specific neighboring tribes. Examples of \**ǰě-nà*’, \**ǰě-dě-nà*’ (\**dě-* is collective) and compounded \**ǰě-nà-* are: Carrier *ə-d-na*, Chipewyan *’è-ná* (Li) “enemy, Cree Indian,” Slave *e-na-kie* “Eskimo,” Hare *e-h-da* “enemy,” *e-na-ke* “Eskimo,” Dogrib *e-h-da*, Loucheux *ə-ne* “enemy, Eskimo,” Bâtard Loucheux *a-ra-ke* “Eskimo,” Kutchin *čè-k’óí* (contracted from \**č’a-nè-*) “Eskimo,” Hupa *ǰi-na*’ “Yurok Indian,” Navaho *’à-nà*’, Mescalero, Chiricahua Apache *’ì-ndà*. (The *-kie*, *-ke*, *-k’óí* of some of these forms, analogous to Navaho *-ké*, is a plural animate suffix.) The old compounded form without indefinite prefix, \**nà-*, is illustrated in Chipewyan *na-tǰ-i* “enemy” (Petitot) (literally, “the one who acts as an enemy”) and, presumably, in Kato *na-čəl* “orphan” (from “alien”+“child, little”). In Navaho this *nà-* is found in compound nouns, particularly such as refer to foreign peoples, e.g., *nà-lán* “Comanche Indians” (from “enemy-many-the”), *nà-šléží* “Zuñi Indians” (contracted from *nà-yìštéží* “enemy”+“the ones who are blackened”), *nà-šgálí* (apparently made over, in accordance with the Navaho tribal name pattern, from *mà-šgálí* “Mescalero”),<sup>12</sup> *nà-tò-hó* “Laguna Indians” (apparently also “Isleta Indians”?). The last of these tribal names is interpreted as “enemies at the water” by the Franciscan Fathers<sup>13</sup> but a

<sup>12</sup> See Vocabulary, Vol. 1, p. 127, sub “Mescalero Apache.”

<sup>13</sup> *Ibid.*, Vol. 2, p. 135, sub *nātqoho*; better “at the river,” for this name is based on *tò·h*, possessed *-tò·h*, “river which does not dry up,” rather than on *tó* “water.”

more natural interpretation is to take the name as a relative in -í (assimilated to -ó) from *nà:tò'h* "enemy-river," presumably an old name for the San Jose (and Rio Grande?), in contrast to the two normal interpretations of *tò'h*, namely San Juan River and Little Colorado River, the two rivers in or near the old Navaho habitat which never completely dry up. This is confirmed by the place name *nà:tò'(h) sìkài'* given by the Franciscan Fathers for Grant, New Mexico (*nātqo sākai*),<sup>14</sup> literally "the enemy river has its legs distended," "(where) the San Jose turns crotch-wise." The point is of some importance linguistically as indicating that Navaho compounds in *nà-* "enemy" not only mean "... enemies" but also "enemy . . ." In other words, both *nà:tò'h* and *nà:dá'* are archaic Navaho words which qualify basic nouns ("river" and "food") by referring them to the enemy, in this case the Pueblo Indians.

The Navaho word for "corn," *nà:dá'*, in summary, which can be analyzed with great probability into an older "food of the enemy," "Pueblo food," implies that there was a time when the Navaho, an agricultural people in historic times, were still thinking of corn as an alien food. Later on, when they had adopted corn as a staple and had built so much of their myth and ritual around it that it was inconceivable to them that there could be anything alien about it, they could not possibly feel the *nà-* of their word for "corn" as akin to the *-nà'* of *'ànà'* "enemy" and the *nà-* of tribal names. The sentiments clustering about the two terms had become irreconcilable.

4. There is a curious verb stem in Navaho which seems to be used only in certain quite specialized verbs; this stem has the forms: imperfective *-ké'h* (probably error for *-kè'h*), perfective *-kí*, progressive and future *-ké'ł*, usitative and iterative *-ké'h*, optative *-ké'ł*. It is used in an idiomatic verb referring to sleeplessness, e.g., iterative *bìl sìcánáké'h* "sleeplessness always bothers me," perfective *bìl sìcánkí* "I have been sleepless." The form of the verb is such (*bìl* "sleep" is subject; *-cá-* "away from" is preceded by the indirect pronominal object) as to suggest that the verb stem refers to a specific type of movement. My interpreter, Albert Sandoval, had no notion what the underlying metaphor was but said he felt, somehow, that there was a reference to gliding movement in it: "sleep glides (slips) away from me." There is no linguistic support for this feeling, which is hardly more than an *ad hoc* interpretation to fit the linguistic form. This obscure verb, as Sandoval pointed out, must have the same stem, in its progressive form (*-ké'ł*), as the sacred name of the owl, *čàhàłxè'ł yìl ná:kéłí* "darkness without the-one-who-comes-gliding(?) -back, the one who comes gliding (?) back

<sup>14</sup> *Ibid.*, Vol. 1, p. 226.

with darkness." The image of gliding is not so apposite here. The simple progressive form, which would be \*yiké·ł "it glides (?) along," is not in use in Navaho. There is nothing to be done with these isolated forms except to see in them survivals of an old set of verbs of movement which perhaps still occur in other Athapaskan dialects.

Turning to Chiricahua Apache, we find the verb stem: imperfective momentaneous -kè· (continuative -ké), perfective -kí, progressive and future -ké·ł, usitative and iterative -ké, optative (evidently transferred from imperfective) momentaneous -kè· (continuative -ké). Its meaning is given as "several run, trot," which is by no means easy to reconcile with the hypothetical "glide" of the Navaho words. If the Navaho and Chiricahua Apache words are historically related, as is indicated by their strict formal parallelism, it must be because each dialect has developed specialized meanings that diverge from a third term. Now the distribution of the meanings of the Northern and Pacific Athapaskan verb stems which are demonstrably cognate to the Southern Athapaskan stems is such as to leave little doubt of what this third term must have been. The following table of stem forms gives a summary of dialectic meanings and of phonetic equivalents for four selected stems of the set:

	<i>Momen- taneous imper- fective</i>	<i>Perfec- tive</i>	<i>Progres- sive</i>	<i>Continua- tive imper- fective</i>
Athapaskan	*-kè·nɣ	*-kén	*-ké·nł	*-ké
1. Ingalik "to travel by canoe"	-kaix	-kan	-kał	
2. Loucheux (ditto)	-kəi	-kə	-ka	
3. Kutchin (ditto)	-kʷəi	-kʷəj	-kʷá·	
4. Carrier (ditto)	-keh	-kei	-kəł	-ke
5. Beaver (ditto)	-ke	-ki	-keł	
	(read -keh?)			
6. Hare (ditto)	-ke		-ke	
7. Chipewyan (ditto)	-kəih	-kì	-keł	
8. Sarsi "to travel by canoe; to go for trade"	-käh	-kí	-káł	
		(-kín- before vocalic suffix)		
9. Ts'ets'aut "to travel by canoe"	-ki·			-ke·
10. Chasta Costa (ditto)				-xe
11. Hupa "to travel by canoe; several objects float"	-xiw	-xiŋ	-xil	-xe·

12. Mattole "to travel by canoe"	-kxi'x	-kxiŋ	-kxi'l (relative form)	
13. Kato "several bathe"				-ke' (transferred from cont. pf., it., and opt.?)
14. Chiricahua Apache "several run, trot"	-ke'	-kí	-ké'í	-ké
15. Navaho (only as survival in obscure forms)	-ké'h	-kí	-ké'í	
	(read -ké'h?)			

The history of the meaning of these verb stems is now reasonably clear. The primary meaning of the Athapaskan verb stems may have been "several objects (*or* persons) move in the water, float" (see Hupa and Kato above), whence "the group travels on the water, to travel by canoe (as one of a canoe-party)." Both meanings are preserved in Hupa. The latter meaning, however, may well have been the primary one. The specific meaning of a group traveling by water seems, under changed environmental conditions, to have taken on a new meaning in Chiricahua Apache ("several run, trot"), though the old plural or collective implication is still preserved. In Sarsi the meaning of "to travel by canoe" is now felt to be rather archaic and to belong to myth and story. The natural meaning today is "to go to trade, to go (by foot or horse-back) in order to shop;" this is developed from "to go by boat (*or* canoe) in order to trade at a Hudson's Bay Co. trading post," itself specialized from the common Athapaskan meaning "to travel by canoe." Here too the gradual passage to a typical Plains life, with little or no use of water craft, has brought about a redefinition of a familiar set of words. The Navaho words seem to stem from an old meaning "to travel by canoe," naturally entirely effaced from tribal memory. A generalized meaning "to float," applying to singular as well as plural subject, cannot be assumed for early Navaho because there is no evidence anywhere in Athapaskan for a reflex of \*-kè'n̄x̄ in the sense of "one person floats" and because all Athapaskan dialects are peculiarly sensitive to the difference between singular and plural forms of verb stems referring to characteristic types of movement. "I become sleepy," in other words, seems originally to have meant "Sleep paddles away from me;" the Owl was ritualistically described as "he who brings Darkness back in his canoe." Such locutions seem to stem from a cultural setting in which travel by canoe was so much a matter of course that it could be transferred to the supernatural world.

The Navaho ná:ké:l̄ "he comes 'gliding' home" (of which ná:ké:l̄ in the sacred name of the owl is the relative form) is contracted from an old Athapaskan progressive \*ná-γ̄č-(dč-)ké:n̄l̄, of which there are exact reflexes in many of the other dialects, e.g., Sarsi ná-γ̄i-kál̄ "he's coming back on a boat, he's returning from shopping;" Beaver na-γa-kił̄ (read -keł̄?) "he is paddling back;"<sup>15</sup> Carrier na-s-keł̄ (contracted from \*ná-γ̄č-š-ké:n̄l̄) "I am again navigating, I am returning by boat;"<sup>16</sup> Ingalik nə-γə-də-kał̄ "he paddles again."<sup>17</sup>

The evidence collected in this paper may now be summarized. (1) It is assumed that there is important external linguistic evidence, distributional in character, to provide a *prima facie* probability of the northern origin of the Navaho and Apache. All the Southern Athapaskan dialects (Navaho, Western Apache, Mescalero and Chiricahua Apache, Jicarilla Apache, Lipan, and Kiowa Apache) obviously form a close-knit dialectic unity which contrasts with the more complex dialectic ramifications of Pacific and Northern Athapaskan. The geographical center of gravity of these languages, in short, lies in the north. (2) If we could find internal linguistic evidence in Navaho, of cultural implications, tending, as it were, to free Navaho and Navaho culture from their present Southwestern environment, the initial probability of a northern provenience would be strengthened. Such supplementary strengthening of an inherently probable hypothesis is suggested by the linguistic analysis of four Navaho words having cultural connotations. The cultural inferences that may be derived from this analysis are: that the gourd was not originally an element of Southern Athapaskan culture; that spoons in this culture were originally made of horn; that broadcast sowing of seed was foreign to the culture; that maize, a staple in historic times, was at one time felt to be an alien food—in other words, that the Southwestern agricultural complex was originally lacking; and that a glimpse, faint but not to be lightly argued away, may be had of a time when the Navaho, or Southern Athapaskans collectively, made use of canoes. (3) All of these inferences deepen, in a historical sense, the cultural gap between the Navaho and the Pueblos. This gap is already given, in a descriptive sense, though in lesser degree, by the modern ethnologic evidence. The first four of the cultural inferences we have listed are theoretically compatible with a non-Pueblo Southwestern cultural setting and, equally, with a

<sup>15</sup> Pliny Earle Goddard, *Beaver Dialect* (Anthropological Papers, American Museum of Natural History, Vol. 10, Pt. 6, 1917), p. 506.

<sup>16</sup> Morice, *The Carrier Language*, Vol. 1, p. 279.

<sup>17</sup> John W. Chapman, *Ten'a Texts and Tales from Anvik, Alaska* (Publications, American Ethnological Society, Vol. 6, 1914), p. 158, 1.1.

more northern setting. The last of these inferences, if valid, points more positively to a northern setting.

"Northern origin" does not in the least imply a direct line of movement from north to south across the Great Basin. Such a line of migration is most improbable. It is far more likely that the movement of these peoples proceeded *via* the western plains. If this is correct, an analysis of Southern Athapaskan culture would aim to reveal four strata: a fundamental northern layer, comparable to the culture of the tribes of the Mackenzie basin; an early western Plains adaptation, more archaic in its outlines than the specialized culture of the Plains as now defined by ethnologists; a first Southwestern influence, tending to assimilate these tribes to the relatively simple non-Pueblo culture of the Southwest; and a second, distinctively Pueblo, Southwestern influence. To these must, naturally, be added a good deal of Navaho specialization on the basis of the Pueblo influence. The disentangling of these various layers is work for the future and, in any event, is hardly likely to be ever more than fragmentary. Meanwhile, the geographical sequence: Chipewyan, Sarsi, Kiowa Apache, Jicarilla Apache, Navaho, may stand as a suggestion of the reality of the historical problem, though, no doubt, the Plains character of Sarsi and Kiowa Apache culture is in each instance of a much later type than the hypothetical Plains influence to be worked out for Navaho cultural antecedents.

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### Editorial Note

Originally published in *American Anthropologist* 38, 224-235 (1936).

A. L. Kroeber called this paper a "matter of virtuosity... Sapir just took out of his head or from scattered literature the particular little bits that he needed and wove them into this masterpiece" (Kroeber 1984: 133).

Contribution to  
Cornelius Osgood, *The Distribution  
of the Northern Athapaskan Indians*

Linguistic Classification within the Northern Athapaskan Area

Linguistic classification within the Northern Athapaskan area is still for the most part extremely uncertain. I am indebted to Dr. Edward Sapir, whose authority is preëminent in this field, for the few statements and tentative suggestions which may be presented at this time. First, it appears certain that there are major linguistic divisions within the Northern Athapaskan area, which are individually equal in comparative weight to the whole Southern, or Pacific, Athapaskan division taken collectively. Linguistically, the difference between Ingalik and Chipewyan, or between Carrier and Sarsi, is as great a contrast as that between Chipewyan and Navaho. Whereas there is apparently a true linguistic unity in both the Southern and the Pacific Athapaskan divisions, the Northern Athapaskan area, as such, does not form a linguistic unit. Secondly, two languages of the Northern Athapaskan group, Kutchin and Tsetsaut, stand out from any further internal [22] alignment as individually distinct, the former being probably the most specialized of all Athapaskan languages. Finally, it seems probable that there are relationships among fifteen other groups which resolve themselves into six divisions beside the two given above. That these eight divisions given below are exactly comparable linguistic equivalents is not to be assumed:

1. Kutchin
2. Tsetsaut
3. Tanaina — Ingalik
4. Carrier — Chilcotin
5. Tahltan — Kaska
6. Sekani — Beaver — Sarsi
7. Chipewyan — Slave — Yellowknife
8. Dogrib — Bear Lake — Hare

Of the remaining eight groups, Koyukon, Tanana, Nabesna, Ahtena, Han, Tutchone, Mountain, and Nicola, nothing is certain concerning their classification. Ahtena may prove to be a distinct division by itself, and it is likely that most of the others are to be consolidated with the divisions numbered above as 3, 5, and 7.

It is greatly hoped that both linguistic and cultural research may be undertaken during the coming decade to bring to more definite conclusions, while still possible, some of the problems which have been mentioned. Such conclusions will have an important and far-reaching effect on the study of the whole of American culture.

## Editorial Note

Excerpt from Osgood, Cornelius, *The Distribution of the Northern Athapaskan Indians*, Yale University Publications in Anthropology 7, 21-22 (1936). Reprinted by permission of Human Relations Area Files.

Cornelius Osgood (1905-1985), an anthropologist who did extensive ethnographic work among Athabaskan groups of Canada and Alaska during the 1930s, was a junior colleague of Sapir's at Yale during the 1930s and had earlier studied with Sapir at Chicago.

Section Seven:  
Penutian Languages



## Introduction

As originally proposed by Dixon and Kroeber (1913), the Penutian linguistic stock encompassed five California groups that had hitherto been separately classified: Wintun, Maidu, Yokuts, Miwok, and Costanoan. In modern discussions of North American linguistic classification Dixon and Kroeber's grouping is referred to as California Penutian, whose status as a unit within a larger Penutian relationship is still an unresolved question (Whistler 1977; Shipley 1980; Berman 1983). The recognition of a wider affiliation of California Penutian, and the extension of the term "Penutian" to the larger relationship, must largely be credited to Sapir. Between 1915 and 1925 Sapir proposed a series of additions to the California kernel, beginning with an Oregon group—limited at first to Takelma, Coos, and Lower Umpqua, but quickly expanded to include Alsea and Kalapuya—then Chinookan, followed by Tsimshian, a Plateau group (Klamath-Modoc, Sahaptian, and Molale-Cayuse), and finally by a cluster of Mexican and Central American outliers. Subsequently, others have used the term Penutian in even broader senses, but Sapir's proposals have remained the point of departure in any discussion of the "Penutian Hypothesis" (as for example in Silverstein 1979 or Greenberg 1987).

Compared with his achievements in the comparative linguistics of Hokan (see Volume V), Sapir's published record in comparative Penutian is a thin one. He wrote only one major paper on Penutian ("A Characteristic Penutian Form of Stem", 1921b), which included no etymological sets or reconstructions. It is fair to say that, for all his interest in historical questions, Sapir's major contributions to Penutian linguistics were descriptive rather than comparative. His Takelma texts and grammar (1909c and 1912h) and his Wishram Chinook texts (1909d) and grammatical synopses (1907c and 1911g in this volume) are the foundational works in the descriptive study not only of these two languages but of Penutian languages generally. Moreover, Sapir's perspective on the diachronic relationship of the Penutian languages was heavily influenced by his detailed knowledge of the synchronic facts of Takelma and Wishram. Any general assessment of Sapir's Penutian work must, then, largely be concerned with his work on these two languages of Oregon.

It was in fact Wishram on which Sapir, as a 21-year-old novice field worker, cut his analytic teeth in the summer of 1905. He had been sent by his teacher, Franz Boas, on funds provided by the Bureau of American Ethnology, to gather data on the upriver dialects of Chinook. "Preliminary Report on the Language and Mythology of the Upper Chinook" (1907c) is

the published version of a paper which Sapir originally delivered shortly after returning from the field, at the December, 1905, meeting of the American Anthropological Association. It is a series of comparisons between the Upper Chinookan (Wasco-Wishram) material that Sapir had collected and the Lower Chinookan data gathered earlier by Boas. For a student's first publication of his own field data it is strikingly self-assured, showing many of the qualities (e.g., meticulous attention to phonetic detail) and concerns (e.g., the relation of linguistic to socio-psychological phenomena, as in consonantal symbolism) of Sapir's mature work. Of particular interest are some historical suggestions that adumbrate the Penutian hypothesis: that a comparison of Upper and Lower Chinookan phonetic systems indicates an original Chinookan homeland east of the Coast Range (p. 535), or that the "puzzling" occurrence in Wishram of locative postpositions reminiscent of case suffixes can be taken to indicate a connection of some sort with Sahaptian and Klamath (pp. 541–542).

In the course of his 1905 work on Wishram Sapir collected an extensive vocabulary, rich grammatical data, and some 30 narrative texts. He published the texts in 1909, together with 25 Wasco texts collected earlier for the Bureau of American Ethnology by Jeremiah Curtin (1909d, in Volume VII). The extent of his material would certainly have allowed him to prepare a full grammatical description had Boas encouraged him to do so. Instead, Sapir was asked only to contribute several illustrative sections of Upper Chinook to the grammar of Lower Chinook that Boas prepared for the first volume of his *Handbook of American Indian Languages* (1911). These sections are reprinted here. Two are expansions of briefer treatments of the same topics in Sapir's 1907 report: "Diminutive and Augmentative Consonantism in Wishram" (cf. 1907c: 537–538) and "Post-positions in Wishram" (cf. 1907c: 541–542). In addition to these relatively self-contained sections, Sapir's contributions to Boas's Chinook grammar also include Section 17, "Modal Elements: 2. *ni-*, 4. *ga-*, 5. *ga-*" (pp. 578–579); Section 44, "Demonstrative Pronouns and Adverbs in Wishram" (pp. 625–626); and Section 45, "Independent Personal Pronouns" (the last five paragraphs of which are Sapir's, paraphrased by Boas; pp. 626–627).

Sapir's second field trip, in the summer of 1906, was to the Siletz Reservation in western Oregon for the purpose of gathering linguistic data on Takelma, a moribund language of unknown affiliation, along with whatever incidental ethnographic information could be obtained. Sapir wrote a full grammar of Takelma for his 1907–09 doctoral dissertation at Columbia University (published as 1912h) and shortly afterwards prepared a volume of Takelma texts for publication (1909c). Both of these works are reprinted in Volume VIII. He also published two papers on Takelma ethnography (1907b, 1907d), reprinted in Volume IV.

Takelma exhibits many of the phonological and morphosyntactic features that have come to be recognized as characteristically Penutian. As early as 1907, when Kroeber's study of Yokuts appeared (Kroeber 1907), Sapir had begun noting structural resemblances between Takelma and certain California languages. It was not, however, until well after Dixon and Kroeber first proposed the Penutian and Hokan relationships in 1913 that Sapir began active exploration of possible genetic links for Takelma. Apparently reading Leo J. Frachtenberg's grammar of Coos (Frachtenberg 1914a) first stimulated Sapir's interest in this work. Sapir's correspondence with A. L. Kroeber reveals that by mid-April, 1915, he had concluded that Coos and Takelma, and possibly some other Oregon languages, formed a "North Penutian" group that had been "cut loose" from the California ("South Penutian") group by the "northern intrusion of Hokan languages" (Golla 1984: 182). He compiled a list of 145 potential cognates among Coos, Takelma, and California Penutian (see Sapir and Swadesh 1953), although his most convincing evidence was grammatical and typological. It was at this time, in all likelihood, that Sapir drafted "A Characteristic Penutian Form of Stem" (1921b), the paper that was to be his only major contribution to comparative Penutian linguistics.

This paper, however, was not completed until 1919, and its publication even further delayed until 1921, so that in part it reflects later developments. Chief among these was the broad expansion of the network of Penutian connections. By late 1915 Sapir had come to believe that "North Penutian" should also include Siuslaw and Chinookan, as well as (more tentatively) Alease, Kalapuya, and Tsimshian (see Golla 1984: 201–203). Leo Frachtenberg, meanwhile, was independently pursuing a similar line of investigation, and in 1918 he published evidence linking Takelma, Kalapuya, and Chinookan, and suggesting (but not claiming) a connection between this group and the California Penutian languages (Frachtenberg 1918). Sapir recast "A Characteristic Penutian Form of Stem" as a reply to Frachtenberg, offering confirmatory evidence of a morphological nature and placing Frachtenberg's comparisons in the context of his own speculations.

Of particular interest to Sapir was the possibility of a relationship between Chinookan and Penutian, not least because it seemed so improbable on the basis of morphological structure. Chinookan is a thoroughly polysynthetic, head-marking language (Nichols 1986) differing radically in this respect from most other Penutian languages, which tend to be dependent-marking, with nominal cases and a rather Indo-European-like distinction between nouns and verbs. For Chinookan to be Penutian it would either have to be assumed that all Penutian languages had originally been head-marking, or that Chinookan had originally been dependent-marking. Sapir saw the latter as the more probable development and believed that certain grammatical differences

between Upper and Lower Chinookan (some of which he had noted in 1907c) indicated a general drift toward polysynthesis. In “A Chinookan Phonetic Law” (1926a), published in 1926 but probably written much earlier, Sapir explores the processes through which a typically Penutian-like clause syntax of pre-Chinookan might gradually have “petrified” into the phonologically close-knit polysynthetic words of attested Chinookan. In this paper—a tour de force of historical argumentation—Sapir musters internal evidence to show that the Chinookan ergative prefixes *g-* (3 sg. masc.) and *č-* (3 sg. fem.) plausibly derive from the post-pronominal element *-g-* that occurs with the ergative prefixes for other persons. This element, in turn, he sees arising out of an accentuated demonstrative particle in the original clause syntax.

Sapir’s proposal that Tsimshian, spoken in northwestern British Columbia, belongs in the Penutian family was a bold step that remains controversial. The idea of such a connection seems to have occurred to Sapir not long after he had collected a small amount of Tsimshian data from a speaker of the Nass River (Nisqa) dialect in February, 1915 (see Sapir’s letter to Kroeber of December 9, 1915 in Golla 1984: 201–202). The nature of Sapir’s evidence remains uncertain, although marginal notes in Sapir’s copies (now in the possession of Professor John Dunn of the University of Oklahoma, who provided copies to the editors) of Boas’s Tsimshian grammar and texts show that he had noted a number of lexical resemblances (see “Sapir’s Comparative Penutian Glosses” in this volume). In a 1917 letter to Kroeber Sapir cited several possible kin-term cognates between Tsimshian and Yokuts (Golla 1984: 242–244), and he again alluded to this evidence (without presenting it) in his paper on “Nass River Terms of Relationship” (1920c: 365, note 1).

Sapir began to explore Mesoamerican linkages to Penutian in the mid-1920s, at the same time that he was noting the possible Hokan affiliation of other languages of that area (see 1925b). In 1924 Kroeber suggested to Sapir that Mixe and closely related Zoque, languages of Oaxaca, were possibly Hokan (Golla 1984: 409). At about the same time Roland B. Dixon independently suggested that Zoque was Penutian (Freeland 1930: 28, note 1). Sapir evidently found Dixon’s evidence more convincing, for he placed Mixe-Zoque and Huave (whose relationship to Mixe had been postulated by Radin in 1919) in a Mexican Penutian group in the classificatory table of his *Encyclopaedia Britannica* article on American Indian languages (1929a: 139). In the same place Sapir also suggested that Xinca (in Guatemala) and Lenca (in Honduras and El Salvador), as well as perhaps Paya and Jicaque (in Honduras), “may be remote southern outliers” of Penutian. Here he followed Lehmann (1920: 767), who had grouped Xinca and Lenca with Mixe-Zoque, although Sapir rejected Lehmann’s further comparisons with Coahuiltecan and Chumash (i.e., Hokan). In the mid-1920s Jaime de Angulo collected more field data on Mixe. His wife, Lucy S. Freeland, used these data to

prepare a paper on "The Relationship of Mixe to the Penutian Family," a draft of which she sent to Sapir for "criticism and suggestions." The paper as published (Freeland 1930) incorporates many of Sapir's comments and suggestions and for all practical purposes is a coauthored work. In addition to ten signed footnotes, Sapir is almost certainly responsible for many of the lexical sets and for the suggested reconstructions. This paper may be considered Sapir's last public statement on comparative Penutian.

During the 1950s Sapir's student Morris Swadesh was the most active scholar in the Penutian field. In addition to his own work, which included a field survey of all surviving Oregon Penutian languages (Swadesh 1954), Swadesh also edited and published, as "Coos-Takelma-Penutian Comparisons" (Sapir and Swadesh 1953), a list of 152 comparative Penutian lexical sets compiled by Sapir around 1915. This is apparently the list mentioned by Sapir in a letter to Kroeber on April 21, 1915 (see Golla 1984: 184–186) and also the data Sapir promised to "present *in extenso* in the future" in "A Characteristic Penutian Form of Stem" (1921b: 59). In his letter to Kroeber, Sapir calls particular attention to the sets involving grammatical elements.

"Sapir's Comparative Penutian Glosses" is a collection of Penutian comparisons that Sapir jotted down in the margins of works on other Penutian languages, and which apparently he never thoroughly collated. A few are contained in the 1915 list (Sapir and Swadesh 1953), but most were probably made subsequently. The original publication of these marginal glosses (Swadesh 1964) contains numerous typographical errors, and the material has been completely re-edited for publication here. Integrated with these glosses are the Penutian marginalia in Sapir's copy of Boas's Tsimshian texts (1912).



## PRELIMINARY REPORT ON THE LANGUAGE AND MYTHOLOGY OF THE UPPER CHINOOK<sup>1</sup>

In the summer of 1905 I was commissioned by the Bureau of American Ethnology to continue the study of Chinookan linguistics and, incidentally, mythology, which had been begun some ten years ago by Professor Boas, and the results of which, so far as published, have appeared in "Chinook Texts" and "Kathlamet texts," both bulletins of the Bureau, and in Dr Swanton's "Morphology of the Chinook Verb" and Professor Boas' "Notes on the Chinook Vocabulary," both of which articles appear in the *American Anthropologist*.<sup>2</sup> This published material deals with the dialects of the Chinookan family spoken at or near the mouth of Columbia river. It was therefore desirable, in order to gain a somewhat more comprehensive idea of the peculiarities of Chinookan grammar, to devote study to the extreme eastern dialects.

The dialect or language to which the following notes refer is that spoken by the Indians formerly living on the northern shore of Columbia river, roughly speaking, from White Salmon river to the Long Narrows. These Indians, who are now on the Yakima reservation, Washington, called themselves *itáxluit*, the 1st per. sing. of which (*itcxluit*, 'I am an Itáxluit') is in all probability the "Echeloot" of Lewis and Clark. They are known by their Yakima and Klikitat neighbors (tribes of the Sahaptian stock) as *Wúcxam*, which, in its anglicized form of Wishram, or Wishham, is their common appellation to-day. The language spoken by them is, to all intents and purposes, the same as that of the Wasco on the other side of the river and of the White Salmon and Hood (or Dog)

<sup>1</sup> Read before the American Anthropological Association at Ithaca, New York, December, 1905. Published by permission of the Bureau of American Ethnology.

<sup>2</sup> Bureau of American Ethnology, Bulletins 20 and 26. *American Anthropologist*, N. S., II, 1900, pp. 199-237, and VI, 1904, pp. 118-147. The phonetic system followed in these works is used in this article. See either Bulletin for the key.

River Indians farther down the stream. More prominent dialectic differences appear when we get as far down as the cascades; the dialect of this locality may be considered transitional between the Wishram and the Clackamas of the Willamette region.

Viewing the Chinookan dialects as a whole, we find that the same general morphological characteristics apply to both Upper and Lower Chinook. In both groups we have the concept of the word as distinct from the sentence clearly developed.<sup>1</sup> Pronominal incorporation of subject, object, and indirect object in the verb; a somewhat elaborate apparatus of pronominal elements and pronouns (including the dual and an inclusive and exclusive in the first person dual and plural); a peculiar method of expressing the possessive pronouns (these are prefixed elements related to the pronoun subjects of transitive verbs); a characteristic use in many cases of invariable particles accompanied by auxiliary verbs instead of the use of verb-stems to express the main idea (as though one were to say in English: "He made the bell ding-dong" instead of "he rang the bell"); a general tendency toward onomatopoesis; the extraordinary phonetic weakness of many of the verb-stems (often consisting of but a consonant or cluster of consonants); local or adverbial prefixes and local and quasi-modal suffixes in the verb; and a thoroughly developed system of grammatical sex-gender (masculine, feminine, and neuter), both in the noun and in the verb—all of these features are shared by both the upper and the lower dialects.

The first important difference between the Wishram and Lower Chinook is found to be in the phonetic systems of the two. Whereas the lower dialects affect on the whole a surd articulation (with pre-

<sup>1</sup> Such a word, for instance, as the Wishram *gatetxcégám*, 'he took them away from the two (women)' (*ga-* = tense sign indicating remote past; *-tc-* = 3d sing. masc. subj. of trans. verb; *-t-* = 3d pl. obj. of undefined gender; *-c-* = 3d dual indirect object of undefined gender; *-x-* = reflexive element indicating that object, *-t-* is possessed by persons referred to by *-c-*, here most easily rendered by 'from'; *-cg-* = verb-stem or "root" meaning 'take'; *-am* = verbal suffix generally denoting 'arriving, coming or going to do something,' but not quite transparent in its application to this verb) must be conceived of as an indivisible unity in the same sense in which a Latin form like *cōnscrīpsī* is an organic unit (not merely *cōn* + *scrīb* + *s* + *ī* as agglutinated elements intelligible *per se*); none of the elements in the given verb-form has any sort of meaning outside of its particular place in such form. In other words, the word and sentence do not flow into one another in Chinookan.

dominance of *p*, *t*, and velar surd *q* over *b*, *d*, and velar sonant *g*), the Wishram is prevailingly sonant in its use of stops. Thus, where the Lower Chinook has *ō'pa*, 'yellow-jacket,' and *an'ō'tēna*, 'I killed them,' the Wishram has *wába* and *indú'dina*. Moreover, the short *u* and *i* of Wishram are generally represented in Lower Chinook by long *ō* and *ē*, as seen in the latter example cited. The peculiar voiceless palatalized *l* (written *ɬ*) of the Pacific coast appears in Wishram without the characteristic stop quality of the Lower Chinook; thus we have Lower Chinook *lōn* 'three,' but Wishram *ɬun*. These phonetic differences, together with a number of local phonetic changes that it is not necessary to go into here,<sup>1</sup> would suffice to give the two groups of dialects a marked acoustic difference. From internal evidence I am very strongly inclined to believe that the phonetics of Wishram represents better than that of the lower dialects the original condition of Chinookan. Inasmuch as the phonetics of Lower Chinook is closely allied to that of the neighboring Coast Salish (such as the Tillamook and Chehalis), the interesting possibility presents itself that the Chinookan tribes were formerly all located east of the Coast range and that some of them, proceeding down the river in their well-built canoes, came to the Pacific coast and there assimilated the phonetic system of their new neighbors. This, however, is confessedly mere speculation, and needs confirmatory evidence.<sup>2</sup>

Leaving aside these phonetic differences, perhaps the most striking morphologic difference is in the treatment of the demonstrative pronouns. Both the upper and lower dialects possess different forms for the various relations of near the speaker, near the person

<sup>1</sup> Characteristic Coast features found in Lower Chinook but not in Wishram are besides: the presence of the voiceless palatal spirant *x* as in German *ich* (Wishram employs instead a voiceless palatal spirant *ɬ* pronounced far forward, yet quite distinct acoustically from *x*, which to Wishram ears sounds like *c*); and the difficulty of distinguishing between *m* and *b* and also *n* and *d*, a characteristic Coast Salish phonetic feature.

<sup>2</sup> Such a movement of the Chinook down the river would satisfactorily explain also the severed position of the Salish Tillamook, in Oregon, who are separated from the linguistically related Chehalis only by Chinookan tribes. Even though all the Salish tribes be of interior provenience, as generally believed, their occupancy of the Pacific coast, including the region directly north and south of the Columbia, may have long antedated the coming to the coast of the Chinook. See A. B. Lewis, "Tribes of the Columbia Valley and the Coast of Washington and Oregon," *Memoirs of the American Anthropological Association*, 1906, 1, pt. 2, p. 198.

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addressed, and near the person spoken of, and both distinguish the three numbers and the three genders of the singular in the demonstrative. Whereas, however, the Lower Chinook further distinguishes between visibility and invisibility of the person or object, no such difference could be observed in the use of the demonstratives in Wishram. Moreover, the principle of formation of the demonstratives is, in detail, quite dissimilar in the two groups. In Lower Chinook the demonstrative is built up of three exceedingly weak phonetic elements: a consonant expressing visibility or invisibility, a vowel or consonant denoting the number and gender of the person or object referred to, and a consonant or two vowels defining the demonstrative relation. In Wishram the principle of formation is simpler; each demonstrative form is built up of two agglutinated syllables, one of which is the short form of a 3d pers. pronoun (defining both gender and number), and the other a characteristic element indicating the demonstrative relation. Speaking generally, the demonstratives in Wishram seem to stand in much closer relation to the personal pronouns than they do in the lower dialects.<sup>1</sup>

Reference was made above to the general tendency toward onomatopoesis in the Chinookan dialects. The impression which Professor Boas had obtained of such a character in his study of the lower dialects was in every way confirmed by my own study of the Wishram. The frequent rhetorical lengthening or shortening of vowels and consonants, the duplication or quintuplication of imitative elements, and the frequent use of onomatopoeic particles in

<sup>1</sup> For convenience of comparison the demonstratives of both Lower Chinook and Wishram are tabulated below. Those in parentheses are the Chinook correspondents of the Wishram forms immediately above:

	Masc.	Fem.	Neuter	Dual	Plural
Near 1st Person	<i>dâuya</i>	<i>dâua</i>	<i>dâula</i>	<i>dâucda</i>	<i>dâuda</i>
<i>hic</i>	{ ( <i>x'ik</i> )	{ ( <i>x'ak</i> )	{ ( <i>x'ikLak</i> )	{ ( <i>x'ictik</i> )	{ ( <i>x'itik</i> )
Near 2d Person	<i>yâxdau</i>	<i>âxdau</i>	<i>tâxdau</i>	<i>cdâxdau</i>	<i>dâxdau</i>
<i>iste</i>	{ ( <i>x'iau</i> )	{ ( <i>x'au</i> )	{ ( <i>x'ila</i> )	{ ( <i>x'icta</i> )	{ ( <i>x'ita</i> )
Near 3d Person	<i>yâxia</i>	<i>âxia</i>	<i>tâxia</i>	<i>cdâxia</i>	<i>dâxia</i>
<i>ille</i>	{ ( <i>x'ix'</i> )	{ ( <i>x'aX</i> )	{ ( <i>x'ôLa</i> )	{ ( <i>x'ôcta</i> )	{ ( <i>x'ôta</i> )
Shortened Pro- nouns in Wish- ram	<i>ya(x)</i>	<i>a(x)</i>	<i>ta(x)</i>	<i>ca(x)</i>	<i>da(x)</i>

The Lower Chinook forms here given are those implying visibility. The corresponding demonstratives used to refer to invisible objects are obtained by changing the initial *x' - lo q -*.

lieu of verb-stems are not the only phenomena which illustrate this onomatopoeitic tendency. Most characteristic of Wishram, and probably of the other Chinookan dialects also, is the employment of a series of changes in the manner and, to some extent, in the place of articulation of the various consonants, in order to express diminution and augmentation. This singular rhetorico-grammatical process works in such a way that all surd and sonant stopped consonants become exploded consonants (better known as "fortis") to express the diminutive idea (i. e. *b* and *p* become *p!*, *d* and *t* become *t!*, *g* and *k* become *k!*), while all surd and exploded consonants become sonant to express the augmentative (i. e. *p* and *p!* become *b*, *t* and *t!* become *d*, *k* and *k!* become *g*, *q* and *q!* become *g*); in the case of the velar consonants a possible change to the "fortis" to denote the diminutive is attended also by a more forward, i. e. palatal, articulation (i. e. *g* and *q* become, not *q!*, but *k!*). Moreover, the sibilant consonants *c*, *tc*, and *tc!* on the one hand, and *s*, *ts*, and *ts!* on the other, are related to each other as augmentative and diminutive consonants, while *dj* may sometimes, though rarely, be employed as the augmentative grade of *tc* and *ts* (e. g., *idjik-*) *djik* 'big wagon,' from *itsiktsik* 'wagon.' The guttural spirant *x* becomes *x* in the diminutive form. Subjoined are a few illustrations for the purpose of making the process more easily understood. The normal word in Wishram for 'hip-joints' is *ck!álkal*. The diminutive of this word is *sk!álkal*, in which, it will be noticed, the *c* of the first word has been changed to *s* in consonance with our rule. The word *sk!álkal* would be appropriately used to designate a baby's hip-joints, for instance. On the other hand the augmentative would require a change of the fortis *k!* to a sonant *g* — hence *cgálkal* is used to denote 'big hip-joints,' as of a giant. Similarly, while *aq!óxt* with velar fortis (*q!*) is the normal word for 'knee,' *ak!úxt* with palatal fortis (*k!*) and guttural spirant pronounced farther front (*x*) is the diminutive, and *aqóxt* with sonant velar (*g*) the augmentative. Not infrequently there is a slight change of meaning accompanying the phonetic change. Thus, while *itc!í' nôn* (masc.) denotes 'eagle,' *it!s!í' nôn* (neut.) with diminutive consonantism means 'bird'; *ik!álamat* denotes 'stone,' but *igálamat* with augmentative consonantism means 'rock.' It

must not be supposed that this characteristic consonant-gradation is confined to the noun; it is found just as well in every other part of speech. An example of its use in the verb will serve to give an idea of its rhetorical possibilities. *InigÉltsim* is the normal word for 'I struck him with it.' If the verb-stem *-tsim* appears, with diminutive consonantism, as *-tsim*, it implies that the person struck is small; if the verbal prefix *-gÉl-*, which implies in this case intent to hit, is pronounced *-kÉl-*, the implication is that the missile used is a small one. Hence we have four forms: *inigÉltsim* 'I hit him with it,' *inigÉltsim* 'I hit him (a child perhaps) with it,' *inikÉltsim* 'I hit him with it (something small),' and *inikÉltsim* 'I hit him (a child) with it (something small).' It would seem then necessary, so far as Chinookan grammar is concerned, to allow as a regular grammatical process, alongside of reduplication, vowel change or "ablaut," and pre-, in-, and suffixation, a fourth process — consonant-gradation or "ablaut."

Turning again to morphology, there was one feature which was well calculated to arouse a certain degree of surprise. The work which had been done on Lower Chinook disclosed a paucity of tenses that is, on the whole, quite in accordance with the general morphologic character of many American linguistic stocks. In Wishram, however, I found that it was necessary to distinguish carefully six tenses: 1st, a tense characterized by the prefix *ga-* (before consonants) or *gal-* (before vowels) in certain cases optionally by the prefixed consonant *n-*, which refers to time long past, say more than one year ago, and which is used regularly in the recital of myths; 2d, a tense characterized by the prefix *ni-* (before consonants) or *nig-* (before vowels), used to refer somewhat indefinitely to time past and which is used in speaking of events that happened say less than a year ago, yet more than a couple of days; 3d, a tense characterized by prefixed *na-* (before consonants) or *nal-* (before vowels) and suffixed *-a*, which seems to refer to recent time exclusive of to-day, more specifically to yesterday; 4th, a tense characterized by prefixed *i-* (before consonants) or *ig-* (before vowels), which refers to an action already performed to-day; 5th, a tense characterized normally by suffixed *-t*, referring to an action now going on but, as it seems, with the implication of its soon being

completed; and 6th, a future tense, normally characterized by prefixed *a-* (before consonants) or *al-* (before vowels) and suffixed *-a*.<sup>1</sup> Besides this series of six positively characterized tenses, I should not omit to mention that some verbs, when referring to present time, are morphologically tenseless, and seem to form their immediate past tense by a verbal prefix *-t-* which ordinarily denotes action toward the speaker.<sup>2</sup>

In this connection I may also mention a group of verb-forms which are characterized by the consonant *l* (assimilated in nasal surroundings to *n*) suffixed or infixd to the verb-stem, sometimes by *-lal* (or *-nan*) suffixed to the verb-stem. These forms denote frequentative or continuative action and, as a rule, do not allow the verb to be further characterized by a tense element. They may then, from a certain point of view, be considered as forming a seventh tense — the present tense with no implication of completion.<sup>3</sup> The most interesting point about these *l*-frequentatives is

<sup>1</sup> Examples —

TENSE:	<i>ga</i> -FORM	<i>ni</i> -FORM	<i>na</i> -FORM
	{ <i>gayúya</i> 'he went'	{ <i>niyúya</i>	{ <i>nayúya</i>
	{ <i>galúya</i> 'she went'	{ <i>niǵúya</i>	{ <i>nalúya</i>
	<i>gacigélkel</i> 'he saw him'	<i>nitcigitkel</i>	<i>natcigélgela</i>
	<i>galixux</i> 'he became'	<i>nigixatx</i>	<i>nalixúxwa</i>
	<i>gacgnúx</i> 'they two did to me'	<i>nicgnátx</i>	<i>nacgnúxwa</i>
	<i>i</i> -FORM	PRES. <i>t</i> -FORM	FUT. <i>a</i> -FORM
	{ <i>iyúya</i>	{ <i>yúit</i>	{ <i>ayúya</i>
	{ <i>iǵúya</i>	{ <i>úit</i>	{ <i>a/úya</i>
	<i>itcigélkel</i>	( <i>tssik!Elutkt</i> ) 'he looks at him'	<i>atcigélgela</i>
	<i>igixux</i>	—————	<i>alixúxwa</i>
	<i>icgnúx</i>	<i>cgnuxt</i>	<i>acgnúxwa</i>

<sup>2</sup> Thus *ixt* (= *a + u + xt*) means 'she is seated,' but 'she was sitting' is rendered by *áixt*, in which the prefix *-u-* has been changed to *-t-*. Cf., for this interchange, *húgwat* 'they fly (away from me)' and *húgat* 'they fly toward (me).'

<sup>3</sup> Such frequentative forms are :

WITH TENSE-SIGN	FREQUENTATIVE
<i>gatsánbnaǵ</i>	<i>tksanbnanǵ</i>
'they jumped in the water'	'they keep jumping in the water'
	(verb-stem <i>bna-</i> )

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that certain verb-stems apparently infix the *l* or *n*. If our English word 'look,' e. g., were also a Wishram verb-stem, 'he looked at it' would be *itciülook*, but 'he keeps looking at it' would probably be *tciiülook*.<sup>1</sup> I pass over many other verbal peculiarities, such as the distributive suffix *-yu* (*alxk!wáya* 'we shall go home,' but *alxk!wáyuwá* 'we shall go each to his own home') or the passive suffix *-ix* (*itciülxum* 'he ate it up,' but *yulxúmix* 'it is eaten up') to mention the considerable difficulty experienced in analyzing the noun, apart from its syntactic elements which are transparent enough.

The pronominal elements prefixed to the noun (every noun is either masculine singular, feminine singular, neuter singular, dual, or plural) are in Lower Chinook identical with the pronominal object elements incorporated into the transitive verb, except for the feminine singular, which in the noun shows *ō-* (from original *wa-*) as compared with *-a-* in the verb. In Wishram, however, the noun has prefixed a pronominal element differing from the corresponding element in the verb by an initial *w-* (masc. and fem.) or *i-* (neuter, dual, and plural). The following table shows the corresponding elements :

	NOUN IN WISHRAM	NOUN IN CHINOOK	OBJ. IN WISHRAM VERB
masc.	<i>wi-, i-</i>	<i>i-</i>	<i>-i-</i>
fem.	<i>wa-, a-</i>	<i>ō-</i>	<i>-a-</i>
neut.	<i>it-</i>	<i>L-</i>	<i>-l-</i>
dual	<i>ic-, (is-)</i>	<i>c-, (s-)</i>	<i>-c-, (-s-)</i>
pl.	<i>id-</i>	<i>t-</i>	<i>-d-</i>
	<i>gatssúbena</i>	<i>tssubénanan</i>	
	'he jumped'	'he keeps jumping'	
	<i>gatccinq!wō'tgunaba</i>	<i>tcinq!wō'tk<sup>n</sup>naup<sup>t</sup></i>	
	'he grasped him with his claws'	'he scratches him'	
	<i>gakdúgwiptck</i>	<i>kdúgwi/ptck</i>	
	'she gathered driftwood'	'she keeps gathering driftwood'	
	<i>gayúkwa</i>	<i>yugwálat</i>	
	'he flew'	'he flies about'	

<sup>1</sup> Some examples of this phenomenon are :

WITH TENSE-SIGN	FREQUENTATIVE
<i>galixpeut</i>	<i>ixpcúlit</i>
'he hid himself'	'he is hiding himself'
<i>gatciucit</i>	<i>tciciúit</i>
'he used it'	'he keeps using it'
<i>ksi'nk!itk<sup>t</sup></i>	<i>ksink!idE/k</i>
'she looks at me'	'she keeps looking at me'

(verb-stem *tk-*)

The choice between *wi-* *wa-* and *i-* *a-* in Wishram is dependent chiefly upon considerations of syllabic length: *wilx* 'land' (cf. Chinook *ilé'è*), but *igánuk* 'beaver'; *wámal* 'marrow' (cf. Chinook *ó'mala*), but *agagílak* 'woman.'

It had been hoped that some light would be thrown on the derivative elements of the noun, but it cannot be claimed that all desirable success was attained in this direction. Perhaps the most transparent derivative elements that were found are the suffixes *-lít* and *-mat*. The former of these seems to denote a group, particularly a grove of trees. Thus the word *ilíbum* 'apple' (borrowed, of course, from the French *la pomme*) forms the derivative noun *ilíbúmElít* 'orchard.' The suffix *-mat* is perhaps best defined as denoting 'something used for so and so.' For instance, *isqxús* denotes 'the eyes,' *isqxúsmat* means 'something for the eyes,' i. e. spectacles.<sup>1</sup> An interesting group of nouns is formed by descriptive verb phrases, such nouns being in effect pure verb forms. The loon, e. g., is described as 'he shouts along the river' (*tci-ilúmat wímat*), and 'telescope' is rendered by 'people keep looking through it' (*qēxgÉlgēlim*).

The most puzzling linguistic phenomenon found in Wishram, because it is at complete variance with what we have in the lower dialects, is the use of a certain number of loosely tagged on postpositions, in some cases optionally prepositions. We have a suffix *-ba* denoting 'in' or 'at,' a suffix *-iamt* meaning either 'towards,' or 'from,' a suffixed or prefixed element *báma* meaning 'for,' the post- or pre-positions *ámEni* and *ÉnEgi* meaning 'with' or 'made out of,' and an element *-bÉt*, meaning 'when,' suffixed to verb forms.<sup>2</sup> The

<sup>1</sup> Further examples of this suffix are: *igíctxmat* 'load' (from verb-stem *-ctx* 'to carry on one's back'); *itk'icitmat* 'tools' (verb-stem *-cit* 'to use'); *ak'ixwácamat* 'plane' (verb-stem *-xwac* 'to plane').

<sup>2</sup> The following examples illustrate the use of these elements with nouns, pronouns, and verbs:

*ba*: *wimatba* 'in the river'; *dáuyaba wílX* 'in this country' (lit. 'this-in country'); *gacigÉlkelba* 'where he saw him' (*gacigÉlkel* 'he saw him').

*iamt*: *wimajíamt* 'to or from the river'; *imigáit naikáyamt* 'you are bigger than I' (lit. 'your bigness [is] me-from, compared with me'); *átpXiamd agátax* 'to where she goes out towards [us] (*átpX* 'she goes out towards'), the sun,' i. e. 'east.'

*báma*: *cán bama* 'for whom?'; *Múlmul bama* 'from, belonging to Fort Simcoe.'

*ámEni*: *igábEnac amEni* 'made out of young oak.'

*ÉnEgi* (*ngi*): *aq!é'wiqxi ngi* 'with a knife.'

*bÉt*: *gayuyabÉt* 'when he went'; *nk'áckacbÉt* 'when I was a child.' In lengthened form *bā't* it means 'as soon as': *gayuyabā't* 'as soon as he went.'

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extent of pronominal incorporation of indirect objects and the use of local or relational prefixes in the verb are such in the Chinookan dialects that the employment of these local tags (one might be inclined to call them "cases," if they had less individuality) seems quite unnecessary. It is of considerable theoretic importance, therefore, to note that the neighboring Sahaptian dialects, quite similarly to the Klamath, make an extended use of such case-suffixes. We would then have here a good example of the *grammatic*, not merely lexical, influence that dialects of one linguistic stock may exert on geographically contiguous dialects of a fundamentally distinct stock.<sup>1</sup>

In conclusion a few words may be devoted to the mythology of the Upper Chinook. I have not as yet enough texts of myths to present a really complete description of the mythologic concepts and elements present in the tales of the Wishram, but some of the main points seem patent enough. As in other Indian mythologies it is believed that there was a time antedating the present one when animals walked about as men, though having approximately the same mental and, to a large extent, physical characteristics as now. At that time, when there were no Indians, properly speaking, in the country, but only anthropomorphic animals, many things were not as they should be, and, in order to make the country fit for habitation by the Indians destined to hold it, it was necessary for a culture-hero or transformer to rectify the weak points in creation. This transformer is, as in the plateau regions to the east, the Coyote. There is a cycle of myths made up of local tales telling how Coyote traveled all the way up the Columbia river, transforming monsters and instructing the people in the various arts of life. This string of local tales is, if I am not mistaken, continued in unbroken succession by the Sahaptian tribes living farther up the river, so that we have here a series of myths, belonging together yet distributed over a large number of different tribes. Some of the things that Coyote does are: to stock the Columbia with fish that had been withheld from the rest of the world by two women; to transform two women, who entice wayfarers, into birds; to provide the people of the

<sup>1</sup> Of the postpositive elements given above, three, *bâma*, *ÉnEgi*, and *ámEni*, are certainly of Sahaptin origin, probably also *-ba* (cf. Yakima *-pa* 'in'). This explains their entire absence in Lower Chinook.

Cascades country with mouths that had formerly been lacking ; to instruct men in the art of catching white salmon in basket traps and of spearing and steaming salmon ; to put an end to the atrocities of the merman who swallows canoes with men and all, and of the dread woman, Atlatláláia, who steals children and roasts them on an island still pointed out at the Long Narrows ; and so on. In all this Coyote is distinctly the benefactor of mankind, but at the same time he is, as often elsewhere, conceived of as cunning, deceitful, and gluttonous. In some stories, particularly in such as do not belong to the cycle of Coyote as Transformer, he is an insufferable marplot, as when he, contrary to Eagle's injunction, opens a box containing the souls of his and Eagle's wife and son, thus bringing death into the world. At the same time he is indescribably obscene ; some of the deeds of this kind performed by the culture-hero of the Tillamook, as communicated by Professor Boas, are also told by the Wishram of him. Although Coyote is the main transformer, I think it would be incorrect to speak of him as the hero of the Wishram. This point comes out clearly when Coyote himself, in one of the transformation myths, admits that he is no chief, that title being reserved, among the animals, for the Eagle and the Salmon. These two may, indeed, be considered the true heroes of Wishram myth, their deeds being narrated with considerable sympathy and admiration. The Salmon, in particular, may be described as the local hero of the Chinookan tribes, an elaborate salmon myth being common to both the Lower Chinook and the Wishram. I cannot say definitely whether Bluejay, who figures so prominently as buffoon among the coast tribes, such as the Kathlamet and Quinaiult, occupies a corresponding position among the Wishram. So far as the material collected is concerned, he is quite a subordinate character, and I suspect that he is almost entirely superseded by Coyote. The mischievous and spiteful elements of his character, as of the Mink of more westerly and northerly regions, are embodied also in the Weasel.

Besides the main type of myth — i. e. the Transformer or Culture-hero myth, one can discern also a species of nature myth that is somewhat different in character. This type is represented, e. g., by the tale of the contest between the East Wind and the West

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Wind, in which the latter proves successful. Another example of this type is the struggle of the five East Wind brothers with the five Thunder brothers, resulting in the death of all but one of the latter, which exception accounts for the existence of a certain amount of thunder to-day.

The single myth motives of Wishram mythology are many, probably most of them, found distributed over considerable areas elsewhere. Such well-known incidents as the magic increase of a small amount of food, the blundering imitation of the host, the life and death contest at gambling bones, the unsuccessful attempt to destroy strangers in an overheated sweat-house, the abandonment and later enrichment of a poor boy while his maltreaters are starving — all these and many others are common property of the Northwest Pacific coast and regions to the east and south, though the setting in which they occur may vary indefinitely. On the whole, the chief interest of Wishram mythology seems to lie in its transitional character between the mythologies of the coast and of the plateau. Although it shares, as we have seen, a local and specifically Chinookan salmon myth with the Lower Chinook, many of the myth motives are not duplicated farther down the river, but are found in other regions, such as the plateaus. Here again we observe that linguistic and cultural, more specifically mythologic, distribution areas are by no means necessarily congruent.

### Editorial Note

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## Contributions to Franz Boas, Chinook

### Diminutive and Augmentative Consonantism in Wishram [638]

Very characteristic of Wishram, as also without doubt of all other Chinookan dialects, is a series of changes in the manner, and to some extent in the place, of articulation of many of the consonants, in order to express diminutive and augmentative ideas in the words affected. This peculiar process of "consonantal ablaut," though perhaps most abundantly illustrated in the case of the noun, is exemplified in all parts of speech, so that it has almost as much of a rhetorical as of a purely grammatical character. Of the two series of consonantic changes referred to, that bringing about the addition to the meaning of the word of a diminutive idea is by far the more common, an actual change to augmentative consonantism hardly being found outside of the noun. The main facts of consonantic change may be briefly stated thus: To express the diminutive, non-fortis stopped consonants become fortis, the velars at the same time becoming back-palatals (the treatment of velar stops, however, seems to be somewhat irregular); *c* and its affricative developments *tc* and *tc!* become *s*, *ts*, and *ts!* (*s* seems sometimes to be still further "diminutivized" to *ts*, *ts* to *ts!*, so that *c*, *s*, *ts*, *ts!* may be considered as representing a scale of diminishing values); *x* becomes *x̄*, in analogy to the change of velar stops to back-palatal stops just noted; other consonants remain unmodified. To express the augmentative, fortis consonants become non-fortis (generally sonant) stops, no change taking place of back-palatal to velar; *s*, *ts*, and *ts!* become respectively *c*, *tc*, and *tc!* (in some few cases *ts* and *tc* fricatives become *dj*, pronounced as in English judge, this sound not being otherwise known to occur in Wishram); other consonants remain unmodified. [639] The following table of consonantic changes will best make the matter clear:

<i>Normal</i>	<i>Diminutive</i>	<i>Augmentative</i>
<i>b, p</i>	<i>p!</i>	( <i>b</i> )
<i>d, t</i>	<i>t!</i>	( <i>d</i> )
<i>g, k</i>	<i>k!</i>	( <i>g</i> )
<i>g, q</i>	<i>k!</i> , ( <i>g, k</i> )	( <i>g</i> )
<i>qx</i>	<i>kx̄</i>	( <i>g</i> )
<i>q!</i>	<i>k!</i> , ( <i>kx̄</i> )	( <i>qx</i> )
<i>p!</i>	( <i>p!</i> )	<i>b</i>
<i>t!</i>	( <i>t!</i> )	<i>d</i>
<i>k!</i>	( <i>k!</i> )	<i>g</i>
<i>c</i>	<i>s, ts</i>	( <i>c</i> )
<i>tc</i>	<i>ts</i>	( <i>tc</i> ), (?) <i>dj</i>
<i>tc!</i>	<i>ts!</i>	( <i>tc!</i> ), <i>dj</i>
<i>s</i>	( <i>s</i> )	<i>c</i>

<i>Normal</i>	<i>Diminutive</i>	<i>Augmentative</i>
<i>ts</i>	( <i>ts</i> ), <i>ts!</i>	<i>tc</i> , <i>dj</i>
<i>ts!</i>	( <i>ts!</i> )	<i>tc!</i> , (?) <i>dj</i>
<i>x</i>	<i>x̣</i>	( <i>x</i> )
<i>x̣</i>	( <i>x̣</i> )	(?) <i>x</i>

On the whole, there is a distinct tendency to have all the consonants of a word bear a consistent diminutive or augmentative coloring, though absolute concord in this regard is by no means always observed. In general it may be said that *c* and *s* sounds are most easily varied in accordance with our rule. Final non-affricative stops seem incapable of change. It often happens that the normal form of a word is itself partly diminutive in form owing to its meaning; in such cases the form may be still further "diminutivized" if it is desired to give the word a more than ordinarily diminutive force. Thus *-k!ac-* in *it-k!a'c-kac* 'child' is evidently a semi-diminutive form of the stem-syllable *-kac*; 'little child, baby' appears in more pronouncedly diminutive form as *itk!a'skas* (Wishram Texts 176.3).

The following table of body-part nouns will serve as a set of examples of diminutive and augmentative forms. The diminutives would naturally refer to the body-parts of a tiny child, the augmentatives to those of an abnormally large being, as a giant.

<i>Normal</i>	<i>Diminutive</i>	<i>Augmentative</i>
<i>i-p!a'qxa</i> 'flat-headedness' ( <i>dim.</i> )		<i>i-ba'qxa</i>
<i>i-gEtc</i> 'nose' (aug.)	<i>i-k!Etc</i>	
<i>i't-pc</i> 'foot' [640]	<i>i't-ps</i>	
<i>i-qxwi't</i> 'leg'	<i>i-khwi't</i>	
<i>a-q!o'xt</i> 'knee'	<i>a-k!u'xt</i>	<i>a-go'xt</i>
<i>a-mE'luqtan</i> 'cheek'	<i>a-mE'luk!tan</i>	
<i>i-mE!Extk!u'lamat</i> 'tongue'		<i>i-mE!Extgu'lamat</i>
<i>i-mi'ct</i> 'lips'	<i>i-mi'st</i>	
<i>i-k<sup>u</sup>cxa't</i> 'mouth'	<i>i-k!<sup>u</sup>sxa't</i>	
<i>wa'-kcEN</i> 'finger'	<i>wa'-ksEN</i>	
<i>is-qxu's</i> 'eyes (dim.)'		<i>ic-qxu'c</i>
<i>id-mE'qco</i> 'face-hair'	<i>id-mE'kso</i>	
<i>i-k!wa'yat</i> 'crown of head'		<i>i-gwa'yat</i>
<i>a-tckEN</i> 'shoulder'	<i>a-tsk!E'n</i>	
<i>wa-qxa'tc</i> 'breast'	<i>wa-kxa'ts<sup>1</sup></i>	
<i>i-kxa'tc</i> 'tooth'	<i>i-k!a'ts</i>	
<i>i-q!a'qctaq</i> 'head'		<i>i-ga'qctaq</i>
<i>ic-k!a'lkal</i> 'hip-joints'	<i>is-k!a'lkal</i>	<i>ic-ga'lkal</i>
<i>is-q!wá'gwōst</i> 'jaws (dim.)'	<i>is-k!wa'gwast</i>	
<i>a-mu'q!wal</i> 'paunch, stomach'		<i>a-mu'gwal</i>

1. Cf. *wa-q!a'tc* 'thorn', dim. *Wa-kxa'ts* (Wishram Texts, p. 261).

Examples of other than body-part nouns are:

<i>Normal</i>	<i>Diminutive</i>	<i>Augmentative</i>
<i>it-q!u'tcu</i> 'bones'	<i>it-q!uts'iē'txlEm</i> 'dog' (literally, eater of small bones)	
<i>i-tc!i'au</i> 'snake'	<i>i-ts!i'au</i>	<i>i-dji'au</i>
<i>i-tsi'ktsik</i> 'wagon (dim.)'	<i>is-ts!i'ktsik</i> 'buggy'	<i>i-dji'kdjik</i> 'heavy truck'
<i>i-cgi'lukc</i> 'wolf (aug.)'	<i>it-sk!i'lukc</i> 'new-born wolf' cub (Wishram Texts 56.30)	
<i>da-ga'c</i> 'yellow'	<i>a-qx-k!i'c</i> 'gold'	
<i>i-cga'n</i> 'cedar board'	{ <i>wa-ska'n</i> 'box' <i>wa'-tsk!un</i> 'cup'	
<i>i-k!a'lamat</i> 'stone'		<i>i-ga'lamat</i>
<i>a-k!a'munaq</i> 'fir'		<i>a-ga'munaq</i>
<i>it-k!a'ckac</i> 'child (dim.)'	<i>it-k!a'skas</i>	
<i>a-t!u'-gagilak</i> 'good, strong woman'		<i>a-du'-gagilak</i> 'strapping big woman'

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In these lists, (dim.) and (aug.) mean that the words so designated are wholly or partly diminutive or augmentative in consonantism owing to their primary significance. In *i-p!a'qxa*, for instance, the diminutive notion implied by *p!* is easily understood if we remember that head-flattening is associated with infancy. In some cases a consonant change involves or is accompanied by a vocalic change; it seems that the change of *a* to *u* or *E* has in itself more or less diminutive force (cf. *wa'-tsk!un* from *wa-ska'n* with *ita-k!ō'its* 'very little' [Wishram Texts 176.3] ordinarily *-k!aits* 'small'). The case of *i-cga'n* as compared with *wa-ska'n* and *wa'-tsk!un* illustrates the fact that the diminutive form of a noun often has a specialized meaning of its own. A few more examples are:

<i>Normal</i>	<i>Diminutive</i>
<i>i-tc!i'nôn</i> 'eagle'	<i>it-ts!i'nôn</i> 'bird'
<i>i-tc!i'laq</i> 'cricket'	<i>i-ts!i'laq</i> 'grasshopper'
<i>i-q!apca'lwac</i> 'turtle'	<i>is-k!a'psalwas</i> 'lock (of door)'
<i>a-tca'la</i> 'grindstone'	<i>a-tsa'la</i> 'file'

It will be observed that several nouns on becoming diminutive in form at the same time change to a more suitable gender, masculines often becoming feminines (e.g., *wa-ska'n*), neuters (e.g., *it-sk!i'lukc*), or diminutive duals in *is-* (e.g., *is-k!a'psalwas*). Most examples of diminutives and augmentatives hitherto given have been formed from nouns that in themselves have no necessary diminutive or augmentative force. Other examples than those already given of

words with inherent diminutive force, and hence with at least partial diminutive consonantism, follow:

- a-k!u'ksk!uks* 'ankle'  
*a-p!u'xp!ux* 'elbow-joint'  
*i-p!u'xc* 'cotton-tailed rabbit'  
*a-!antsa* 'crow' (contrast *i-cka'lax* 'raven')  
*i-sk!u'lya* 'coyote' (? cf. *i-cgilukc* 'wolf')  
*a-gu'sgus* 'chipmunk'  
*a-p!una'tSEktSEK* 'mosquito' (? cf. - *bEna* 'jump')  
*is-ga'k!aps* 'hat'  
*i-k!a'uts* 'smallness' (contrast -*gait* 'bigness')  
*i-k!a'stila* 'crab'  
*it-xan* '(somebody's) child'  
*i-sk!wô'latsîntsîn* 'swallow'  
*wa-tsk!E'nLx* 'nit'

Particularly instructive as indicating a live feeling for diminutive consonantism are such words as *a-lik!u'k* 'chicken' and *a-lap!u's* 'cat' borrowed from Chinook jargon (*p* in *-pus* would not be consistent [642] with diminutive *s*). It is perhaps not too far-fetched to recognize augmentative consonantism in the following nouns:

- i-ga'nuk* 'beaver'  
*i-gu'nat* 'Chinook salmon' (contrast *wa-tsu'iha* 'blue-black salmon')  
*i-cE'lqCElq* 'porcupine'  
*ic-ga'kwal* 'eel'  
*i-du'iha* 'buffalo'  
*ic-kcku'ct* 'testicles' (contrast *is-qxu's* 'eyes')  
*i-gu'cax* 'sky'  
*ic-gwô'lala* 'gun'  
*wa'-itc* 'tail of mammal'  
*ic-li'ct* 'fish-tail' (contrast *is-p!i'ost* 'tail of bulb, dried fish')

It sometimes happens that a change to diminutive consonantism implies not so much the diminutiveness of the object referred to as a sense of endearment. This seems particularly true in the case of certain terms of relationship:

*Non-diminutive*

- qCE-n* } 'man's son's  
*ga'c-u* (vocative) } child'  
*-gak-an* } 'man's daughter's  
*ga'g-u* (vocative) } child'  
*-gi-an* 'woman's son's child'

*Diminutive*

- k!a'c-u-c* 'paternal grandfather'  
*-ga'k!-u-c* 'maternal grandfather'  
*-k!i-c* 'paternal grandmother'

Interesting as examples of augmentative consonantism are the names of Coyote's four sons, all of which are derived from words denoting body-parts of the salmon. The augmentative consonantism implies the lubberliness of Coyote's sons.

<i>Body-parts of salmon</i>	<i>Names of Coyote's sons</i>
<i>i-k!la'tcin</i> 'salmon-head gristle'	<i>Sipa'-glatsin</i> 'Big Gristle' (Wishram Texts 66.5)
<i>i-ksa'lk!uts</i> 'backbone of fish'	<i>Sipa'-ksalguts</i> 'Big Backbone' (Wishram Texts 66.6)
<i>i-q!wi'nān</i> 'fin'	<i>Sapa'-gwinan</i> 'Big Fin' (Wishram Texts 66.7)
<i>a-k!a'tk<sup>u</sup>tgwax</i> 'adipose fin' (? better <i>-q!a'tk<sup>u</sup>tgwax</i> )	<i>Sapag-a'tk<sup>u</sup>tgwax</i> 'Big Adipose Fin' (Wishram Texts 66.8)

As has already been remarked, the noun is not the only part of speech that illustrates the consonantal play here discussed. Adverbs and particle verbs of appropriate meaning sometimes show diminutive consonantism: *ts!u'nus* 'a little'; *sāk!* 'to whistle'; *sa'u sau* 'to whisper' (contrast Lower Chinook *cāu*); Lower Chinook *k!a* 'and' may be diminutive to *ka*. The diminutive form of a particle verb denotes a less intense state of being or activity than its correlative form. Sometimes its meaning is considerably specialized: [643]

<i>Non-diminutive</i>	<i>Diminutive</i>
<i>tċic</i> 'cold'	<i>(ts!u'nus) a-itsā's</i> 'just (a little) cool' (Wishram Texts 190.15)
<i>ma'ca</i> 'to spoil'	<i>ma'sa</i> 'to be ashamed'
<i>gut</i> 'to break up (earth) by digging'	<i>k!u'tk!ut</i> 'to pluck'
Possibly also:	
<i>wax</i> 'to pour out'	<i>wax</i> 'to set on fire; to bloom'
<i>lq!up</i> 'to cut'	<i>tk!up</i> 'to shoot'

The dual in *is-* is not the only example of a diminutive form of a purely grammatical element. The diminutive stem *-q!wa'lasup* 'fast running' occurs with possessive prefixes showing diminutive consonantism. Thus the normal elements *-tca-* 'her' and *-cda-* 'of them two' appear as *-tsa-* and *-st!a-* in *i-tsa-q!wa'lasup* 'she runs fast' (Wishram Texts 66.9) and *i-st!a-q!wa'lasup* 'they two run fast' (Wishram Texts 66.13). Similarly, in a song (Wishram Texts 94.23), where the reference is to *is-p!i'ast* 'tail of bulb', a noun of diminutive form, the pronominal element *cd-* and the post-positive local element *-ba* appear as *-st* (? better *st!-*) and *-p!a*. Thus:

*staimap!ā' giskip!i'ast* 'it-alone-at the-my-tail'

Finally the verb may show diminutive consonantism, partly in the stem itself, partly in its local and adverbial prefixes and suffixes, partly and most frequently

in its pronominal prefixes. Examples of verb stems in distinctly diminutive form are not exactly common, but certain cases seem clear enough. Thus *gaqiutal!a'ulx* 'he was tossed up' (Wishram Texts 84.26) and *gatciutat!a'mElq* 'he swallowed him by sucking him in' evidently contain a diminutive form of the verb stem *-tada-* 'to throw away'; *silu'skwax* 'it trembles' (Wishram Texts 116.10) and *gasi'ximk!na-uk<sup>u</sup>atsk* 'he looked around' (Wishram Texts 30.6) show diminutive consonantism both in their stems (*-skw-* and *-k!na-u-*) and in their first incorporated pronominal objects (dual *s-*), the latter verb also in its adverbial suffix *-tsk*, doubtless the diminutive form of *-tck* 'up from position of rest'; *gats(s)altsgi'ma* 'he laid her belly up' (Wishram Texts 56.27) shows diminutive consonantism in both stem (*-tsgi*) and incorporated pronominal subject (*-ts-*) and first object (dual *s-*).

We have already given *-tsk* as an example of a derivative suffix with diminutive consonantism. Other such suffixes are *-p!a* 'slightly out (of position)' (from *-ba* 'out') in *ayulap!a'tcguxwida* 'it will tilt up', literally 'it will spontaneously move out up from its sitting [644] position' (Wishram Texts 184.10) and *tsu* (from *-tcu* 'down') in *itilu'stsu* '(water) moved down into the (hollow place)'. As examples of diminutive forms of local prefixes may be given *-k!El-* (from *-gEl-* 'directed toward') in *ga-tssi'k!Elutk* 'he looked at him' and its reflexive correlative *-xEl-* (from *-xEl*) in *gasi'xElutk* 'he looked'; *-sk!EM-* 'under' in *iniask!Emla'datcu* 'I threw it down under her' is doubtless diminutive to *-gEM-* 'next to' (cf. *-tcu* and *-s-tsu* above).

The only examples of diminutive consonantism in the pronominal prefixes of verb forms occur in the case of *ts* (for *tc*, third person masculine subject transitive) and *s* (for *c*, third person dual subject intransitive and transitive and object transitive). Whenever the object of the transitive verb (or the apparent subject, really first object, of the "half-transitive" verb) is diminutive in form, the pronominal prefixes *tc* and *c* appear as *ts* and *s*; the *ts* by no means implies the diminutive character of the transitive subject. Examples are: *i'wi gatssu'x isié'nqxôq* 'he looked at his fish-line' (Wishram Texts 140.28), where the incorporated pronominal dual element *-s-* of *gatssu'x* refers to the diminutive dual object *is-ié'nqxôq* 'his fish-line', while the pronominal subject *-ts-* 'he' agrees with the object in diminutive consonantism; *gatksu'ktam* (*-tks-* always appears for *-skt-*) 'the two (women) came home with the (baby)' (Wishram Texts 2.12), the diminutive dual *-s-* referring to the grown-up women, not to the baby; *gase-ngatk!agwāx gas ktênak!wā'st* 'it-waves-freely-over-me-my-feathered-cloak' (Wishram Texts 142.5), where the first object *-s-* of the half-transitive verb refers to the diminutive dual noun *s-tênak!wā'st* '(small) feathered cloak'. Particularly noteworthy in this connection is the idiomatic use of a diminutive dual object *-s-* referring to an implied, unexpressed noun of diminutive significance; there need not even exist such a diminutive dual noun to which reference, if desired, could be explicitly made. A good example is: *gaksi'lutk* 'she cradled him', literally, 'she put the-two-small (objects) down to him', where 'the two small (objects)' refer to an implied word for 'cradle', though the word for 'cradle' in actual use is a masculine (*i'-lkau*). Similarly, verbs of jumping and somersaulting have an incorporated diminutive dual object *-s-* referring to 'the two

small (feet)', though the actual word for 'feet' is plural (*i't-pc*). Examples are: *gaksu'bEna* 'she jumped'; *gasixmi'lgwa* 'he turned a somersault' (Wishram Texts 82.18); and *gats(s)altsgi'ma* 'he laid her, belly up'. The [645] most transparent example of the use of an incorporated diminutive dual object to refer to an unexpressed but existing noun is afforded by certain verbs of looking, in which the *-s-* has reference to *is-qxu's* 'the two eyes'. A frequently occurring example of such a verb is *gatssi'k!Elutk* 'he looked at him', literally, 'he put the two small (eyes) down toward him', the *-tc-* and *-gEl-* appearing in their diminutive forms *-ts-* and *-k!El-* to agree with the object *-s-*; *gasiximk!na'-uk<sup>u</sup>atsk* 'he looked around' is another such verb.

As a rule, it will have been observed, a verb form tends to be consistently diminutive or non-diminutive in its consonantism. It is at least possible, however, to limit the application of the diminutive idea to some specific element of the action by "diminutivizing" only some corresponding element of the verb form. An example already published elsewhere will again do service here. The normal word for 'I struck him with it' is *inigE'ltcim*. If the verb stem *-tcim* appears, with diminutive consonantism, as *-tsim*, the implication is that the missile used is a small one. Hence we have four forms: *inigE'ltcim* 'I hit him with it'; *inigE'tsim* 'I hit him (a child perhaps) with it'; *inik!E'ltcim* 'I hit him with it (something small)', and *inik!E'tsim* 'I hit him (a child) with it (something small)'. To be sure, such examples are very uncommon and the one just given is perhaps little more than a linguistic tour de force. Nevertheless, it shows very clearly how thoroughly alive is the feeling for the significance of consonantal play.

### Post-positions in Wishram

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Wishram, differing markedly in this respect from Lower Chinook, makes rather considerable use of a series of post-positive particles [651] defining material case relations (chiefly local and instrumental). As most such relations can be expressed by means of local and adverbial prefixes and suffixes in the verb, the denominating parts of speech being in apposition to incorporated pronominal elements, this use of postpositions must be considered as un-Chinookan in origin; the fact that some of the postpositive particles are phonetically identical with corresponding Sahaptin case suffixes proves the whole process to be borrowed from the neighboring Sahaptin linguistic stock. As a rule, such postpositive particles are used with denominating parts of speech (nouns, pronouns, adjectives), but some of them may also be suffixed to predicating words (verbs, particle verbs); in the latter case the predicate is to be considered as substantivized syntactically, though not morphologically, and is used subordinately to another predicate. Wishram thus utilizes its postpositions to some extent in the building up of subordinate clauses. Where a noun or

other denominating part of speech has been already represented in the verb by an incorporated pronominal element, its relation to the verb and to other nouns in the sentence is necessarily already defined, so that no postposition is necessary; even here, however, it not infrequently happens that a postposition is pleonastically used (compare such English possibilities as "He entered into the house"). If a noun is modified by a preceding attributive word (demonstrative pronoun, numeral, noun, or adjective), the postposition is used with the modifying word. The postpositions, with examples illustrating their uses, are listed in the following paragraphs:

1. *-ba* (*-pa*) 'in, at'. With this element should be compared Yakima *-pa* 'in'.

Examples illustrating its use with nouns and pronouns occur with very great frequency, so that only a few need here be given.

*cikxa'-imāt ci't!ix yak<sup>u</sup>cxa'tpa* 'half of it lies in his mouth' 4.3<sup>2</sup>

*gaktakxa'-ima itk!a'ckac akni'mba* 'she put the child in the canoe' 2.11

*atgadi'mama da'uyaba wi'lx* 'they will come in this land' 6.17

*gayu'yam ixtpô' wi'lx* 'he arrived at one land' 6.28

*itcqxε'mεm axqxatcpa* 'I am sick in my breast' 12.27

*gatci'upmt it!ô'xwatckpa* 'he hid it in the bushes' 18.25

*gatu'ya yaxka'ba* 'he went up to him' 20.10 (one can also say *gatiglu'ya* 'he went to him' with local prefix *-gEl-*)

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*gadiq!Eltxi'uba icia'gûcba ya'k<sup>u</sup>cxa'tpa wamL!u'xiba* 'they went out through him at his nostrils, at his mouth, and at his ears' 28.24

*gatu'xuni yaga'ilpa wi'mat* 'it floated in the great river' 48.7

*alxu'ya wa'tcttib' itga'qpuks* 'let us go on the tops of the grass' 70.26 (literally, 'the-grass-at its-tops')

Observe that the first two examples illustrate its pleonastic use; the nouns *yak<sup>u</sup>cxa't* and *akni'm* have been respectively anticipated in the verb by the pronominal elements *-i-* and *-a-*, while their local relation to the verb is defined by the prefix *-k-* 'on' following these elements. *-ba* is also used with demonstrative stems to form adverbs of place where: *da'ba* 'here'; *kwô'ba* 'there'; *iā'xiba* 'yonder'.

As subordinating element, *-ba* denotes 'where'; less frequently it indicates cause. It is suffixed either to the verb itself, or, similarly to the case of the modified noun, to an adverb or particle preceding the verb. Examples are:

*ctā'xya i'nadix q!a'tsεnba gatccgE'lgElx* 'across yonder (were) the two where he had first seen them' 8.10 (literally, 'first-at he-saw-them')

*galiktô'ptck gatccgElkE'lxpa* 'he came to land where he had seen them' 8.5

*ē'wi gali'xôx gayaxa'limatxpa* 'he looked back to where he had thrown himself into the water' 8.6

*ma'sa gali'xôx q!u'mba gagi'ux* 'he was ashamed because she had disturbed him in his sleep' 58.26 (literally, 'disturb-in-sleep at she-made-him')

2. References are to Wishram Texts.

2. *-iamt* (often with palatalized *a* as *-iämt*, *-iêmt*) 'to, from'. This suffix is probably Chinookan in origin; it may be plausibly analyzed as verb stem *-i-* 'go' + verb suffix *-am* 'arriving' + tense suffix *-t*. This analysis would explain its two apparently contradictory meanings. It tends to draw the accent to itself. Examples are:

*icktê'lgwiptck wimalia'mt* 'they collected (driftwood) from the river' 2.2

*nigElga'ba iciagitcia'mt* 'it flew out of his nostrils' 80.29 (literally, 'out of him from his nostrils')

*gacx<sup>u</sup>k!wa'x txtôqlia'mt* 'the two returned to their house' 2.12

*gayuk!wí'xa ilaxní'miêmt* 'he swam to the person's canoe' 18.23

*mxa'tcktcam wimalia'mt* 'go to the river and wash yourself' 22.18 (literally, 'go-and-wash-yourself to-the-river')

*gatchu'k<sup>u</sup>t itq<sup>u</sup>tiám itcgoa* 'he took the water to the house' 28.8

As subordinating element it may be translated as 'to where'. An example of its use after verbs is:

[653]

*asEMxElu'tka a'tpxiamd aga'Lax* 'you shall look towards the east' 188.21 (literally, 'she-comes-out to-where the-sun')

3. *ba'ma* 'for, belonging to'. This is evidently the Yakima suffix *-pama* 'for'. Examples of its use with denominating words are:

*na'ikabam' amtkni'dama ilqagi'lak* 'for my sake you two will go and get me the woman' 62.25

*ya'xtau laxka'bama lgiubí'tcema* 'that (fish) he obtains for himself' 186.4

*gaqxô'gwigax its!i'nônks wí'lxpama* 'animals were taken belonging to the country' 16.13

*ctmô'kct gactu'ix ntca'ikabama* 'two of our men (literally, us-for) went on' 216.16

*da'nbama qxê'dau mxu'lal* 'what for do you speak thus?' 132.24

*lga'tqwôm luwa'n qa'xbabama* 'he has come I know not where from' 128.17 (literally, 'what-in belonging-to')

*k!a'ya kwô'babama idE'lxam tcduxt* 'he had not made people belonging to there' 44.23

*gi'gwalbam' itk!i'tit* 'underclothes' (literally, 'below-for clothes')

Less commonly *bama* may precede. An example is:

*bam' ilē'wulx aktugwi' itk!a'lamat* 'he carries rocks for (i.e., in order to gain) strength' 186.17 (cf. *ilxē'wulx bama* 188.2)

When used at the beginning of a predication, *bama* gives it the meaning of a clause of purpose. Examples are:

*ba'ma la'-itcka a'lem' atcludi'na* 'in order that he might kill them' 54.2 (literally, 'for them will he-will-kill-them')

*bama capca'p qiuxu'nnit ika'ba* 'for chopping up the ice' 188.19 (literally, 'for chop-up it-is-always-made the-ice')

When accented (*bama'*), it is used after predicates to mean 'ever since'. An example is:

*nk!a'ckacbama' klā'ya qxantciḡ itctcge'mEM* 'ever since I was a child I have never been sick' 190.9

4. (*E*)*nEgi* 'with, by means of', less frequently 'made out of'. It seems to be the Yakima genitive case ending *-ngi*. Examples are:

*axk' E'nEgi amcgii'xa lq!ô'p* 'with it you will cut it off' 12.4

*Lq!ô'p galgi'ux aqE'nEkC E'nEgi* 'they cut it off with the stone knife' 18.5

*galktô'qf' atakcE'n ENEgi* 'he counted them with his finger' 18.19

*it!a'ma ngi gayu'ya* 'he went by means of a round-pointed canoe' 38.21

*igā'bENAC E'nEgi gatclu'x* 'he made them out of young oak' 4.13

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Less frequently *ngi* may precede. Examples are —

*xa'u xau galxu'x ng' itkCE'n* 'they combed themselves with the hand' 78.10

*ayak!a'lamat ngi wa'nux* 'his pipe (was) made out of a stomach' 94.9

5. *a'mENi* 'made out of', less frequently 'with'. It is perhaps the Yakima *-nmi*.

Examples are —

*sā'q" itk!a'lamat a'mENi akitxax* 'it is entirely out of stones' 82.13

*isk!u'ly amENi isgā'k'laps aqsu'xwa* 'a hat is made out of coyote' 182.7

*alk!wa'dit amENi aqiu'xwa* 'it is made of tule' 182.9

*itq!u'tc' a'mENi tSE'tSEX gaqtu'x itk!a'munaq* 'they split trees by means of antlers' 182.14

6. *-pt* 'up to' is used to form adverbs out of demonstrative stems: *dapt* 'up to here'; *kwôpt* 'up to there, then, enough'; *ya'xpt* 'up to yonder'. Probably etymologically identical with this element is *-bet*, frequently added to verbs or other words in the predicate to form temporal clauses. Examples are —

*gatctE'mquit lqa'wulqt gagiula'dabît* 'he spit blood when she threw him down' 14.11

*galikta'tckpET p!a'la igi'xôx* 'when he had come up out of the water, he stopped' 22.18

*lE'p(b)ET atxu'xwa anigElgā'ya* 'when he dives, I shall take hold of it' 18.20

*nk!a'ckacbet* 'when I was a boy' 188.8

*agā'lax alaxu'xwa yaxtadi'wi gali'xux gatxô'qbET* 'the weather will be as it was when they came together' 130.27

When rhetorically lengthened to *-bā't*, this post-position has a general cumulative significance; with verbs it is best translated 'as many as'.

Examples are —

*gWE'nEMabā'd itgwô'mEX antk!wa'lalaqwida* 'I shall be absent as much as five days' 122.12

*kwôpt natcdupgenayabā't* 'that many (ropes) as he had apportioned' 188.6

*qxa'ntcipt alktxa'tgway' atclulxamabā't* 'he piles up as many as he tells him to' 186.19

7. *diwi* (emphatic *dä'wi*) 'like'. This element is very likely of demonstrative origin, and so does not perhaps belong here. It is freely used, however, as a post-position, and so may be included. Examples are —  
*ick!a'li diwi datc!i'p* 'striped like a basket' 166.2  
*iya'tqx itgwa'tilx diwi* 'his body (was) like a person's' 166.17  
*naika dä'wi itcE'lgulit* 'exactly like my appearance' 104.10

### Demonstrative Pronouns and Adverbs in Wishram

[625]

	<i>Masculine</i>	<i>Feminine</i>	<i>Neuter</i>
Near 1st person	{ <i>da'uya(x)</i> <i>da'ya(x)</i>	{ <i>da'ua(x)</i> <i>da'wa(x)</i>	{ <i>da'ula(x)</i> <i>da'ta(x)</i>
Near 2nd person	{ <i>ya'xdau</i> <i>ya'xda(x)</i>	{ <i>a'xdau</i> <i>a'xda(x)</i>	{ <i>ta'xdau</i> <i>ta'xda(x)</i>
Near 3rd person	<i>ya'xia(x)</i>	<i>a'xia(x)</i>	<i>ta'xia(x)</i>
Near 3rd person (formed from <i>ya'xdau</i> )	<i>yakā'xdau</i>	<i>akā'xdau</i>	<i>takā'xdau</i>
	<i>Dual</i>	<i>Plural</i>	<i>Plural, persons</i>
Near 1st person	{ <i>da'ucda(x)</i> <i>da'cda(x)</i>	{ <i>da'uda(x)</i> <i>da'da(x)</i>	{ <i>da'uda-itc</i> <i>da'da-itc</i> <i>da'(u)ta-itc</i> <i>da'(u)a-itc</i>
Near 2nd person	{ <i>cda'xdau</i> <i>cda'xda(x)</i>	{ <i>da'xdau</i> <i>da'xda(x)</i>	{ <i>da'xdauaitc</i> <i>ta'xdauaitc</i> <i>a'xdauaitc</i>
Near 3d person	<i>cda'xia(x)</i>	<i>da'xia(x)</i>	{ <i>da'xiaitc</i> <i>ta'xiaitc</i> <i>a'xiaitc</i>
Near 3d person (formed from <i>ya'xdau</i> )	<i>cdakā'xdau</i>	<i>dakā'xdau</i>	<i>dakā'xdauaitc</i> <i>takā'xdauaitc</i> <i>akā'xdauaitc</i>

Note. — It is somewhat doubtful whether *ya'xdau* should be so read or as *ya'xdau*. (*x*) in personal and demonstrative pronouns is deictic in value.

-*ka* may be added to demonstratives in -*itc*.

Elements -*!a* and -*!ikc* are perhaps "diminutive" forms of demonstrative pronominal stem *da* 'this' and personal plural *dikc*.

Following is a list of the demonstrative adverbs of the Wishram dialect:

	<i>Locative</i>	<i>up to</i>	<i>towards, on . . . side</i>
Stem <i>da(u)</i>	<i>da'ba</i> 'here'	<i>dapt</i>	<i>dabā't</i> 'little ways further on'
Stem <i>kwô</i>	<i>kwô'ba</i> 'there'	<i>kwôpt</i>	<i>kwôbā't</i>
Stem <i>iaxi</i>	{ <i>(yax da'ba 48.16)</i> <sup>3</sup> <i>ia'xiba</i> 'yonder' <i>ia'xi</i> 'away, off'	<i>ya'xpt</i>	<i>iaxā't</i> 'further on'
Stem <i>di</i>	<i>dī'ka</i> 'here' <i>(dika dabā' 92.11)</i>	( <i>pt</i> also in <i>qa'n tcipt</i> 'how long?')	<i>dī'gat</i> (18.17)
[626] Stem <i>gi</i>			<i>gi'gat</i> (18.17) { <i>i'wat</i> 'to you (place)' (106.22) <i>iwa'tka</i> (158.24)
	<i>i'wa</i> 'thus, there'		

Note. — Compounded with *gi* are also *da'ngi* 'something'; *qa'tgi* 'somehow'; *qxa'matgi* 'somewhere' (96.11).

Related to *dī'ka* and *dī'gad* is perhaps *digu'tciḡ* 'perhaps' (96.17); also *dī'wi* 'like'.

In *-xi* we have, besides *ya'xi*, also (*aga*) *du'xi* 'oh, well!' (60.4).

Note. — *Ya'xa* 'indeed' (also in *quct i'axa* 'as it turned out'); *au* (perhaps = *aw'*, *a'wa*, and related to Chinook *yāwa*) in *da'n au ayamlu'da* 'what, pray, shall I give you?' (154.6); *yaḡa'wa* 'however'.

Note also *kwô'bixiḡ* 'right there, not very far'.

-*a'dix* forms: *a'ngadix* 'long ago'; *ixtka'dix* (192.2); *ina'tkadix* (192.5).

With stem *dau*: *kwô'dau* 'and'; *da'ukwa* 'just as before'; *qxi'dau* 'thus'.

### Independent Personal Pronoun

These correspond to Wishram forms recorded by Sapir:

<i>ná-ima</i>	'I alone'
<i>laimadike, dá-imadike, áimadike</i>	'they alone'
<i>má-ima</i>	'thou alone'
<i>lxá-imadike</i>	'we (incl.) alone'

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Besides these, Doctor Sapir has recorded in Wishram the following:

Shortest form:

<i>na(x)</i> 'I'	<i>ya(x)</i> 'he'	<i>da'-ite</i> 'they'
		<i>la'-ite</i> 'they' (Wishram Texts 48.4)
		<i>a'-ite</i> 'they'

Inclusive:

<i>na't!a</i> 'I too'	<i>ya'xt!a</i> 'he too'	<i>la'-it!ike</i> 'they too'
<i>lxat!ike</i> 'we too'		<i>da'-it!ike</i> 'they too'
		<i>a'-it!ike</i> 'they too'

3. References are to Wishram Texts.

He remarks that the demonstratives of the third person (*ya'χia*) seem morphologically parallel to first and second personal emphatic pronouns (*na'ya*); that the demonstrative element *-i-* is characteristic of the first and second persons, *-χ-* of the third; as in

<i>na-i-ka</i> 'I'	<i>ya-χ-ka</i> 'he'
<i>na'-i-t!a</i> 'I too'	<i>ya-χ-t!a</i> 'he too'
<i>na'-(i)-ya</i> 'I'	<i>ya'-χ-ia</i> 'he'

These elements *-i-* and *-χ-* are probably identical with Chinook *-ī-* and *-x·*, *-χ* in *x·ī'La* and *x·ix·*, *x·ax·*.

### Modal Elements

[578-579]

2. *ni-*. This prefix is confined to the dialects east of the Kathlamet. It takes the form *nig-* before vowels, like the preceding *a-*, prefix indicating a change from one state into another, translated 'to become' in intransitives and as an aorist in transitives. It occurs in transitive and intransitive verbs. It expresses a somewhat indefinite time past, and is used in speaking of events that happened less than a year or so ago, yet more than a couple of days ago.

*ni-y-u'ya* 'he went' (*ni-* 'past'; *-y-* 'he'; *-uya* 'to go')

*nig-u'ya* 'she went' (the same before vocalic element; *-a-* 'she', being contracted with *-u-* into *-u*)

*ni-tc-i-gil-kel* 'he saw him' (*ni-* 'past'; *-tc-* 'he'; *-i-* 'him'; *-gil* verbal prefix; *-kel* 'to see')

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3. *a-*. [Prefix indicating the future in intransitive verbs.] In the dialects east of the Kathlamet it is used also with transitive verbs.

*a-tc-i-gE'l-kel-a* 'he will see her' (*a-* 'future'; *-tc-* 'he'; *-i-* 'him'; *-gE'l-* verbal prefix; *-kel* 'to see'; *-a* 'future')

4. *ga-*, before vowels *gal-*. This prefix is confined to the dialects east of the Kathlamet. It expresses time long past, and is always used in the recital of myths

*ga-y-u'ya* 'he went' (see analysis under 2)

*gal-u'ya* 'she went' (see analysis under 2)

*ga-tc-igE'l-kel* 'he saw him' (see analysis under 2)

*n-* may be used in place of this prefix.

5. *na-*, before vowels *nal-*. This prefix is confined to the dialects east of the Kathlamet. It refers to recent time exclusive of today, more specifically to yesterday. Its use is analogous to that of the preceding.

WISHRAM TEXT<sup>1</sup>

By EDWARD SAPIR

## COYOTE AND ITC!E'XYAN

- 673 Aga<sup>2</sup> kwô'pt<sup>3</sup> gayu'ya<sup>4</sup> isk!u'lya<sup>5</sup> wi't!ax.<sup>6</sup> Nā'2wit<sup>7</sup> gayu'yam;<sup>8</sup>  
 Now then he went Coyote again. Straightway he arrived  
 going;  
 galixE'ltcmaq<sup>9</sup> isk!u'lya gwā'nîsîm<sup>10</sup> qtulat!a'melqt<sup>11</sup> idE'lẓam<sup>12</sup>  
 he heard Coyote always they (indef.) are always  
 swallowing them down the people
- 
- 674 itc!E'xyan.<sup>13</sup> Qxa'damt<sup>14</sup> gayu'y'<sup>15</sup> iknî'm<sup>16</sup> nā'wit gatcige'lga<sup>17</sup>  
 Merman. Whither it went the canoe straightway he got hold of it  
 itc!E'xyan; gatciulat!a'melq<sup>18</sup> kā'nawi<sup>19</sup> dan.<sup>20</sup> "Nait!"<sup>21</sup> a'g'<sup>22</sup>  
 Merman; he always swallowed it down every thing. "Me too now  
 atenuat!a'melEqema,"<sup>23</sup> isk!u'lya galixlu'xwa-it.<sup>24</sup> Aga kwô'pt  
 he will swallow me down," Coyote he thought. Now then  
 gayu'y' isk!u'lya; gatcige'lga yag'ai<sup>25</sup> ikla'munaq.<sup>26</sup> Aga kwô'pt  
 he went Coyote; he got hold of it its bigness the tree. Now then
- 
- 675 la'x<sup>27</sup> gali'xôx.<sup>28</sup> Gatcige'lga itc!E'xyan, gaqiuat!a'melEq.<sup>29</sup>  
 in sight he made him- He got hold of merman, they (indef.) swallowed  
 self. him down.  
 Nā'wit iltcqô'ba<sup>30</sup> gi'gwal<sup>31</sup> isk!u'lya galixi'maxitam<sup>32</sup> wi'lẓba.<sup>33</sup>  
 Straightway in the water below Coyote he arrived falling on the ground  
 Aga kwô'pt gatcugi'kel<sup>34</sup> lgabla'd<sup>35</sup> idE'lẓam; lgabla'd<sup>36</sup> aknî'm<sup>37</sup>  
 Now then he saw them their multitude the people; their multitude the canoes  
 axu'xt<sup>38</sup> kwô'ba<sup>39</sup> gi'gwal iltcqô'ba. Aga kwô'pt gatcige'lkel<sup>40</sup>  
 they are there below in the water. Now then he saw it  
 piled together  
 isk!u'lya itc!E'xyan yagô'menî<sup>41</sup> qxwôl<sup>42</sup> iki'ax.<sup>43</sup> Aga kwô'pt  
 Coyote Merman his heart hanging it is. Now then
- 
- 676 gaqiu'lẓam<sup>43a</sup> isk!u'lya: "Ya'xdau<sup>43b</sup> itc!E'xyan yagô'menî." Aga  
 they (indef.) told Coyote: "That Merman his heart." Now  
 him  
 kwô'pt Lq!ô'p<sup>43c</sup> gati'ux;<sup>43d</sup> Lq!ô'p<sup>43c</sup> gali'xôx<sup>43e</sup> itc!E'xyan yagô'menî.  
 then cut he made it; cut it made itself Merman his heart.  
 Aga kwô'pt kā'nawi gatkxeni'yutck<sup>44</sup> sā'q<sup>45</sup> aknî'm kwô'dau<sup>46</sup>  
 Now then all they each floated up out entirely the canoes and  
 of water.  
 idE'lẓam kwô'dau isk!u'lya.  
 the people and Coyote.  
 Aga kwô'pt gali'kim<sup>47</sup> isk!u'lya: "Lga<sup>48</sup> pu<sup>49</sup> qā'ma<sup>50</sup> ma'ima<sup>51</sup>  
 Now then he said Coyote: "Perchance would how you alone  
 itc!E'xyan qxi'dau<sup>52</sup> amdu'xwa<sup>53</sup> idE'lẓam? Da'uya<sup>54</sup> wi'gwa<sup>55</sup> aga  
 Merman thus you will do to them the people? This day now
- 
- 677 kwô'pt<sup>56</sup> qxi'dau amdu'xwa idE'lẓam. Na'ika<sup>57</sup> isk!u'lya yamu'lẓam.<sup>58</sup>  
 that far thus you will do to the people. I Coyote I have told you.  
 them  
 Kwa'ic<sup>59</sup> da'uyaba<sup>60</sup> wi'lẓ atgadi'mama<sup>61</sup> idE'lẓam. Kwô'pt  
 Soon in this land they will arrive coming the people. Then  
 alugwagi'ma,<sup>62</sup> "Qxi'dau 'Ex<sup>63</sup> gati'ux<sup>64</sup> isk!u'lya itc!E'xyan."  
 they will say, 'Thus exercising he did to him Coyote Merman.'  
 supernatural  
 power  
 Kwô'pt a'ga itc!E'xyan pla'l'<sup>65</sup> amxu'xwa."<sup>66</sup>  
 Then now Merman being quiet you will make yourself."

<sup>1</sup> A connected English translation of this text will be found in Sapir's Wishram Texts, Publications of the American Ethnological Society, II, 41, 43. The Indian text as here given has been very slightly normalized from its form as there published (pp. 40, 42).

<sup>2</sup> Used partly with weak temporal force, partly as mere connective in narrative. It is frequently practically untranslatable into English.

<sup>3</sup> *kwópt*, THEN, AT THAT TIME, is regularly used with preceding *aga* to mark new step in narrative. It can be analyzed into demonstrative stem *kwó-* (or *kwa-*) THAT (= Chinook *gō* THERE) and local suffix *-pt* UP TO (SO AND SO) FAR. Neither of these elements occurs freely. *kwó-* is not used to form demonstrative pronouns, only occurring stereotyped in several adverbs; besides *kwópt* we have *kwó'ba* THERE (note 39), and *kwó'dau* AND (note 46). *-pt* also hardly seems to occur except stereotyped in adverbs; cf. *dapt* AS FAR AS THIS (related to *da'ba*, THIS-IN=HERE, as *kwópt* is to *kwó'bc*), and *yaxpt*, AS FAR AS THAT YONDER, from *ya'zi* OFF YONDER). See also note 56.

<sup>4</sup> *ga-* (*gal-* before vowels) = tense prefix denoting remote past, regularly used in myth narrative. *-y-* = 3d per. masc. subj. intr., referring to *isk'u'lya*, before consonants it would appear as *-i-*, while *gal-* would then appear as tense prefix (*ga-y-* = *gal-i-*: see notes 9, 28, 32, 47). *-u-* = directive prefix AWAY FROM SPEAKER. *-ya* = verb stem TO GO.

<sup>5</sup> *i-* = masc. noun prefix with which *-y-* in *gayu'ya* is in agreement. *-sk'u'lya* = noun stem COYOTE, apparently not capable of analysis; perhaps loan-word from Klickitat *spi'lya*. Chinook has another stem, *-t'á'lapas*.

<sup>6</sup> Composed of *wi't'a* AGAIN and deictic particle *-x-*: cf. *da'uya* (note 54) and *da'uyax* THIS. *wi't'a* is most plausibly explained as stereotyped adverb from *wi-*, masc. noun prefix (originally independent masc. pronoun? See notes 19 and 33), and *-t'a*, emphatic particle added to pronouns, TOO, ALSO (see note 21). According to this analysis *wi't'a(x)* was originally formed from *\*wi* as *ya'x't'a(x)* HE TOO from *ya-x-HE*. Originally it must have meant THAT (masc.) TOO, but was later generalized in meaning.

<sup>7</sup> Rhetorically lengthened form of *nu'it* IMMEDIATELY, RIGHT AWAY. When thus lengthened to *ná'wit*, it seems to imply direct, unswerving motion without interference of other action; it may then be rendered as STRAIGHT ON or ON AND ON.

<sup>8</sup> As in note 4, except that instead of verb stem *-ya* we have its shorter form *-y-*. *-i-* (as in *yu'it* HE GOES; cf. also note 61). To this is suffixed verb suffix *-am* ARRIVE WHILE —ING, GO (OR COME) TO DO—. Several verb stems have two forms,—one in *-a*, and one without this *-a* (e. g., *-pa* and *-p* TO GO OUT; cf. *gal'pa* SHE WENT OUT with *atp̄x* SHE COMES OUT).

<sup>9</sup> *gal-* = tense prefix *ga-* before vowels. *-i-* = 3d per. masc. obj. before reflexive element (reflexive verbs have, morphologically speaking, no subject). *-xEl-* = indirect reflexive composed of reflexive element *-x-* and local verb prefix *-l-* TO, INTO. *-tcmaq* = verb stem TO HEAR. *galixE'tcmaq* means literally TO HIM-SELF HEARD. TO HEAR SOME ONE is expressed by *-x-tcmaq* with prefixed transitive subject and object pronominal elements.

<sup>10</sup> Adverb not capable of analysis.

<sup>11</sup> *q-* = indefinite transitive subj. *-l-* = 3d per. pl. obj. tr., referring to *idE'l̄xam*. *-u-* = directive prefix (very many verbs have this "directive" *-u-* even when no definite idea of direction away from speaker seems to be implied). *-lat'amElq-* is example of rarely occurring compound verbs. *-lat'a-* is "diminutive" form of verb stem *-lada-* TO THROW DOWN, AWAY (in this case its meaning seems to correspond somewhat more closely to that of its Chinook cognate *-lata* TO PULL BACK); *-mElq-* is best explained as verb stem *-mEq-* (or *-mq-*) TO VOMIT with infixed *-l-* of frequentative or continuative significance (that *-l-* is not really part of stem is shown by form *ic'iculat'a'maq* HE SWALLOWED HIM DOWN); PULL BACK + VOMIT may be construed as meaning VOMIT BACKWARD, DRAW TO ONE'S SELF AND SWALLOW. *-t-* = tense suffix of present time. Observe peculiar sequence of tense, HE HEARD . . . THEY SWALLOW THEM DOWN. Verbs that are dependent on other verbs, chiefly of saying or perception, are always present in tense, no matter what tense is logically implied; cf. below *gatcigE'l̄kEl* . . . *iki'ax* (note 43) HE SAW IT . . . IT IS.

<sup>12</sup> *id-* = 3d per. pl. noun prefix, in concord with *-t-* in preceding verb. *-l̄xam* (*-E-* is inorganic) = noun stem VILLAGE (*wi'l̄xam* VILLAGE is formally masc. sing. of *idE'l̄xam* PEOPLE); *-l̄xam* is evidently related to *-l̄x* (see note 33).

<sup>13</sup> *i-* as in note 5. *-ic'E'x̄yan* = noun stem MERMAN, PROTECTOR OF FISHERMEN (see Wishram Texts, p. 40, note 2; p. 42, note 2; p. 256, note 2); no etymology suggests itself. Syntactically *ic'E'x̄yan* is subject implied, but not grammatically referred to, by *q-* of preceding verb. This clause can hardly be considered as quite correct; properly speaking, *ic'E'x̄yan* should go with *tctulat'a'mElqt*.

<sup>14</sup> From interrogative stem *qxa-* (or *ga-*), seen also in *qa'zba* WHAT-IN? = WHERE? *qa'xia* OF WHAT KIND? and *qa'ngi* WHAT-WITH? = HOW? *-damt* = local suffix TOWARD found suffixed to several adverbs (cf. *ca'xaladamt* TOWARD ABOVE, *gigwa'ladamt* TOWARD BELOW). This *-damt* is evidently related to local noun suffix *-iamt* TO, FROM. *Qxa'damt* here introduces indirect question, and may best be translated as NO MATTER WHERE.

<sup>15</sup> = *gayu'ya*. Final vowels are regularly elided when following word begins with vowel. For analysis of form, see note 4.

<sup>16</sup> *i-* as in note 5. *-knim* = noun stem CANOE. This stem can be only secondarily monosyllabic, for otherwise we should have \**wiknim* (see note 33); its Chinook cognate *-kanim* shows original dissyllabic form. See also note 37.

<sup>17</sup> *ga-* = tense prefix as in note 4. *-tc-* = 3d per. masc. tr. subj., referring to following *itc!E'ryan* as subject. *-i-* = 3d per. masc. tr. obj., referring to *ikni'm* of preceding clause as object. *-gEl-* = verb prefix of adverbial force, TOWARD (with purpose, intent to reach); it here replaces directive *-u-* of most transitive verbs. *-ga* = verb stem TO GET HOLD OF, SEIZE; it is possibly to be identified with verb stem *-ga* STICK TO, its particular active significance being gained by use of transitive pronominal prefixes and verb prefix *-gEl-*.

<sup>18</sup> *ga-tc-i-* as in note 17, *-i-* here referring to following *dan*. *-u-lat!a'-mElq* as in note 11.

<sup>19</sup> *ka'nawi* ALL, EVERY is most probably compounded of *kana-* ALL TOGETHER (found in such numeral forms as *ka'nactmókt* ALL-THE-TWO = BOTH and, with unexplained *-m-*, in *kanEmlu'nikc* ALL THREE PEOPLE) and old 3d per. masc. demonstrative pronoun \**wi* (cf. note 6) now no longer preserved as such (except in such petrified words as *wi't!a* and *ka'nawi*), but specialized, like its corresponding fem. *wa-*, as 3d per. noun prefix (see note 33). These old pronouns \**wi* and \**wa* are best explained as substantivized from pronominal elements *-i-* (masc.) and *-a-* (fem.) by means of demonstrative element *w-* (or *u-*); this latter element is probably identical with *-u-* in demonstrative stem *da'u-* THIS (found also as *da-*; see note 54), and with Chinook *-ō-* in demonstratives near 3d per. (*x'ōLa*, *x'ōcta*, *x'ōta*). *ka'nawi* must originally have meant something like ALL (OF) THAT (masc.), but, like *wi't!a*, was later generalized in significance. *ka'nawi* is here, as often, rhetorically lengthened to *ka'nawi* to emphasize its meaning of TOTALITY.

<sup>20</sup> Interrogative and indefinite pronoun referring to things, WHAT, ANYTHING, SOMETHING. Though not provided with any sign of gender, it is always construed as masculine, hence *-i-* in *gatculat!a'mElq*. Its correlative *can* (Kathlamet *Lan*) referring to persons, WHO, ANYBODY, SOMEBODY, is always neuter in gender; HE SWALLOWED EVERYBODY DOWN would be *gatculat!a'mElq ka'nawi can*.

<sup>21</sup> Elided from *na'it!a* (see note 15). Composed of 1st per. sing. pronominal stem *nai-* (seen also in *na'ika* I) and emphatic suffix *-t!a* TOO, ALSO (see note 6). All independent pronouns in *-ka* can be changed to emphatic pronouns by merely replacing *-ka* by *-t!a* (e. g., *ya'zka* HE becomes *ya't!a* HE TOO). Syntactically *na'it!a* here anticipates *-n-* in following verb (see note 23) as 1st per. sing. obj.

<sup>22</sup> = *a'ga* (see note 15). This particle is very frequently used before future verb forms in conversation.

<sup>23</sup> *a-* = tense prefix of future time. *-tc-* = 3d per. masc. tr. subj. *-n-* = 1st per. sing. tr. obj. *-u-lat!a'-mElq-* as in note 11 (*-E-* before *-q-* is inorganic). *-Em-* = connective before future suffix *-a-*; verbs that are continuative or frequentative in form regularly use this connective *-Em-* before certain suffixes (such as future *-a*, cessative *-tck*, usitative *-niil*). *-a* = tense suffix of future time; in Wishram verbs regularly form their future by prefixing *a-* or *al-* (before vowels) and suffixing *-a*. It is somewhat difficult to see why this form should be frequentative; one would rather expect *atcnulat!a'mEgwa*.

<sup>24</sup> *gal-i-* as in note 9. *-x-* = reflexive element; literal translation of verb would be (TO) HIMSELF THOUGHT. *-lux(w)-* = verb stem TO THINK. *-a-it* = verb suffix of rather uncertain significance here; it is found in all tenses of verb but present, where it is replaced by *-an* (*ixlu'xwan* HE THINKS).

<sup>25</sup> *ya-* = *i-ya-*. *i-* = masc. noun prefix, determining gender of noun stem *-gail*. *-ya-* = 3d per. masc. possessive pronominal prefix, referring to masculine noun *ik!a'munaq*. *-gail* = abstract noun stem BIGNESS. *yagail ik!a'munaq* THE TREE'S BIGNESS may, like all other possessive constructions, be construed either attributively (THE BIG TREE) or predicatively (THE TREE IS BIG). Its attributive character is here determined by presence of true verb (*gacigE'lga*) as predicate.

<sup>26</sup> *i-* as in note 5. *-k!a'munaq* = noun stem TREE, STICK, WOOD. This word is difficult of etymological analysis, yet can be no simple stem; *-k!a-* is undoubtedly to be regarded as noun prefix (cf. *ik!a'lamat* ROCK, perhaps from verb stem *-la* TO MOVE). *-k!a-* is most plausibly considered as "diminutive" form of verb stem *-ga-* TO FLY UP IN AIR (as first element in compound verbs); cf. *iciuk!wa'la* HE WHETTED IT WITH *ici'ula* HE FILED IT, and *iniugwala'da-ulx* I THREW IT UP ON TOP (OF SOMETHING) WITH *iniula'da-ulx* I THREW IT UP.

<sup>27</sup> Particle verb. Though verbal in force, it is purely adverbial morphologically, having no grammatical form of its own. In regard to tense and person it is defined by following verb, which serves as its forming auxiliary.

<sup>28</sup> *gal-i-* as in note 9. *-x-* = reflexive element. *-ō-* (modified from *-u-* because of preceding and following velar consonants) = directive prefix; ordinarily reflexive *-x-* replaces directive *-u-*, but there are several

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verbs that retain it even when reflexive in form. *-x* = verb stem TO DO, MAKE. *-x-u-x* TO DO TO ONE'S SELF, MAKE ONE'S SELF, is regularly used to mean BECOME. For other forms of verb stem *-x* see notes 43, 53, 64, and 66.

<sup>29</sup> *ga-* as in note 4. *-q-* = indefinite tr. subj. *-i-* = 3d per. masc. tr. obj. *-u-lat!a'-mElEq* as in note 11. Forms with indefinite *-q-* subject are very commonly used in Wishram in lieu of passives.

<sup>30</sup> *il-* = 3d per. neut. noun prefix. *-t-* = inorganic consonant, serving as glide between *l* and *c*. *-cq6-* (= *-cqa-*; *a* is velarized to *6* by preceding *q*) = noun stem WATER; its shorter form *-cq-* is seen in *lcta'cq* THE WATER OF THE TWO (Wishram Texts 190.14). *-ba* = local noun suffix IN, AT (see also notes 33, 39, and 60).

<sup>31</sup> Adverb; *-al* is probably not part of stem, for it is found also in correlative *ca'x-al* ABOVE.

<sup>32</sup> *gal-* as in note 9. *-i-* = 3d per. masc. intr. subj., referring to preceding *i-sk!u'lya*. *-xima-* = verb stem TO PUT DOWN, PUT ON GROUND, LAY DOWN (as tr.); LIE DOWN (as intr.); probably composed of *-x-* ON GROUND(?) and *-ima-* PUT (cf. *ga-ya-x-a'l-ima-lx* HE PUT HIMSELF INTO THE WATER [Wishram Texts 2.5]); whenever indirect object with *-k-* ON is introduced, *-x-ima-* becomes *-xa-ima-* (e. g., *ga-k-l-a-k-xa'-ima* SHE LAID IT DOWN ON IT [Wishram Texts 2.11]). *-xit* = quasi-passive suffix; *-x-ima-xit-* = BE LAID DOWN, LAY ONE'S SELF DOWN, FALL DOWN TO GROUND. *-am* = verb suffix ARRIVE — ING (cf. note 8).

<sup>33</sup> *wi-* = 3d per. masc. noun prefix; masc. noun stems that are non-syllabic or monosyllabic require *wi-* (cf. note 55); those that have more than one syllable have *i-* (see notes 5, 13, 16, 26); for probable origin of *wi-* see note 19. In Chinook *wi-* has entirely given way to *i-*, except as archaism in some place-names and in songs. *-lx-* = noun stem LAND; seen also in *wi'lxam* VILLAGE, *idE'lxam* PEOPLE (see note 12); probably also in *wa'lxi* FISHING STATION and *icE'lxi* STAGING FOR FISHING. *-ba* as in note 30.

<sup>34</sup> *ga-* as in note 4. *-tc-* = 3d per. masc. tr. subj. *-u-* = 3d per. pl. obj., referring to following *idE'lxam* (before verb prefix *-gEl-* 3d per. plural obj. *-t-* is replaced by *-u-*, *-gEl-* then becoming *-g(w)i-*; in other words, *-t-* before *gEl-* is treated analogously to when it comes before *-gEl-*). *-gi-* = plural form of *-gEl-* (see note, 40) OUT FROM ENCLOSED SPACE (cf. *ga-l-a-gE'l-ba* IT FLOWED OUT OF HER [Wishram Texts 94.4]); analogously to *-gEl-* (see note 17) directive *-u-* is here replaced by *-gEl-*. *-kel* = verb stem TO KNOW (cf. *l-k-d-u'-kul* HE KNOWS THEM [Wishram Texts 176.10]); *-gEl-kel* = TO KNOW FROM OUT ONE'S (EYES), hence TO SEE, GET SIGHT OF.

<sup>35</sup> *l-* = 3d per. neut. noun prefix, defining gender of abstract noun stem *-blad*. *-ga-* = 3d per. pl. possessive pronominal prefix, referring to *idE'lxam*. *-blad* = noun stem MULTITUDE, GREAT NUMBER. *lgabla'd idE'lxam* is construed like *ya'gail ik!a'munaq* (see note 25).

<sup>36</sup> As in note 35, except that *-ga-* = 3d per. fem. possessive pron. prefix (merely homonymous with *-ga-* of note 35), referring to *akni'm*.

<sup>37</sup> *a-* = 3d per. fem. noun prefix; though many fem. dissyllabic stems have *wa-* (e. g., *wala'la* POND), it is here replaced by analogy of *ikni'm* (see note 16), as in related nouns *i-* and *a-*, *wi-* and *wa-* generally pair off respectively. *-knim* as in note 16. Logically *akni'm* CANOES is plural, morphologically it is fem., being so referred to in *axu'xt* (note 38); another example of fem. as plural is *wa'mwa* MAGGOTS, masc. *wi'mwa* MAGGOT.

<sup>38</sup> *a-* = 3d per. fem. intr. subj., referring to *akni'm*. *-x-* = verb prefix ON GROUND, ON BOTTOM (?) *-u-* = directive prefix. *-zt* = verb stem TO LIE, SIT, BE PLACED, corresponding in use to Chinook *-c*. This verb stem allows of no formal modification by means of tense affixes.

<sup>39</sup> Composed of demonstrative stem *kw6-* (see note 3) and local suffix *-ba* (see note 33): THAT-IN = THERE.

<sup>40</sup> As in note 34, except that incorporated obj. is *-i-* = 3d per. masc., referring to *yag6'mEnil*, and that *-gEl-* is unmodified.

<sup>41</sup> *ya-* = *i-ya-* as in note 25, *i-* defining HEART as masc. in gender, while *-ya-* refers to *itE'lyan*. *-g6mEnil* HEART seems to be verbal in form, *-Enil* being usitative suffix; *yag6'mEnil* may also be used predicatively to mean HE IS ALIVE.

<sup>42</sup> Particle verb, for which *iki'ax* serves as auxiliary.

<sup>43</sup> *i-* = 3d per. masc. intr. subj., referring to *yag6'mEnil*. *-kiaz* TO BE is another tenseless verb (cf. note 38). It is best, though somewhat doubtfully, explained as composed of verb prefix *-ki-*, which shows lack of object of ordinarily trans. verb, and verb stem *-x* TO DO (cf. Eng. HE DOES WELL, i. e., gets along well); *-a-* would then have to be explained as inorganic glide vowel (cf. Chinook *i-kE'-x* HE IS and Wishram *i-ki'-x-ax* HE IS, HAS BECOME). For syntactic construction, as subordinated to *gacige'lkel*, see note 11.

<sup>43a</sup> *ga-* as in note 4. *-q-* = indef. tr. subj. (cf. note 29). *-i-* = 3d per. masc. tr. obj., referring to *isk!u'lya*. *-u-* = directive prefix. *-lxam* = verb stem TO SAY TO with personal object. This verb form is logically passive.

<sup>43b</sup> Demonstrative pronoun, showing location near 2d person, composed of simple form of independent 3d personal pronoun + demonstrative element *-ɔ-* (cf. also ordinary forms of independent 3d personal pronoun *ya'ɔ-ka* and similarly for other genders) + demonstrative stem *-dau* (= *-da* + *-u*), for which see note 54. Syntactically *ya'ɔdau*, here used substantively, agrees in gender with *yagó'menil*, to which it refers. There is no expressed predicate in this sentence, *yagó'menil* (IT IS) HIS HEART being so used.

<sup>43c</sup> Particle verb, to which following verbs *gatci'ux* and *gali'xóz*, both from verb stem *-x* TO DO, serve as auxiliaries. *Lq'óp* doubtless has onomatopoeic force.

<sup>43d</sup> See note 64.

<sup>43e</sup> As in note 28. CUT IT-MADE-ITSELF = IT BECAME CUT.

<sup>44</sup> *ga-* as in note 4. *-t-* = 3d per. pl. intr. subj., referring to *akni'm*, *ide'lɔam*, and *isk'tu'lya* as combined plural subject. *-k-* = regular replacement of directive *-u-* whenever intr. subj. *-t-* would theoretically be expected to stand before it. *-ɔEni-* (or *-ɔuni-*) = verb stem TO FLOAT, DRIFT. *-yu-* = distributive suffix EACH SEPARATELY (*gotkɔEni'tck* would mean THEY FLOATED UP IN ONE BODY). *-tck* = local verb suffix UP TO SURFACE, UP FROM POSITION OF REST (cf. also *gal-i-x-le'-tck* HE MOVED HIMSELF UP FROM SITTING POSITION, HE AROSE [Wishram Texts 4.6]; *gal-i'-kta-tck* HE ROSE (STICKING HIS HEAD) OUT OF WATER [op. cit., 10.5]); combined with *-ba* OUT OF INTERIOR, *-tck* appears as *-ptck* FROM WATER OUT TO LAND (*gotkɔEni'yuptck* THEY EACH FLOATED ON TO LAND; for change of *-ba* to *-p* cf. *galag'e'ba* with *lag'e'lpɔ* [Wishram Texts 94.7]). This *-tck* should be distinguished from *-tck* of cessative significance, whose function it is to deprive verbs that are continuative or frequentative in form of their continuative force (e. g., *yuwil'al* HE IS DANCING, *gayuwil'alEmtck* HE WAS DANCING (but is no longer doing so)).

<sup>45</sup> Adverbial in force. Logically *sa'qu* (rhetorically lengthened to *sá'qu* to emphasize idea of totality) often seems to be used attributively with nouns (translated as ALL), but grammatically it is best considered as adverbial, even when there is no expressed predicate.

<sup>46</sup> Composed of demonstrative stems *kwó-* (see note 3) and *dau-* (see note 54). Its original significance was evidently THAT (which precedes) and THIS (which follows).

<sup>47</sup> *gal-i-* as in note 32. *-kim* = verb stem TO SAY (without personal object; cf. note 58).

<sup>48</sup> Adverb of modal significance, serving to give doubtful coloring to verb.

<sup>49</sup> Adverb of potential and conditional significance; in formal conditions introduced by *cma'nix* IF, it often has contrary-to-fact implication. This use of modal particles in lieu of verb modes is characteristic of Chinookan.

<sup>50</sup> Evidently contains interrogative stem *qa-* WHAT, seen also in *gra'damt* (note 14). *-ma* can not be explained. This word has been found only in such passages as here, and is very likely felt to be archaic. *lga pu qa'ma* occurs as stereotyped myth-phrase in transformer incidents (cf. Wishram Texts 6.13, 38.6, for similar passages).

<sup>51</sup> Forms in *-aima* ALONE may be formed from simplest forms of personal pronouns (subject intr. incorporated); e. g., *na'ima* I ALONE, *ma'ima* YOU ALONE, *ya'ima* HE ALONE. It is doubtful, however, whether these forms should be considered as intransitive verbs from verb stem *-aima*. Since personal plurals in *-dik* (e. g., *la'imadik* THEY ALONE) occur, it seems preferable to consider them as formed by suffixed *-ma* ALONE? (cf. *qá'a'ma* note 50) from independent pronoun stems in *-ai-* (as in *na'ika*, note 57, and *na'il'a*, note 21); this *-ai-* is in these forms found also in 3d persons (e. g., *la'ima* IT ALONE, as contrasted with *la'ɔka* and *la'ɔt'a*). Chinook *ná'mka* I ALONE, analyzed by Boas as intr. subj. pronoun + verb stem *-ámka*, is probably best explained as simple independent pronoun in *-a-* (*na*, *ma*, and corresponding forms for other persons occur not rarely in Wishram) + *-m(a)* + *-ka* JUST, ONLY (cf. *lu'nka* JUST THREE).

<sup>52</sup> Adverb composed of relative particle *qri-* (cf. *qri* as relative pronoun in Wishram Texts, 188.1) and demonstrative stem *dau-* THIS (cf. note 54). *qri'dau* thus means literally AS, LIKE THIS.

<sup>53</sup> *a-* = tense prefix of future time. *-m-* = 2d per. sing. tr. subj. *-d-* = 3d per. pl. tr. obj., referring to *ide'lɔam*. *-u-* = directive prefix. *-x-* = verb stem TO DO (TO). *-w-* = inorganic consonant induced by *-u-* preceding *k-* sound. *-a* = future suffix.

<sup>54</sup> Demonstrative pronoun, showing location near 1st person, composed of demonstrative stem *dau-* (= *da-*, as in *da'ba* HERE + *-u-*, see note 19) and simple form of 3d per. independent pronoun in *-a* (masc. *ya*, fem. *a*, neut. *la*, du. *cda*, pl. *da*). Forms without *-u-* (e. g., *da'ya*) occur, though much less frequently; deictic *-x* may be added without material change in meaning (e. g., *da'yax* or *da'yax*). *-dau* also occurs as second element in demonstrative pronouns showing location near 2d person (e. g., *ya'ɔdau* THAT masc., note 43b). *da'uya* is here masculine because in agreement with masc. noun *wi'gwa*. Chinook seems to

preserve *da-* only in isolated adverbs like *ta'ke* THEN (= *da'ka* JUST THIS or THAT [cf. Wishram *da'uka* JUST SO]).

<sup>55</sup> *wi-* = masc. noun prefix, with *w-* because noun stem is monosyllabic. *-gwa* = noun stem DAY. *da'uya wi'gwa* THIS DAY is regularly used as stereotyped phrase for TO-DAY; *dau' aga'lax* THIS SUN is also so used.

<sup>56</sup> Analysis given in note 3. Here *kwó'pt*, with well-marked stress accent, preserves its literal meaning of THAT FAR, THUS MUCH, *aga kwó'pt* being regularly used, outside of narrative, to mean ENOUGH. Chinook *kapé't* ENOUGH is doubtless related, but *ka-* can not be directly equated with *kwó-*, which corresponds rather to Chinook *gō* (see note 3).

<sup>57</sup> Ordinary form of independent personal pronoun, composed of stems in *-ai-* (for 1st and 2d persons) or *-a-ɣ-* (for 3d persons) and suffixed particle *-ka* JUST, ONLY, found also suffixed to numerals. *na'ika* is here grammatically unnecessary, but is used to emphasize subject of following verb form.

<sup>58</sup> = *iyamu'lɣam*. *i-* = tense prefix of immediate past time. *-gam-* = combination of 1st per. sing. subj. and 2d per. sing. obj. *-u-* = directive prefix. *-lɣam* = verb stem TO SAY TO with expressed personal object.

<sup>59</sup> Temporal adverb referring to action just past or about to occur, either JUST NOW, RECENTLY, or SOON. Seems to be Klickitat loan-word.

<sup>60</sup> *da'uya* as in note 54; masc. because in agreement with masc. noun *wilɣ*. *-ba* = local noun suffix IN regularly suffixed to demonstrative pronoun preceding noun instead of to noun itself.

<sup>61</sup> *a-* as in note 53. *-t-* = 3d per. pl. Intr. subj., referring to *idE'lɣam*. *-ga-* = element regularly introduced after 3d per. pl. Intr. *-t-* before *-d-i-* TO COME and, before verb stems beginning with *k-* sounds, after 3d per. pl. Intr. *-u-* (cf. note 62). *-d-i-* TO COME consists of *-d-* = directive prefix HITHER, TOWARD SPEAKER, correlative to directive *-u-*, and *-i-* = verb stem TO GO. *-mam-* = form of *-am-* (see notes 8 and 32) used after vowels. *-a* as in note 53.

<sup>62</sup> *al-* = tense prefix of future time employed before vowels (*al-* and *a-* used analogously to *gal-* and *ga-*). *-u-* = 3d per. pl. Intr. subj. used, instead of *-t-*, before verb stems beginning with *k-* sounds (as here *-gim-*). *-gwa-* = *-ga-* as in note 61, *-w-* being inorganic, due to influence of *-u-* preceding *k-* sound (cf. note 53). *-gim-* = verb stem TO SAY; *-kim* (as in note 47) is used when accent immediately precedes, *-gim-* when suffix (here *-a*) is added and accent is pushed forward. *-a* as in note 53. In Chinook *-ugwa-* appears as *-ogo-* (*gwa* regularly becomes *go*); *alugwagi'ma* is paralleled in Chinook by *ogogoē'ma*.

<sup>63</sup> Particle verb TO USE SUPERNATURAL POWER, TRANSFORM, to which following *gacɪ'uɣ* serves as auxiliary. It is one of those very few Wishram words in which glottal catch is found (other words are *-tci<sup>ε</sup>* OR, *εi'ε<sup>ε</sup>ic* BLUEJAY, *dala<sup>ε</sup>a'ɣ* PERHAPS).

<sup>64</sup> *ga-* as in note 4. *-tc-* = 3d per. masc. tr. subj., referring to *isk!u'lya*. *-i-* = 3d per. masc. tr. obj., referring to *itc!E'ɣyan*. Observe that subject noun regularly precedes object noun, their order being thus analogous to that of incorporated pronouns with which they stand in apposition: *-u-* = directive prefix. *-x* = verb stem TO DO (TO).

<sup>65</sup> = *p!a'la*. Particle verb, with which following *amxu'ɣwa* is used as auxiliary. *p!a'l' amxu'ɣwa* QUIET YOU-WILL-BECOME (i. e., you will stop, desist).

<sup>66</sup> *a-* as in note 53. *-m-* = 2d per. sing. obj. with following reflexive element (see *-i-* in notes 9 and 28). *-x-* as in note 28. *-u-x-w-a* as in note 53.

## Editorial Note

Excerpts originally published in Franz Boas, "Chinook," in *Handbook of American Indian Languages, Part I* (Bureau of American Ethnology, Bulletin 40), 578-579, 625-627, 638-645, 650-654, 673-677. Washington, D.C.: Smithsonian Institution (1911).

Sapir's extensive grammatical files on Wishram were later used by Walter Dyk, a student of Sapir's at Yale, in preparing a Wishram grammar for his 1933 doctoral dissertation. This grammar, which remains unpublished, also drew on new material collected both in the field and at Yale, where Philip Kahclamat, a young Wishram speaker, was in residence for a few months in 1932. Sapir's and Dyk's manuscript materials on Wishram are now in the Boas Collection, Library of the American Philosophical Society.

Sapir's description of Wishram diminutive-augmentative consonant "gradation," here and in the previous paper, is the first detailed treatment of this common feature of western North American languages. Sapir's exhaustive description of the elaborate phonetic symbolism of Nootka (1915a) is also reprinted in this volume. For a thorough survey of the literature on American Indian consonant symbolism see Nichols (1971). See also Haas (1970).

## A CHARACTERISTIC PENUTIAN FORM OF STEM

In spite of its somewhat top-heavy introduction Dr. Leo J. Frachtenberg's "Comparative Studies in Takelman, Kalapuyan and Chinookan Lexicography" (*International Journal of American Linguistics*, vol. I, n° 2, pp. 175-182) is a decidedly valuable and welcome contribution to our gradually progressing knowledge of the relations between the several linguistic "stocks" of the Pacific Coast. He does not go so far as to deduce genetic relationship between Takelma, Kalapuya, and Chinook on the basis of the lexical evidence presented in his paper, but he does "make bold to predict that additional data will be produced in the near future" tending to confirm such a conclusion. Elsewhere in the paper he states: "I have collected a mass of material establishing a probable common origin for the Kusan, Siuslawan, Yakonan, and (perhaps) Kalapuyan languages which will be presented in the near future." Though he chides Dixon and Kroeber for their hasty announcement of the Hokan and Penutian groupings, he remarks, somewhat unexpectedly: "The absence of conclusive evidence concerning Penutian and Hokan is the more unfortunate, as there exist strong reasons to believe that the Takelman, Kusan, Siuslawan, Yakonan, Kalapuyan, and (perhaps) Chinookan languages spoken in Oregon may be proven to be Penutian sister-tongues."

All this is very interesting to me, as it chimes with conclusions or hypotheses I had arrived at independently. On the appearance

of Frachtenberg's Coos grammar<sup>1</sup> it soon became clear to me that the morphological and lexical resemblances between Takelma and Coos were too numerous and fundamental to be explained away by accident or plausibly accounted for by borrowing. This in spite of the very great differences of phonetics and structure that separate the two languages. The appearance of Frachtenberg's Siuslaw material<sup>2</sup> has only tended to confirm this impression, further, to make it perfectly obvious that Coos and Siuslaw, as Frachtenberg announces, are divergent representatives of a single linguistic stock. Meanwhile comparison of Takelma, Coos, and Siuslaw with Dixon and Kroeber's Penutian group of California (Costanoan, Miwok, Yokuts, Wintun, and Maidu) disclosed an astonishing number of both lexical and morphological correspondences, correspondences which were first dimly brought to my consciousness years ago by certain morphological resemblances between Takelma and Yokuts, later and more vividly by the decidedly Penutian "feel" of Coos grammar. In spite of our slight knowledge of most of the Californian languages involved, I succeeded in getting together what I believe to be a quite respectable mass of evidence tending to unite the southern

1. Coos, an Illustrative Sketch (*Handbook of American Indian Languages*, BBAE 40, part 2, 1914, pp. 297-429).

2. Lower Umpqua Texts (CU, 4, 1914); Siuslawan (Lower Umpqua), an Illustrative Sketch (*Handbook of American Indian Languages*, BBAE 40, part 2, 1914, pp. 431-629).

languages with those of Oregon into a large and highly differentiated "stock".

Unfamiliarity with Alsea (Yakonan) and Kalapuya made it impossible for me to follow the chain of evidence geographically. Nevertheless, Chinookan points of contact soon manifested themselves too persistently to be brushed aside. After hesitating for a long while to take up seriously the possibility of affiliating Chinook, one of the most isolated and morphologically specialized languages in America, with the Penutian languages of Oregon, I now find myself forced by the evidence to admit such an affiliation as not only possible but decidedly probable. In view of the clear points of lexical contact and of the phonetic shifts that Frachtenberg has established, even if only in a preliminary way, between Takelma and Kalapuya, his further hypothesis of a fundamental connection between Kalapuya and Chinook was, for me, to be looked for *a priori*. I believe it only fair to add that the manuscript evidence that I possess of the relation between Chinook and various languages to the south is much stronger than the comparatively scanty lexical data presented by Frachtenberg<sup>1</sup>.

1. Even of the nineteen cognates given by Frachtenberg no less than nine or ten, it seems to me, are almost certainly borrowings. This is particularly obvious in the case of Kalapuya *u'skan* CUP and *u'lxayū* SEAL. Both of these nouns have taken over bodily the Lower Chinook feminine prefix *u-* of *u'-egan* CUP and *u'lxaiu* SEAL. Moreover, the Kalapuya, as an inland people, could hardly be expected to possess a native term for the seal. As for *u'-egan*, that is merely a secondary feminine formation from Chinook *i'-egan* (MASC.) CEDAR. This alone would prove Kalapuya *u'skan* CUP to be a borrowing from Chinook.

The fifty-three Takelma-Kalapuya correspondences are of a very different sort and bear all the ear-marks of genuineness. I take this opportunity of correcting a few errors. For Takelma *dak'*- TO FINISH (p. 180) read *tlap'g-*; for *t'pall'* SNAIL (pp. 180, 181) read *t'bält'*; for *dip'* CAMASS (p. 180) read *dip'*; for *tlēwex* FLEA (p. 181) read *tlēwēx*. Frachtenberg's statement that "Takelma *ts* remains unchanged" in Kalapuya (p. 180) is incorrect, as

However, further evidence serving to link Chinook both with Kalapuya and with Coos-Siuslaw-Alsea will no doubt have been discovered by Frachtenberg by the time this paper is published.

The greatest surprise was still awaiting me. Tsimshian occupies a peculiarly isolated position. In its morphological aspects it offers hardly any specific points of resemblance to the neighboring Nadene languages (Haida, Tlingit, Athabaskan). With the Wakashan-Salish-Chimakuan group to the south it shares, *e. g.*, initial reduplication to express distributive and plural ideas and a series of classifying suffixes appended to numeral stems. In its deeper morphological features, however, Tsimshian stands quite apart from these languages. Lexically too, aside from a number of more or less patent loan-words, there seem to be no stems that Tsimshian shares with any of the neighboring languages. A tentative comparison with the Penutian (or, if one prefers, hypothetically Penutian) languages of Oregon revealed a considerable number of correspondences both in the lexical material and in some of the more intimate and fundamental features of the morphology. Should it be possible to demonstrate (and I am fairly sanguine that it can be demonstrated) that Tsimshian is a detached northern offshoot of Penutian, we would be compelled to face a most interesting fact in linguistic differentiation and in the distribution of American tribes.

The data for the various assertions I have made in this paper I expect to present *in extenso* in the future. The fundamental type of Penutian language seems to be a predominantly inflective one, as exemplified say in Miwok, Yokuts and, in more specialized form, in Takelma. The tremendous morphological

Takelma possesses no *ts*; *al-ts'il* RED (pp. 180, 181) should be corrected to *al-ts'ilil*.

divergences exhibited by the various languages here grouped together are due, it would seem, to two main types of change: the gradual breaking down of inflective forms and the consequent growth of more analytic forms (e. g., in Costanoan and, in a less extreme way, in Coos); and the evolution of special synthetic developments, as in Chinook, often, no doubt, under the influence of alien languages, as in Maidu and Tsimshian. It is, of course, entirely premature to group the Penutian languages genetically, but the following provisional scheme may be of some slight value as an aid to convenient visualization.

A. Californian group

- 1 { Miwok  
  } Costanoan

2. Yokuts  
3. Wintun  
4. Maidu

B. Oregon group

1. Takelma  
2. Oregon Coast group  
  Coos  
  Siuslaw  
  Yakonan  
3. Kalapuya

C. Chinookan

D. Tsimshian

It may well be that Frachtenberg's as yet unpublished data on Kalapuya and Yakonan will force a readjustment of the languages under B; as for group A, possibly Wintun and Maidu form a closer unit, analogous to that undoubtedly comprised by Miwok and Costanoan<sup>1</sup>.

One of the most striking of the more intimate structural peculiarities of Takelma is the presence of a large number of stems of type *cv, cv(c<sub>2</sub>)-*, i. e. of stems with repeated vowel. In the verb, this method of stem formation has, to a large extent, taken over a grammatical significance, in some cases characterizing the aorist stem, in others, less numerous, the verb-stem proper. It is, however, frequently illustrated in the noun, adjective, and adverb as well<sup>2</sup>. Examples are:

- yana*<sup>3</sup> ACORN  
*mabai* LARGE  
*waga-* TO BRING (non-aorist)  
*baxam-* TO COME (aorist)  
*legem-* KIDNEY  
*yewe*<sup>e</sup> PERHAPS  
*sebe-* TO ROAST (non-aorist)  
*lebei-* TO DRIFT DEAD TO LAND (aorist)  
*yiwini* SPEECH  
*-xiwi-* TO ROT (non-aorist)  
*ginig-* TO GO SOMEWHERE (aorist)  
*mot'op'* SEED-BEATER  
*olom* FORMERLY  
*odo-* TO HUNT FOR (non-aorist)  
*lop'od-* TO RAIN (aorist)  
*sülw'k'* CRICKET  
*üyüt's-* TO LAUGH (aorist)

Turning to Coos, we find that this same type of stem formation, though apparently not provided with formal significance, is very common. It is so very characteristic of the noun, indeed, that Frachtenberg's failure to mention it in his Coos grammar must be set down as a curious oversight. By actual count I find in his Coos

2. For details see The Takelma Language of South-western Oregon (BBAE 40, part 2, 1912, pp. 1-296), §§ 40, 86, 109.

3. I am omitting all stress and pitch accents in this paper, also normalizing all orthographies to correspond to the recommendations of the Phonetic Committee of the American Anthropological Association.

1. See A. L. Kroeber, The Chumash and Costanoan Languages, UCP 9: 237-271, particularly 259-263 (1910); also The Languages of the Coast of California north of San Francisco (*loc. cit.*, 1911, pp. 273-435), pp. 306-308.

vocabulary<sup>1</sup> no less than 140 examples of such nouns (and adjectives), 35 of verb stems, and 9 of adverbs. These figures show conclusively that we are dealing with a real formative feature of the language, not with an arbitrarily selected congeries of words. A few of the examples are :

*yabas* MAGGOTS  
*yalaq* GRAY (of hair)  
*manat* CROWD  
*cala't's*, CRACK  
*qarwa* CHEEK  
*maha-* TO SCARE  
*ak'anak-* TO STICK OUT  
*kay'al-* TO DECAY  
*qala<sup>u</sup>-* TO HURT  
*tlala<sup>u</sup>-* TO BARK  
*hakwat* AS IF  
*che* GONE  
*webel* STOMACH  
*tsebes* ALIVE  
*kel'eths* CORNER  
*l'tpene* WINGS  
*en'ek-* TO STICK OUT  
*eqe* TO DIE (plur.)  
*xeyetl* TO TWIST TO ONE SIDE  
*kele* SHOUTS  
*welax-* TO STOOP  
*kweet:* TO LIVE  
*ehentc* FAR AWAY  
*l'cud* MAT  
*kwinis* FEATHER  
*w:tm* BLOOD  
*cl'uc* RAZOR-CLAM  
*l'kwat* FEATHERS  
*i'ts:l-* TO RECOGNIZE  
*hnt-* TO CARRY  
*tums-* TO HOLD BACK INFORMATION  
*ktiw-* TO OVERTAKE  
*w:xy:m-* TO STEAL

*ylki'* LONG AGO  
*u'yu'* RAINBOW  
*mo'yus* ANUS  
*tso'no'* BOTH WAYS

It does not seem plausible that these and numerous analogous examples are merely secondary phonetic developments due to progressive or regressive vocalic harmony<sup>2</sup>. To at least some extent Coos possesses forms with repeated vowel that are of grammatical significance, notably certain irregular plurals of nouns and adjectives, e.g. :

<i>tse'y-ux<sup>u</sup></i> SMALL	plur. <i>tse'yε'-ne</i>
<i>knēs</i> HUNCHBACK	<i>kene'yεs-ε</i>

The very irregularity of such forms points to their archaic character. They are obviously analogous to such Takelma adjectival plurals as :

<i>-t'gem</i> BLACK	plur. <i>-t'geme-t'it'</i>
<i>-t'gey-ap-x</i> ROUND	<i>-t'geye-p'-it'</i>
<i>ba'als</i> LONG	<i>ba'als-it'</i>

Analogous forms seem to be found in Lower Umpqua (Siuslaw), though apparently not so characteristically. I do not feel as clear about them as yet as about the corresponding Coos formations. Examples are :

*yalqa-a<sup>u</sup>* HOLE  
*baya'tut* WIDOW  
*hatca-t* LONG  
*pa'nqa* MEDICINE-MAN  
*taha'nk* QUIVER  
*ca'ya* PENIS  
*l'saxan* STOMACH  
*k'ayak* EAGLE  
*qa'xat* FISH-NET  
*xwa'ka* HEAD  
*lawat-* TO GAMBLE

1. See pp. 191-213 of Coos Texts, CU 1, 1913.

2. See Frachtenberg's Coos, BBAE 40, 2 : § 7.

<i>amba-</i>	TO BE WILLING
<i>atas</i>	ONLY
<i>wi'mtc</i>	RAT
<i>pi'sip</i>	FISH-HAWK
<i>misi'-a'</i>	ELDER SISTER
<i>l'lmus</i>	CHILD
<i>l'i'wi'st</i>	SUNSET
<i>tsuml'ε'</i>	MUSKRAT
<i>tsi'kw</i>	LEGGINGS
<i>lunitca</i>	MATCHES
<i>pmit-t</i>	SHARP
<i>awi'hn-</i>	TO LOSE
<i>wi'tsn-</i>	TO CAMP
<i>mu'l'u</i>	BREECH-CLOTH BELT
<i>tlxmu'ku'</i>	BOW-STRING

Many more forms of this type, though not as many as in Coos, could be cited, but, on the whole, one gets the feeling that it had ceased to be a live and productive method of stem formation. An apparent tendency to loss of vowels and consequent formation of consonantal clusters would seem to have counteracted the persistence of the type. Comparison with Coos seems to confirm this, e.g. :

L. Umpqua	<i>ma'qut</i> crow
(Siuslaw)	
	<i>tlpa'an, tpe'ε'n</i> wings
Coos	<i>ma'qat</i>
	<i>l'tpene</i>

In both Coos and Siuslaw, it should be noted, forms with repeated vowels are sometimes related, as in Takelma, to monovocalic forms, e.g. :

Coos <i>manat</i>	crowd	<i>manta'-</i>	to keep company
<i>l'tpene</i>	wings, feathers	<i>l'tpe</i>	wings
<i>xalaw-is</i>	heat	<i>xalw-is</i>	hot
L. U. <i>yalqa-au'</i>	hole	<i>yalq-'i'lq-</i>	to dig
<i>pan'qa</i>	medicine-man	<i>psnq-</i>	to dance a medicine dance

Whether the type of stem with repeated vowel is found also in Alsea (Yakonān) must

wait for an answer until Frachtenberg's material is available. This applies also to Kalapuya. The Kalapuya forms that he gives in his comparative study number several of the type, e.g. :

<i>tkanaq</i>	fly
<i>qal'am</i>	silverside salmon
<i>qauwan</i>	Chinook salmon
<i>pa'am</i>	drunk (Chinook Jargon)
<i>qol'oq</i>	swan (Chinook)
<i>dugulhu'</i>	owl
<i>mu'lukwa</i>	cow

but, suggestive as such examples are, not much can be done with them when torn apart from their grammatical and statistical context. In Chinook and Tsimshian the type cannot be demonstrated to exist. It is evident from internal evidence and from its numerous and often complex clusters of consonants that vowels have dropped out very frequently in Chinook, so that an originally present type of stem formation (c)vc,v(c<sub>2</sub>)- would be expected, under the destructive influence of phonetic processes, to have disappeared as such. Possibly, however, comparative evidence and closer study of Chinookan material may eventually reveal the former existence of the type. Such forms as *-kala* MAN (cf. also Wishram *-gi-kal* HUSBAND), *-ka'kole'* EEL < *\*-ka'kwale'* (cf. Wishram *-gakwal*), *-sala* FRESH-WATER CLAM, *təxm* SIX (cf. Wishram *təxm*), and *ca'yam* GRIZZLY BEAR (cf. plural *caya'm-uke*) are, for the present, suggestive but too isolated to constitute convincing evidence.

As soon as we turn to the Penutian languages of California, we are at once struck by the large number of nouns, adjectives, and verb stems that are formed on the pattern (c)vc,v(c<sub>2</sub>)-. Examples from Wintun<sup>1</sup> are :

1. Taken from S. A. Barrett's vocabulary, pp. 81-87 of *The Ethno-geography of the Pomo and neighboring Indians* (University of California Publications in Ameri-

*apa-* mother's brother  
*tabal* tongue  
*daka* belly  
*anak* knee  
*kama* bed  
*taral* mush-paddle  
*kada* deer-snare  
*aka* bitter  
*k'ana* to sleep  
*hara* to go (D) <sup>1</sup>  
*elet* infant  
*te'me* rib  
*kewel* house  
*wene* medicine  
*ti'nik* nose (Southerly dialect)  
*i'mit* milk  
*ticwi'l* rattlesnake  
*hi'ti'* shell-beads  
*l'iki* sand  
*wini* to see (D)  
*ko'so'l* lungs  
*poto* intestines  
*no'ko'* arrow  
*no'lo'* smoke  
*do'ko'* knife  
*teo'ro'* fish-net  
*cotok* pestle  
*su'no'* nose (Northerly dialect)  
*pu'ru'* heart  
*u'du'i* rabbit-skin robe  
*tu'ru'l* magnesite beads  
*tu'nu'k* cradle  
*su'ru't* burden net  
*yu'ru'* rain  
*ku'pu'm* fingers  
*u'tcu'* younger sister  
*lu'mu'* dead  
*mu'hu'* to sing

It is evident at a glance that the type is very much in evidence in Wintun. By actual count I find that considerably more than a third of the nouns and adjectives listed by Barrett for the « Southerly » dialect belong to it.

Equally evident is the type in Maidu. From Dixon's grammar <sup>2</sup> I may quote :

*waka'* meat  
*tsaka'* pitch  
*tsa'wa* teeth  
*paka* sinew  
*ma'wa* hip  
*yaba'* good  
*wasa'* bad  
*-tala-* to crush  
*heme* gopher  
*sede* blood  
*benek* tomorrow  
*hini* eye  
*bini* net  
*ki'wi'* back  
*mini* nipples  
*yimi* arm  
*piti'* dung  
*simi* month  
*tsibi'* nails  
*-pwili-* to roll  
*-tibil-* to wind around  
*wöhöl* heavy  
*kölö-* to rotate  
*ono'-* head  
*ko'wo'* armpit  
*yoso'* field-mouse  
*kono'* baby  
*nolo'* pack-basket  
*bono'* ear  
*poko'* sun  
*koyo'* valley  
*wo'no'-* to die

can Archaeology and Ethnology, vol. 6, 1908, pp. 1-332).

1. Forms marked (D) are quoted from R. B. Dixon's Outlines of Wintun Grammar (Putnam Anniversary Volume 1909, pp. 461-476).

2. Maidu, an illustrative Sketch (Handbook of American Indian Languages, BBAE : 40, part 1, 1910, pp. 679-734).

*buku* tail  
*butu* fur  
*suku* smoke  
*ku'lu* evening  
*mu'su* face

It is clear that the type is as much alive in Maidu as in Wintun, and, as in Wintun, it seems, further, to be rather more characteristic of the noun than of the verb. This may be only apparent, however, as our knowledge of the verb morphology of these languages is far from complete.

Turning to Yokuts, we find the type of stem formation still very much in evidence. I select from Kroeber's lists<sup>1</sup>. Examples of nouns are :

*tʰapad* shoulder  
*ma ad* tears  
*kabad* wings  
*tabak* deer-tick  
*capan* coal  
*wadak* head-net  
*kʷεwεt* back  
*tʰhεtʰ* head louse  
*tεhεr* fog  
*bidik* faeces  
*dimik* prairie falcon  
*tʰipinsky*  
*idik* water  
*cikid* arrow  
*ip'in* ground acorns  
*tʰirik* nose  
*mikic* throat  
*lirit* earth  
*wöhö'cit* panther  
*nɔ'tɔ* youth  
*ɔtɔ* hair  
*pɔtɔ* penis

*cəmɔt* lungs  
*rɔhɔɔ* grizzly bear  
*cɔɔd* antelope  
*tɔpɔr* buckeye  
*tɔxɔtɔ* soaproot  
*sɔ'kən* tobacco  
*cəkɔd* hole  
*ɔdɔt* ball  
*wɔɔk* belt  
*putuc* acorn

The list might be greatly extended. A large number of verbs also belong to this type, e.g. :

*awatʰ* to dislike  
*tawac* to be thirsty  
*paxat* to mourn for  
*tcadax* to turn  
*dixid* to make a basket  
*piniʰ* to ask  
*pitid* to tell  
*pitciw* to catch  
*tcitid* to pull hair  
*winis* to be ready  
*xitʰiw* to be angry  
*tcixitc* to be sick  
*idik* to sing  
*wɔdɔ* to dodge  
*ɔdɔy* to be on  
*cutux* to skin  
*dukud* to bury  
*dumuk* to sweat  
*k'uyuk* to scratch  
*nubuk* to kneel  
*hupuc* to select

Before certain suffixes these stems, like other disyllabic stems, lose their second vowel, e.g. :

<i>dukud</i> (imperative)	}	{ <i>duk-d-un</i> (present-future)
<i>dukud-ji</i> (past)	}	{ <i>duk-d-ut</i> (passive)

According to Kroeber this stem alternation is purely phonetic, not morphologic, in character, so that direct comparison with the stri-

1. See *The Yokuts Language of South Central California*, UCP 2: 165-377 (1907). For this paper I use only Yaudanchi forms (see pp. 240-254 for vocabulary).

kingly similar stem alternations of Takelma (e.g. aorist *p'elg-* TO GO TO WAR : non-aorist *p'elg-*) is not feasible. However, this matter certainly needs further investigation, particularly as not all of Kroeber's forms seem to conform to his phonetic rule (loss of second vowel before a suffix beginning with a vowel). It may well be, on the other hand, that what was in remote origin a purely phonetic alternation in Takelma gradually assumed a morphological function. There is nothing to indicate this at present, however, for Takelma.

In Miwok (Moquelumnan) the presence of the type (c)vc<sub>1</sub>v(c)<sub>2</sub>- is as easy to demonstrate as in Wintun, Maidu, and Yokuts. For examples of nouns and adjectives I quote from Barrett's vocabularies of Coast Miwok <sup>1</sup> :

*nawa* old man  
*ata* elder brother  
*saka* cradle  
*panak* red-headed woodpecker  
*patca* poison  
*wala* Indian potatoe  
*beleke* neck  
*ewe* milk  
*wene* medicine  
*ki'lli* antler  
*ki'ti'lak* butterfly  
*pi'tci'* nails  
*ko'no'* bow  
*loko* tule  
*olok* ocean  
*posol* lungs  
*mo'lok* condor  
*koto* grasshopper  
*tso'to'i* short  
*pu'tu'* infant  
*pu'lu'k* belly  
*ku'lu'm* bone  
*pu'tcu'* wild onion

*u'ku'* hand  
*tu'nu'k* cradle  
*su'ku'i* sand  
*mu'lu'-ta* black  
*w'lu'-ta* red  
*hu'ku'* stinking

From Kroeber's material <sup>2</sup> the following verb stems are cited :

*yaɾa* to sleep  
*kata* to shut  
*ete* to see  
*etepö* to lie on one's stomach  
*kelpe* to swallow  
*nete* to count  
*nipitö* to sit with folded leg  
*hili* to pinch  
*öwö* to eat  
*koyok* to see  
*toloye* to hear  
*lutsu* to ascend  
*ubu* to drink  
*umu* to come  
*yunu* to kill  
*kusu* to sit with stretched leg  
*nuzu* to undress  
*uku* to enter  
*utcu* to stay  
*yuku* to swing

Costanoan, finally, is perfectly analogous in this respect, as in so many others, to Miwok. Examples of nouns and adjectives are again quoted from Kroeber <sup>3</sup> :

*ama* person  
*wara* body  
*patcan* blood

2. See his Miwok sketch (pp. 278-319) in *The Languages of the Coast of California north of San Francisco*, UCP 9: 273-435 (1911). The Northern Sierra dialect is quoted.

3. See vocabularies in *The Chumash and Costanoan Languages* (UCP 9: 237-271 [1910]).

1. See *The Ethno-geography of the Pomo and neighboring Indians*, UCP 6: 68-80.

*lawan* bow  
*wasar* wind  
*lanai* neck  
*batac* foot  
*tcara* sky  
*wakan* snow  
*besexem* old woman  
*eyes* beard  
*tceyes* jackrabbit  
*weren* rabbit  
*wetel* large  
*sini* child  
*kinir* fish  
*pitin* belly  
*mini* heart  
*liti* bow  
*wixi* fish  
*worox* hair  
*kotco* boy  
*otco* ear  
*koro* foot, leg  
*conok* bow  
*moto* cloud  
*yokom* ice  
*tolos* knee  
*colok* moccasin  
*coto* fire  
*locko-*, *laska-* white  
*colko-* black  
*xutu* belly  
*kunuc* pipe  
*umux* wolf  
*pusut* small

It is worth noting that disyllabic stems of this type are in some dialects, particularly in that of Monterey, sometimes reduced to monosyllables by the loss of the second vowel, *e.g.* :

Monterey	S. Juan Bautista
<i>xurks</i> neck	<i>xorkos</i>
<i>tols</i> knee	<i>tolos</i>
<i>tceis</i> jackrabbit	<i>tceyes</i>

Some examples, furthermore, of vocalic repetition may be only the secondary result of assimilation, *e.g.* :

- S. Clara *oroc* bear *ores* (four other dialects)  
 S. Cruz *lasa* tongue *lase-* (four other dialects)  
           *tcipi* knife S. J. B. *t'ipe*  
                           S. Francisco *tipa*

For examples of Costanoan verb stems of type (c)vc<sup>1</sup>v(c<sub>2</sub>)- I quote from De la Cuesta's Mutsun vocabulary <sup>1</sup> :

*ama* to eat  
*ara* to give  
*axa* to comb  
*ata* to examine  
*wara* to cut  
*xawa* to call  
*saya* to shout  
*ene* to write  
*ele* to raise  
*wexe* to shield  
*mete* to hide  
*sepe* to cut hair  
*tere* to cut hair  
*pele* to stick  
*ipili* to lie down  
*witi* to fall  
*wixi* to fish  
*nimi* to strike  
*xiri* to make dried meat  
*olo* to become blind  
*yoko* to become ashes  
*moko* to be born  
*roto* to drown  
*xopo* to give water  
*tcorok* to become sad  
*upu* to pay  
*utu* to guard  
*luxun* to stick in mud

1. See J. A. Mason, *The Mutsun Dialect of Costanoan based on the Vocabulary of De la Cuesta* (in UCP 11: 399-472 [1916]).

*rusu* to spit  
*sumu* to decay  
*tupun* to finish  
*teulu* to jump

This list might be vastly extended. That the second vowel is felt as an integral part of the stem is shown by its persistence after infixed frequentative *-s-*, *e.g.* :

<i>ele-pu</i> to go	<i>else -pu</i> many go
<i>epe</i> to pass	<i>epse</i> many pass

The final impression left on one's mind is that the stem type (c)vc<sub>1</sub>v(c<sub>2</sub>)- is quite unmistakably, not to say exuberantly, represented in all the Penutian languages of California. It is, further, just as unmistakably in evidence in Takelma and Coos. Further north it appears to die out, in all probability owing to the operation of destructive phonetic laws. Its persistence to a minor extent in Lower Umpqua (Siuslaw), however, is highly probable, while further data may eventually indicate its presence also in Kalapuya. In other words, we are not far from having demonstrated its characteristic presence in the Penutian languages as a whole.

Whether any conceptual significance originally attached to this type of stem formation it is quite impossible to say at present ; quite probably it will always remain impossible. It will be interesting to determine later whether

the Takelma alternation between the aorist verb stem with repeated vowel and non-aorist verb stem with single vowel is an archaic Penutian feature or a specialized development peculiar to Takelma. It is quite likely, indeed, to prove related to the alternation in Coos and Siuslaw between the short form and the « amplified » form of stem (generally with *a*-vowel), *e.g.* :

Coos	<i>ikwi'tt-</i> to follow	<i>ikwi'yatt</i>
	<i>tcnntt-</i> to reach	<i>tcnait</i>
Siuslaw	<i>tku'm-</i> to close	<i>tkwam-</i>
	<i>hi'ts-</i> to put on	<i>hi'yats-</i>
	<i>i'tq-</i> to dig	<i>yatq-</i>
	<i>hau'-</i> to be ready	<i>hawa-</i>
	<i>wi'tu'-</i> to agree	<i>wi'twa-</i>

The primary function of the amplified stem is the indication, apparently, of durative activity. Assuming the « amplified » stem of these languages to be related to the aorist (present-past) stem of Takelma, it remains to be determined whether their amplifying *a*-vowel is generalized from stems with radical *a* (*e.g.* Siuslaw *hau'-*) or, on the contrary, the repeating vowel of Takelma is a secondary assimilation from an older *-a-* (*e.g.* *p'elag* from *\*p'elag-*). More penetrating study of the Californian Penutian languages may help to solve this and other similar problems.

## Editorial Note

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Sapir's suggestion of the "characteristic presence in the Penutian languages as a whole" of disyllabic stems with a repeated vowel should be compared to his identification of a similarly diagnostic stem-type (with deletable initial vowel) for Hokan (see 1917e, 1920b, 1921o, and 1925b).

There is evidence that Sapir had second thoughts about Penutian stem shapes after the completion of this paper in early 1919. In November of that year, following the publication of Dixon and Kroeber's full lexical evidence for California Penutian (Dixon and Kroeber 1919: 56-61), Sapir wrote to Kroeber, "I feel the typical Penutian stem is long, often 3 or 4 syllables in original form," suggesting such reconstructions as *\*ilap̄iṭa* 'fish' and *\*yikati* 'one' (Golla 1984: 315). A characteristic stem-type is not included by Sapir as a diagnostic trait of Penutian languages in his final classificatory statement (1929a: 140). Later work in comparative Penutian morphology has tended to emphasize the centrality of stem vowel ablaut, frequently coupled with suffixation as a "morphological process," rather than focusing on stem shape *per se* (Hymes 1957; Silverstein 1979: 663-667).



## A CHINOOKAN PHONETIC LAW

It is the purpose of this paper to show how the operation of a phonetic law, hitherto unnoticed, brought about a number of irregularities in the use of pronominal elements in Chinookan. Certain incidental inferences on more fundamental points of Chinookan linguistic history also suggest themselves. These will be briefly referred to at the end of the paper.

If we examine the Chinookan system of transitive and intransitive pronominal prefixes of the verb and corresponding possessive prefixes of the noun<sup>1</sup>, we shall note three apparently unrelated irregular features which involve an alternation of *g* (which may be modified to *k* or *kx*<sup>2</sup>) and the palatal sibilant affricate *tc*. These are as follows :

1. The possessive prefix for the third person singular feminine ("her") is *-ga-* when the noun itself is feminine, neuter, dual, or plural, i. e. is preceded by the gender-number prefixes :

	Lower Chinook	Wishram <sup>3</sup>
sing. fem.	ō-	(w) a-
neut.	L-	it-
du.	c-, s-	ic-, is-
plur.	t-	id- (it-)

but is *-tca-* when the noun itself is masculine,

1. See F. Boas, *Chinook* (in *Handbook of American Indian Languages*, Bureau of American Ethnology, Bulletin 40, part 1, 1911, pp. 559-677), particularly pages 580, 581, and 585.

2. For consistency's sake I am preserving Boas' Chinook and my own Wishram orthography without modification.

3. An Upper Chinookan dialect. I quote from my MS data.

i. e. is preceded by the gender-number prefix :

masc. sing.    ē-, i-    (w)i-

Examples (Wishram dialect) are :

Absolute		Possessive : "her"
<i>wa-ska'n</i>	cup	<i>a-ga'-skan</i>
<i>it-tcwa'</i>	water	<i>it-ga'-cq</i>
<i>is-qxu's</i>	eyes	<i>is-ga'-xus</i>
<i>i't-q"ti</i>	house	<i>it-ga'-q"t</i> (-kō'-q"t)

but :

*wi'-lɣam*    village    *i-tca'-lɣam*

2. The possessive prefix for the first person singular ("my") is *-gE-* (Wishram *-g-*, *-k-*; *-x-* before *k*-stops) when the noun is feminine, neuter, dual, or plural, but *-tce-*, *-tcí-* (Wishram *-tc-*) when the noun is masculine. Lower Chinook (C.) and Wishram (W.) examples are :

Absolute		Possessive : "my"
C. <i>ō'-pL!ike</i>	bow	<i>ō-gu'-pL!ikē</i> ( <i>-gnu-</i> labialized from <i>-gE-</i> because of preceding <i>ō-</i> )
W. <i>a-kni'm</i>	canoes	<i>a-x-kni'm</i>
C.		<i>L-gE'-qacqac</i> my grandfather
W. <i>is-qxu's</i>	eyes	<i>is-k-xu's</i>
W. <i>i't-ɸc</i>	feet	<i>i't-k-ɸc</i>

but :

C. <i>i-ts!E'mENō</i>	wooden spoon	<i>i-tce'-ts!EMENō</i>
W. <i>wi'-tq</i>	body	<i>i'-tc-tq</i>

3. Aside from certain secondary irregularities in the third person dual and third person plural which do not concern us here, the pronominal subject of the transitive verb differs from the pronominal subject of the intransitive verb (and pronominal object of the transitive verb) only in the case of the third person singular masculine and third person singular feminine, the difference between the two sets of forms being for the most part indicated by position (the subjective pronominal prefix preceding the objective pronominal prefix) and, in part, by the use of a "postpronominal" particle *-g-* which indicates that the preceding pronominal element is used as the subject of a transitive verb. For "he" (and "him") and "she" (and "her"), however, the following distinctive forms are used:

Intransitive		Transitive
3d person singular, masc.	<i>tc-</i>	he <i>i-he</i> , him
	fem.	<i>g-</i> she <i>a-she</i> , her

The forms will be better understood from the following Wishram examples:

*i-tc-i'-uwaq* he killed him (*i-* is temporal; *tc-* "he"; *-i-* "him")

*i'-tpx* he comes out of the house (*i-* "he")

*i-g-i'-uwaq* she killed him (*-g-* "she")

*a'-tpx* she comes out of the house (*a-* "she")

Contrast:

*i-m-i'-uwaq* you (sing.) killed him (*-m-* "thou")

*a-m-tba'y-a* you will come out of the house (*a-* is temporal)

*i-tc-m-u'woq* he killed you, in which *-m-* "thou, thee" is used both as transitive subject and as intransitive subject and transitive object.

How are we to explain these irregularities? The distribution of the forms in question is such as to make it probable that we are dealing with a phonetic factor rather than a morphol-

ogical one in the first instance. Cases 1 and 2 are parallel phonetically:

1. *a-ga-* "her" (fem. noun): *i-tca-* "her" (masc. noun)

2. *a-g-* "my" (fem. noun): *i-tc-* "my" (masc. noun)

and suggest at once that the masculine prefix *i-* palatalized the older *-ga-* "her", *-g(ɛ)-* "my", to *-tca-*, *-tc(ɛ)-*, perhaps via palatalized *k-* sounds (*\*-ga-*, *\*-gɔ-*). But how account for the forms in case 3 (fem. *g-*: masc. *tc-*), and why should only these forms be exclusively characteristic of the subjective transitive verbal paradigm? If we venture to reconstruct them in accordance with cases 1 and 2, we get:

*\*ag-* "she" (transitive subject)

*\*itc-* "he" (transitive subject)

< *\*ig-*

The phonetic parallelism would then be perfect in the three cases. If we compare the theoretical forms *\*ag-* "she" and *\*itc-* "he" with the remaining subjective forms of the transitive verb, we obtain at once a perfectly regular and intelligible set of forms. Including the "post-pronominal" *-g-*, the system is as follows:

1st pers. sing.	<i>n-</i>
exclusive dual	<i>nt-g-</i>
exclusive plural	<i>nc-g-</i> (also heard as <i>ntc-g-</i> , with <i>t</i> -glide)
inclusive dual	<i>tx-g-</i> (simplified in Wishram to <i>t-g-</i> )
inclusive plural	<i>lx-g-</i> (simplified in Wishram to <i>l-g-</i> )
2nd pers. sing.	<i>m-</i>
dual	<i>mt-g-</i>
plural	<i>mc-g-</i>
3d pers. sing. masc.	<i>*i-tc-</i> < <i>*i-g-</i>
sing. fem.	<i>*a-g-</i>
sing. neut.	<i>t-g-</i>
dual.	<i>c-g-</i>
plural	<i>t-g-</i>

Compare these pronominal prefixes with the corresponding intransitive subjects (and transitive objects) :

1st pers. sing.	<i>n-</i>
exclusive dual	<i>nt-</i> ( <i>nd-</i> )
exclusive plural	<i>nc-</i> ( <i>ntc-</i> )
exclusive dual	<i>tx-</i>
exclusive plural	<i>lx-</i>
2nd pers. sing.	<i>m-</i>
dual	<i>mt-</i> ( <i>md-</i> )
plural	<i>mc-</i>
3rd pers. sing. masc.	<i>i-</i> ( <i>y-</i> before vowels)
sing. fem.	<i>a-</i>
sing. neuter	<i>ɬ-</i>
dual	<i>c-</i> (in certain cases <i>ct-,cd-</i> )
plural	<i>t-</i> (in certain cases <i>u-gwa-</i> , Lower C. <i>o-gō-</i> )

Aside from the irregular intransitive subjective (not objective) forms in the third person dual and plural (*ct-*; *u-gwa-*), whose use is limited to certain cases, the transitive paradigm obviously derives from the intransitive by the addition of a transitivizing particle *-g-* to the pronominal element, except in the first person singular (*n-*) and second person singular (*m-*), in which cases position alone differentiates the transitive and intransitive subjective uses. If our analysis is correct, the actual transitive subjects for the third person singular, masc. *tc-* and fem. *g-*, are not true pronominal forms in origin; the older pronominal elements, *i-* and *a-* respectively, still in evidence in the intransitive paradigm, have disappeared as such but have left their trace in the different treatment of the old transitivizing *-g-*, which now appears in twofold form and with transferred function as *tc-* "he" and *g-* "she."

We may therefore reasonably infer that in all three cases what now appears as a peculiar morphological alternation of *g*: *tc* is really a survival of an old phonetic law, according to which *g* (*k*) was palatalized by immediately

preceding *i* to anterior palatal *g* (*k*), which in turn shifted at an early period of Chinook history to *tc*. Presumably an old *\*ik!* shifted to *itc!*, but I have no evidence of this. The law is no longer operative as such. It had run its course long before Chinookan split up into its present dialects, its consequences are now of a strictly functional character, and its operation was probably checked at an early period by analogical leveling. There may at one time have been such alternations as *\*i-tca'la* "man": *it-ka'lukc* "men" or *\*n-i'-tcim* "he said": *n-a'-kim* "she said", which were then leveled out to the forms *i-ka'la*: *it-ka'lukc*, *n-i'-kim*: *n-a'-kim* that we now possess. But there is nothing to prove this and it is more probable that the phonetic law had ceased to operate before the welding of noun and verb stems with pronominal and with gender-number class prefixes. It is not at all unlikely that such elements as *i-*, *wi-* of masculine nouns and *n-i-*, *n-a-* of verb forms were independent elements or assemblages of elements (e.g. *\*w-i* "he"; *\*n-i* "then-he", *\*n-a* "then-she"), which became attached to noun and verb stems at a comparatively recent date. On the other hand, we must assume that such assemblages as *\*i-tca* < *\*i-ga* "hers" (masc.), *\*i-tcə* < *\*i-gə* "mine" (masc.), and *\*i-tcə* < *\*i-gə* "he" (transitive subject), *\*a-gə* "she" (transitive subject) and *\*c-gə* "they two" (transitive subject) formed firm units at a much earlier date. Within such units the phonetic law could operate but not outside of them.

Comparative evidence, making use of data outside of Chinookan, may some day succeed in confirming our phonetic law by showing that certain cases of *tc* in stems go back to *g* (*k*) after *i* (say *-itc*, fem., "tail of quadruped"), but at present we cannot do this. So far I know of only one other case of *tc* which may be presumed, with some plausibility, to derive from palatalized *k*. This is Upper Chinook

*-i-tc(i)*, which forms personal plurals of demonstrative and personal pronouns, e.g. Kathlamet *La-i-tci* "those" (indef.), *ta-i-tci* "those" (def.), based on pronominal stems *La-* "it", *ta-* "they"; Wishram *da'-i-tc*, *ta'-i-tc*, *a'-i-tc* "they", based on pronominal stems *da-* "they", *ta-* "it", *a-* "she"; Wishram *da'uda-i-tc* "these people", *ta'xia-i-tc* "yon (indef.) people", based on demonstrative *da'uda*, *ta'xia*<sup>1</sup>. This suffix corresponds morphologically to *-kc-*, *-di-kc-*, *-i-kc-* of other forms (e.g. nominal plural *-kc* in cases like W. *it-ka'-lu-kc* "men"; W. *ta'it!i-kc* "they too", cf. *ta'it!a* "it too"; *da'ima-di-kc* "they alone", cf. *da'ima*; Kathlamet *tata-i-kc* "these people", cf. *tata'-x* "these"). Presumably Upper Chinook *-i-kc* is unlauded from older *\*-a-kc* < *\*-a-ki-c* (cf. *ta'it!a* : *ta'it!i-kc*; *-di-kc* < *\*da-ki-c*, personal plural in *\*-ki-c* of *da-* "they"). In Lower Chinook plural forms in *-kc*, *-ikc*, and *-tikc* occur plentifully with nouns, both animate and inanimate (e.g. L-q!<sup>l</sup>ēLxā'pu-kc "coats", *t-ia'-gala-i-kc* "his firs", *ia'wux-ti-kc* "his younger brothers"), but not with demonstrative or personal pronouns. The Lower Chinook suffix for personal plurals in the demonstrative is *-c* (e.g. *x'itac* "those people", visible, *qōta-c* "yon people", invis.), probably the same element as the *-c-* of prefixed *nc-* "we" (excl.) and *mc-* "ye" (cf. *n-* "I", *m-* "thou"). The best way to explain the various plural suffixes in Chinookan seems to be to assume an old element *\*ki*, preserved in palatalized form in Upper Chinook *-i-tc(i)*; a plural element *-c*; and a double plural *-kc* < *\*-ki-c*.

Another survival of the old *\*-ki* plural may be Lower C. L-*a-tct* "mothers" < *\*t-a-ki-t* : L-*aa* "mother".

The data presented in this paper suggest a number of further problems, which we can hardly do more than touch upon.

1. The disappearance of *\*i-* and *\*a-* in the old

1. See F. Boas, *op. cit.*, pp. 623, 625, 627.

forms *\*itc(ə)* "he" and *\*age* "she" is merely an early phase of a phenomenon that seems to have been characteristic of Chinookan at all times, the loss of short unaccented vowels. The accent of Chinook is a strongly expiratory one, seems to have been regulated by morphological considerations (contrast W. *galu'pa* "she went out of the house" with *aluba'ya* "she will go out of the house"; future *-a*, as shown also by Lower Chinook evidence, shifts the accent forward), and has left in its train a number of phonetic consequences, both early and dialectic, the chief of which are the disappearance of short vowels (cf. vowelless stems like *-tq* "body", *-tcktc* "to wash"; alternations like *n-* "I", as verb prefix, with independent *na'*, W. *-g-* "my" with Lower C. *-gE'-*; loss of final vowels which reappear in protected forms, e.g. Lower C. *i-sā'mE'* "lid" < *\*-sā'məlga* : L-*ia'-SEMElqa-ks* "their lids" < *\*-sāmə'lqa-*), the shortening of unaccented and the lengthening of accented vowels (e.g. Lower C. *\*i-cā'yim* "grizzly bear" : plur. L-*cayā'm-u-kc* < early Chinook *\*ca'yam* : *\*cayā'm-*), and the weakening of consonants after unaccented vowels (cf. above examples of W. *'p* : *'b'*; Lower C. *q* : *'g'*).

2. As regards the old unaccented *\*i-* and *\*a-* which we must suppose to have disappeared before transitivizing *\*-gə-*, we may note that it is characteristic of all transitive forms that the pronominal subject is unaccented, while in many instances the intransitive subject receives the accent. Lower Chinook seems to preserve the old accentual conditions better than the upper dialects, which have undergone further shifts of accent with resulting loss of reduced vowels (e.g. Lower C. *atcE'tax* "he made them" : W. *gatctūx*). A good example of such accentual alternation is Lower C. LE'- "it" (intr. subj.) : L- "it" (tr. subj.) in *alE'nkatka* "it comes flying above me" : *alLigE'licxEM* "it sings for him"<sup>1</sup>. This is not the place to

1. *Op. cit.*, p. 588.

pursue the matter further, but we may at least point out that the transitivity  $*-g\delta-$  is in all probability identical with the  $-gE-$  of the "adverbial prefixes"  $gE-l-$  "for, on account of" and  $-gE-m$  "with, near". It is remarkable that the pronominal element (indirect object) to which  $-gE-l-$  and  $-g\dot{E}m-$  are suffixed never receives the accent, which either strikes the  $-gE-$  or some syllable following it. In other words, the treatment of pronominal element + transitivity  $*-g\delta-$  and that of pronominal element + indirective  $-gE-l-$ ,  $-g\dot{E}m-$  are parallel. But note that the pronominal element (indirect object) is frequently, even typically, accented before the "adverbial prefix" (really postposition)  $-l-$  "to, for", with which  $-gE-l-$  is compounded; e.g. W. *inia'lut* "I gave it (masc.) to her", Lower C. *läl'loc* "it was to her". If  $-l-$  and  $-gE-l-$  were strictly parallel elements, it should be possible to have such parallel forms as  $a'-l-$  "to her" and  $a'-gE-l-$  "for her", whereas we consistently have  $a'-l-$  "to her" but  $a-gE'l-$  or  $a-gE-l'$  "for her". This can only mean that  $-l-$  and  $-gE-l-$  are not morphologically parallel, but that  $-gE-$  is an element which somehow displaces the pronoun and draws the accent to itself. Its power to take the accent away from preceding elements is further indicated by the fact that it regularly occurs with voiced  $g$ , not with voiceless  $k$  or affricative  $kx$  (cf. remarks in I.).

What is this old element  $*-g\delta-$ , which now appears as transitivity  $-g(E)-$ , as third person singular masculine and feminine transitive subject ( $ta[E]-$  "he",  $g(E)-$  "she"), and as first component of the verb prefixes  $-gE-l-$  "for" and  $-gEm$  "with"? It seems likely that it is an old demonstrative or deictic stem which is either predicatively related to the preceding pronominal element or which serves to emphasize or displace the pronominal element and to which the postposition ( $-l-$ ,  $*-m-$ ) is attached as an enclitic. A cluster of elements like

$i-gE-l-$  "for him" originally meant  $i-gE'-l-$  "him -that one-to, for him". Similarly, at a far earlier stage, a transitive cluster like  $t-gE'-n-$  (W.  $t-g-n'$ ) "they (subj.) -me (obj.)" or  $*i-gE'-m-$   $>$   $*i-tcE'-m-$   $>$   $tcE'-m-$  (W.  $tc-m'$ ) "he (subj.) -thee (obj.)" really indicated "they-that (it is) -me", "he -that (it is) -thee". If this is correct, the original difference between the intransitive and transitive phrase must have been one of sentence idiom. "He goes" was expressed as "he goes", but "he kills her" as "he that (is) (who) kills her".

This deictic or demonstrative  $*g\delta-$  can only be a reduced form of post-accentual  $-ka$ , which occurs freely in Chinookan numerals, pronouns, and adverbs as deictic element ("only, just"). Examples are W. *i'xt-ka* "just one", *na'i-ka* "I", *a'x-ka* "she", Lower C. *na'm-ka* "I alone", *é-ka* "thus", *kawa't-ka* "soon", *nan'it-ka* "indeed", W. *iwa't-ka* "to yon (place)". This deictic  $'-ka$ , in turn, is obviously merely an enclitic use of an old demonstrative stem  $ka$  "that" which is no longer in free Chinookan use but which survives in Lower C.  $ka$ ,  $c-ka$  "and" and as petrified temporal  $ka-$  "that (time)" in Lower C.  $ka-wa't-ka$  "soon" ( $<$  "to just that [time]", parallel in form to W.  $i-wa't-ka$  "to just yon [place]") and  $ka-wi'x$  "early" (cf. *wux'i'* "tomorrow", W. *wax* "dawning"); cf. also W. tense prefix  $ga-$ ,  $ga-l-$  of remote past time. All these Chinookan elements ( $ka$ ,  $ka-$ ,  $-ka$ ;  $ga-$ ;  $-gE-$ ), finally, are reflexes of a wide-spread demonstrative stem  $*ka$  "that", often used as a general term of reference, found in other Penutian languages (e.g. Coos  $-k\ddot{a}$  in  $x\ddot{a}-k\ddot{a}$  "he"; Takelma  $ga$  "that"; Yokuts  $ka$  "that" [vis.]; Miwok  $i-ka$  "that"; Tsimshian  $-gE$  absent connective,  $-ga'$  absent demonstrative added to final noun in sentence).

3. It is fairly clear that the two fundamental factors in the development of the somewhat irregular morphology of Chinookan were a

strong and movable stress accent and, as a result of this, the tendency for vowels to drop out and for originally independent elements to melt together into complex assemblages. Thus the old sentence, which seems to have been constructed on rather simple, analytical, lines, tended more and more to petrify into a highly synthetic sentence-word. We have already hinted at the probability that the phonetic change of *g* to *tc* antedated the inclusion of certain elements in the verb. Internal evidence makes it practically certain that at least the tense prefixes were late in coming into the verb complex. In the first place, the tense prefixes of Lower Chinook differ considerably from those of the upper dialects<sup>1</sup>, so that it looks at though an old set of temporal particles or adverbs (Lower C. *a*; *n-*; W. *a*, *a-l*; *i*, *i-g*; *na*, *na-l*; *ni*, *ni-g*; *ga*, *ga-l*; *n-*) had coalesced with the following pronominal prefixes of the verb in the independent life of the various dialects. Moreover, these elements do not behave as though they had ever coalesced into a phonetic group with the early Chinookan forms of the transitive forms for "he" (*\*itcc-*) and "she" (*\*agʷ-*). Thus, in Wishram we have forms like *i-g-i'-ux* "she made him", in which the tense prefix *i-* does not palatalize the following *-g-* to *-tc-*, no doubt because it did not enter into the verb complex until long after the palatalizing effect of an *i-* had spent its force. If the *i-* had been prefixed at the time that the pronominal element *g-* "she" still existed in the fuller form *\*agʷ-*, it would have required an intervocalic *-g-* and the form *\*ig-agʷ-* would have arisen (cf. modern forms like *ig-a'-tpa* "she came out of the house"). Similarly, a form like Lower Chinook *atcE'tax* "he made them" evidently arose before the tense prefix *a-* was part of the verb complex, for *a-* could not have palatalized an original *\*-gʷ-* to *\*-tcʷ-* while the

1. *Op. cit.*, pp. 577-79.

older pronominal form *\*itcʷ-* would have required as tense prefix the pre-vocalic *n-*, hence *\*n-itcʷ-*.

4. It is a well known linguistic phenomenon that similar or identical sounds, groupings of sounds into phonetic patterns, or phonetic processes may characterize a number of independent languages or even linguistic stocks within a continuous area. Such examples are suggestive of phonetic interfluences between distinct languages presumably through the medium of bilinguals. The change of *g* or *k* to *dj* or *tc* because of the palatalizing influence of a preceding or following front vowel (*i* or *e*) is perhaps too general a process to warrant our attaching much importance to its occurrence in a number of contiguous languages. Nevertheless it is of some interest, and, it may be, of historical significance, to point out that the change of *k-* sounds or of palatalized *k-* sounds to *tc-* sounds is found in a continuous or nearly continuous area from a northern point on the west coast of Vancouver Island south to the mouth of the Columbia. All the Nootka dialects, both Nootka proper and Nitinat-Makah, have altered the original Wakashan anterior palatal *k-* sounds, preserved in Kwakiutl, to corresponding palatal sibilant affricatives; Kwakiutl, *g'* (*g*) and *k'* (*k*) appear as Nootka *tc*; *k'* (*k'*) as *tc'*; and *x* (*x*) as *c*. A large number of Salish dialects, furthermore, have altered the original unlabialized *k-* sounds to *tc-* sounds. I am quoting Dr. Boas' personal statement on this point and am unable to give the geographical distribution of the Salish *tc-* dialects. I should perhaps add that the Lower Chinook *k-* (*k-*) sounds, which correspond to ordinary *k-* sounds in Wishram, are a comparatively recent dialectic development before *i-* vowels and that they have nothing whatever to do with the old, general Chinookan, change of *g* to *tc* after *i-* vowels which is the subject of this paper.

## Editorial Note

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Silverstein (1977), working with richer comparative data, has reaffirmed Sapir's analysis of the Chinookan ergative prefixes, although he posits a basic zero marker, rather than *a-*, for the third person masculine subject/agent prefix. Like Sapir, Silverstein sees "heavy categorial influence from the languages surrounding [Chinookan] on the coast," resulting in a rich elaboration of ergative inflectional morphology out of an earlier "nominative-accusative phrasal-enclitic syntax" (1977: 154).

Sapir's ms. corrigenda on his copy are as follows:

<i>Original</i>	<i>For:</i>	<i>Read:</i>
p. 106, col. 1, first table		Reverse headings "intransitive" and "transitive"
p. 107, col. 2, last para.	<i>ta-</i>	<i>ta</i>
p. 108, col. 1, l. 11	<i>-kc-</i>	<i>-kc</i>
p. 108, col. 1, l. 22	in animate	inanimate
p. 108, col. 1, fn. 1	See,	See
p. 108, col. 2, l. 1	<i>age-</i>	<i>agə-</i>
p. 108, col. 2, l. 3	characteristic	characteristic
p. 108, col. 2, l. 8	whith	with
p. 108, col. 2, l. 26	<i>q:'g'</i>	<i>'q:'g'</i>
p. 109, col. 1, l. 4	<i>gE-L-</i>	<i>-GE-L-</i>
p. 109, col. 1, l. 5	<i>-gE-M</i>	<i>-GE-M-</i>
p. 109, col. 1, l. 18	to her,"	to her"
p. 109, col. 1, last l.	tachedas	tached as
p. 110, col. 1, l. 25	<i>itce-</i>	<i>itcə-</i>
p. 110, col. 2, l. 29	Kwakiutl, g·	Kwakiutl g·



# THE RELATIONSHIP OF MIXE TO THE PENUTIAN FAMILY<sup>1</sup>

By L. S. FREELAND.

## MORPHOLOGICAL

THE structure of Mixe is rather bare and scanty, at least when compared with the rich and fairly intricate grammatical patterns found in some of the Penutian tongues of California and Oregon. One gets the impression that in Mixe the morphology has worn thin.<sup>2</sup> There is a strong tendency to fall back on word-order to express relational ideas. New morphemes appear which are but one step removed from concrete semantics. In some cases these "empty words" still retain their full concrete meaning in other connections, as for instance the word *mīd* which is the verb "to have". We find it in Mixe used to express the concept "with, of" very much in the same manner as the "belong" of Beche-de-mer. In Miwok or in Maidu this would be expressed by a comitative suffix.

<sup>1</sup> The Mixe material for this study was obtained by J. de Angulo in Oaxaca during the course of a linguistic survey of that region for the Department of Anthropology of Mexico under the Direction of Dr. Manuel Gamio.

After writing this article I sent it to Dr. Edward Sapir for criticism and suggestions. Dr. Sapir was kind enough to send me a list of further cognates from Takelma, Coos, and other languages from the northern Penutian group. Dr. Sapir was also kind enough to write some marginal notes which I have taken the liberty to reproduce as footnotes with the initials E. S. In his communication to me Dr. Sapir says that Prof. Roland B. Dixon had already been struck by the Penutian character of Zoque, and had sent him a list of Penutian cognates in this language. Zoque is very close to Mixe. The credit for the discovery of a Penutian language in southern Mexico belongs therefore to Dr. Dixon, by priority.

<sup>2</sup> Cf. analytic wearing down in Mukne and Coos as contrasted with Miwok and Takelma. — E. S.

One somehow gets the impression that the Penutian morphology having reached too great a degree of intricacy in its usual methods for expressing the relational, has thrown the whole baggage overboard and started on a new tack. This may be due in some measure to the influence of other Central American tongues which seems to be in the direction of sparseness of linguistic expression. Nevertheless it is true that a very similar drift is at work in some places in California, for instance in the western dialects of Miwok as compared with the eastern dialects.<sup>1</sup>

Whatever may be the interpretation, the fact of the morphological sparseness of Mixe remains, and naturally precludes extensive morphological comparisons. The evidence for classing Mixe in the Penutian family must therefore necessarily be largely lexical. But in spite of its limited grammatical apparatus Mixe possesses morphological traits that have a strong Penutian flavour. We will consider these briefly:

### (I) INTERNAL MODIFICATIONS OF THE RADICAL.

As in Maidu, in Miwok and in Yokuts, so in Mixe the radical often appears in several forms so closely allied that it is sometimes difficult to say which is the primary one.

<sup>1</sup> This is just what happened in Chinookan, where older Penutian features are only survivals and a new autonomous and rather complex morphology was built on top of the older system by means of coalescences of sequences. — E. S.

In Maidu these symbolic changes express derivational concepts, in Miwok and Yokuts temporal aspects, in Mixe differences of person.<sup>1</sup>

Examples (a hyphen indicates the omission of irrelevant affixes):

#### Maidu:

- a) *tot* to drag; *tut* to touch; *lat* to stroke; *tet* to reach for.  
 b) *tea* to eat grass; *teo* to eat meat.  
 c) *yopom-ta* to throw; *yapam* to slap.  
 d) *witcap* to tear; *witcep* to tear a little; *witcobit* to wring; *witcup* to tear off.

#### Mixe:

	to get up	to fall	to like	to sleep
I	<i>pedeik-as</i>	<i>n'gunac-els</i>	<i>n-zoik-bes</i>	<i>may</i>
thou	<i>pedeik</i>	<i>m-gunac-el</i>	<i>n-zoik-be</i>	<i>may</i>
he	<i>pedig</i>	<i>kunac-el</i>	<i>coik-be</i>	<i>mey</i>
we	<i>pedeik-matc</i>	<i>n-gunac-edom</i>	<i>d3ok-medj</i>	<i>mau-medj</i>
ye	<i>pedik-tetc</i>	<i>m-gunac-tel</i>	<i>m-d3ok-taba</i>	<i>mau-detc</i>
they	<i>pedik-nedj</i>	<i>kunac-tel</i>	<i>tsok-teba</i>	<i>mey-dj</i>

#### (2) THE INCORPORATED PRONOUN.

Yokuts and Mukne (Costanoan) are apparently lacking in incorporated pronouns. Southern Maidu uses independent forms in the ordinary statement, but possesses what seems to be a depleted series of suffixed pronouns (possibly old objective forms), used

- e) *witcot* to skin a hare or small animal; *witcut* to scrape hides; *witcat* to split with the hand; *witcet* to split a small thing.

#### Miwok:<sup>2</sup>

	PRESENT	TIME REMOVED FROM PRESENT.	FREQUENTATIVE
to play	<i>awin-</i>	<i>awin-</i>	<i>awni</i>
to die	<i>tcamci-</i>	<i>tcamic-</i>	<i>tcam'ic-</i>
to smoke	<i>haksi-</i>	<i>hakis-</i>	<i>hak'is-</i>
to run	<i>huwat-</i>	<i>huwat-</i>	<i>huwta</i>

#### Yokuts:

*cadik*, *cadak* to awake; *tcadxin* *tcadax* to turn; *ipe*, *epi* to get water; *hiwet*, *heut* to walk, go, move; *tawidc*, *taudj* to overcome; *waid*, *waadi* to break up; *dukdu*, *dukud* to bury; *tui*, *toy* to shoot.

in subordinated expressions of time and in hortatory and optative modes. Miwok is rich in pronominal series, specialized in their use for present, past, future, subjunctive and the like. Although they are much less numerous the Mixe forms come closest to those of Miwok.<sup>3</sup>

#### Examples:

	Maidu	Miwok		Mixe
		PRESENT	PAST AND FUTURE	
I	<i>-s, -se</i>	<i>-m</i>	<i>-t</i>	<i>-ēs</i>
thou	<i>-ne, -no, -men</i>	<i>-s</i>	<i>-n</i>	<i>m-</i>
he	<i>-i</i>	—	—	<i>y-, w-</i>
we	<i>-es, -nes, -hese</i>	<i>-mas</i>	<i>-m</i>	<i>-ma, -mats</i>
ye	<i>-mam, -mem</i>	<i>-tos</i>	<i>-ton</i>	<i>n-</i>
they	<i>-i</i>	<i>-p</i>	<i>-k</i>	<i>-le</i>
				<i>y-, w-</i>

Both Miwok and Mixe show a considerable amount of fusion and obliteration of elements

in putting together their verb forms. This gives often quite a similar impression:

<sup>1</sup> Cf. internal vocalic changes of verb themes in Takelma, Coos, Lower Umpqua. — E. S.

<sup>2</sup> These alternations are amazingly like the Takelma

ones, e. g. *yāan-* "to go": fut. *yana-*. — E. S.

<sup>3</sup> Takelma like Miwok and Mixe. — E. S.

	Miwok	I eat	Mixe
I have eaten	<i>ĩ'wĩcak</i>		<i>hĩ'kcebēs</i>
thou	<i>ĩ'wĩcas</i>		<i>hĩ'kceb</i>
he	<i>ĩ'wĩca</i>		<i>hēykc</i>
we	<i>ĩ'wĩcakmas</i>		<i>hĩ'kcemets</i>
you	<i>ĩ'wĩcaktos</i>		<i>hĩ'kcteb</i>
they	<i>ĩ'wĩcap</i>		<i>hĩ'kcteb</i>

## (3) THE VERBAL PREFIX.

Rather a large number of the Mixe verbs in the list are bi-syllabic, and many can be analyzed into two elements. They suggest very strongly the Maidu verbs with prefixes or first-position-stems such as *be-* action with the foot, *ka-* action with the hand, and the like. Mixe probably has nothing like the number of these prefixes that there are in Maidu, but three or four are quite clearly discernible and very suggestive:

Maidu: *beye* creep; *bedokoi* run; *bedoi* kick; *belōm* step over; *bewel* hurry. *kadokok* push away; *kapadum* roll up; *katut* touch; *katcaduk* grab; *pai* foot, trail; *-pai* after.

Mixe: *petc-b* to climb; *pegig* to run; *pedig* to rise; *pasī-b* to go out; *pa-* along, by; *pa-otsm* to go along; *pa-witsm* to creep; *pa-nas* to pass by (*nas* "the ground"); *pa-boy* to chase; *pa-son* to follow; *pa-wēp* to kick (*wēp* to strike). *kubatb* to pay; *kudigx* to put; *kutuk* to command; *kuyat* to play; *kunas* to fall (*nas* ground); *ni-pan* to cover; *ni-kēs-b* to be on top of something high (*kos*, *kēs* above, on, upon); *ni-wits* to close; *nēksm* to go, *ni-nēksm* to go for the benefit of some one else; *kutuk* to order, *ni-kutuk* to order through the agency of another; *kēs-wits* to place; *kēs-ēts* to place to boil (*ēts-b* to boil); *niwis-dud* to open (*niwits* to close); *nipan-dud* to uncover (*nipan* to cover); *rswits* to take off (*kēs-wits* to place, *ni-wits* to close); *rspit-n* a skirt (*pit* to make thread) (*rspit-m* also means "to tangle"); *rsmats* to let go (*mats-b* to take, *pats-b* to find); *rsmots* trousers;

II. SEMASIOLOGICAL<sup>1</sup>

## (I) NATURAL ELEMENTS:

1. sun: *sī* Cf. Maid. *sa* fire; Miw. *hi*, *hi* sun, day; Muk. *icmen*, *hismen* sun; Wint. *sun* sun.
2. moon: *po* Cf. Maid. *pombok* moon (also *poko* sun, *poho* night, *pokelcuk* star); Yok. *opodo*, *upic* moon; Wint. *po* fire; Tak. *be* sun; Kal. *pyā-n* sun, day.
3. shine: *tuks* Cf. Miw. *tulep-* shine; Muk. *tuxis* day.
4. night: *su*, *us* Cf. Miw. *sien-* be night; Wint. *sinol* night; Tak. *xū'n* night (Tak. *x* regularly comes from *s*).
5. cloud: *yots* Cf. Maid. *ya*; Tak. *hai*; L. Um. *hiat*; Pen. \* *h-yai*.
6. sky: *tsap* Cf. Muk. *tcarak*.
7. star: *musa* Cf. Muk. *mur* night.
8. fire: *hēn* Cf. Miw. *wik-*, *wik-*, *wul-*, *wel-*; Yok. *ucil*, *oxit*; Muk. *xii*, *xih*, *xule* go for a fire, light a fire; Tak. *-'tcūl-* to set fire to, to catch fire; Coos *cull* to set fire, *'tcil-* to burn, *'tcwel-* fire; Pen. \* *swil* fire, \* *'tswil-* to burn (cf. "to burn" next semantema).<sup>2</sup>
9. burn *tsai* Cf. Maid. *ico*; Miw. *tsup*.
10. salt *kan* Cf. Muk. *akes*, *aks*.
11. dry *lēs* Cf. Miw. *tsulul*.
12. stone: *tsa* Cf. Miw. *cawa*; Muk. *isin*.
13. earthquake: *pumimb* Cf. Wint. *pomoko*.
14. hole: *hut* Cf. Maid. *luke*; Muk. *kutui*.

<sup>1</sup> In making the following list of semantemas I found it necessary to alter somewhat the orthography of the different sources in order to obtain a common basis of comparison. The system of transcription we have followed is that of the American Anthropological Association. It may be well to point out that in Mixe, *s* and *c* are interchangeable; *ĩ* and *ĩ* are the "unrounded" forms of *u* and *o*; in Mixe the dynamic stress accent is invariably on the semantema, and this in turn is so seldom of more than one syllable that a di-syllabic stem may be looked upon confidently as resolvable under further scrutiny.

For Miwok, Wintun and Maidu, I have made use of my own unpublished material and of that of Mr. J. de Angulo, also of the grammar of Maidu by R. B. Dixon in the first volume of the *Handbook of American Indian Languages*.

For Pomo I have made use of my own and J. de Angulo's unpublished material, also of *The Ethnogeography of the Pomo Indians* by S. A. Barrett. For Mukne I have used the *Mutsun Dialect of Costanoan* by J. A. Mason.

For Yokuts I have used *The Yokuts Language of Southern California* by A. L. Kroeber.

Many of the kinship terms are to be found in E. W. Gifford's exhaustive work "*California Kinship Terminologies*".

<sup>2</sup> Pen. \* *swil-* "fire"? : Pen. \* *'tswil-* "to burn"? — E. S.

15. water, river: *nī* Cf. Maid. *dim* wet; Miw. *num-* to be submerged; Wint. *nu* boat.  
 16. wet: *sog* Cf. Miw. *cumek* to soak up.  
 17. rain: *tub*, *tsuy* Cf. Miw. *upa*; Yok. *ciwek* drizzle.  
 18. wash: *wibux* Cf. Maid. *ōp* to dive; Miw. *upux* bathe, swim; Yok. *ep-*, *ip-* swim; Muk. *upxi* to sip; Tak. *ʔpag-* to bathe.  
 19. wind: *poh* Cf. Maid. *bīye*; Miw. *pu* to blow; Yok. *puate* whistle; Muk. *pu* blow, *pusninyis* whirlwind; Wint. *pu* whistle; Tak. *-pʔouw-* to blow; Chinook *po* to blow; Kal. *pu* to blow; Coos *pu-* to spout; Tsim. *buu* to blow.  
 20. red: *tsaps* Cf. Muk. *tasas*.  
 21. green: *tsusk* Cf. Maid. *kotcis*; Muk. *tcutsu*.  
 22. then: *net* Cf. Miw. *ne* this; Muk. *ne* this.

	Mixe	Maidu	Miwok	Yokuts	Mukne	Wint.
1	<i>tig</i>	<i>wite, suti</i>	<i>keye</i>	<i>yet</i>	<i>emet-</i>	<i>ete</i>
2	<i>matsk</i>	<i>pen</i>	<i>otto</i>	<i>punoi</i>	<i>utxin</i>	<i>pampe</i>
3	<i>tugig</i>	<i>sapui</i>	<i>toloko</i>	<i>soopin</i>	<i>kapxan</i>	<i>ponol</i>
4	<i>maktask</i>	<i>tcii</i>	<i>oyisa</i>	<i>hatepanai</i>	<i>usit, utit</i>	<i>emus</i>
5	<i>mogosk</i>	<i>mawik (ma hand)</i>	<i>macoka</i>	<i>yitecinil</i>	<i>parues</i>	<i>ete-sem</i>
6	<i>tu duk</i>	<i>timbo</i>	<i>temoka</i>	<i>icolipi</i>	<i>nakitci</i>	<i>serpot</i>
7	<i>ustug</i>	<i>penimbo</i>	<i>kenekaki</i>	<i>nomtcin</i>	<i>takitci</i>	<i>serpote</i>
8	<i>tuktug</i>	<i>pentcii</i>	<i>kawinta</i>	<i>monoc</i>	<i>tailimin</i>	<i>pan-emus</i>
9	<i>tastug</i>	<i>tciiinbo</i>	<i>wo'e</i>	<i>nonip</i>	<i>watsu, paki</i>	<i>pan-emute</i>
10	<i>mak</i>	<i>matcam</i>	<i>na'atca</i>	<i>waditc</i>	<i>matsu</i>	<i>pampa-sem (two hands)</i>
20	<i>ipc</i>	<i>maiduk</i>	<i>na'a</i>			<i>kay</i>

28. more: *maak* Cf. Miw. *manik*.  
 29. no, not: *ka-*, *kedī*. Cf. Miw. *ke*, *ken*, *ket*; Yok. *k'amū*; Muk. *ekwe*, *kwe*.  
 30. yes, positive, good: *oy* Cf. Maid. *he*; Miw. *hī*; Yok. *houu*; Muk. *he*; Wint. *o*.  
 31. thus: *sa* Cf. Miw. *saka* like, as; Muk. *sata*.  
 32. if: *pēn*. Cf. Muk. *pinī*.

## (2) ANIMALS:

33. dog: *uk*. Cf. Maid. *suku*; Miw. *tcuku*; Yok. *tecej*; Muk. *hutce*; Wint. *cukut*; Tak. *ʔtsixi*.  
 34. bird: *hon* Cf. Maid. *hu* to fly, *hom* nest; Miw. *hoŋu* egg; Yok. *hoŋ* egg.  
 35. eagle: *wits* Cf. Miw. *wipayak*; Yok. *winsul*, eagle, *witc*, condor.  
 36. snake: *tsan* Cf. Muk. *lisana*.  
 37. frog: *tuk* Cf. Miw. *wataksay*, *kotola*; Wint. *watak*.  
 38. fish: *ak* Cf. Maid. *mako*.  
 39. flea: *picg* Cf. Muk. *wipsur*.

<sup>1</sup> Note to "two" Chin. *mokt.*, Mixe *matsk* cannot be directly compared to Mixe *us-* in *us-tug* "7" (= 2 + 5) and to Miwok *otto* and Mukne *utxi-n* but may be related if we assume *m-* as archaic durative intransitive prefix, such as we have far more transparently in Hokan and Muskogian. — E. S.

23. Temporal affixes: Past *te-* Cf. Miw. *-tu*; Muk. *-te*, *-kte*. "essential": *-b*, *-n* Cf. Muk. *-n* infinitive; Tak. *-n* noun suffix, sometimes used to make verbal nouns, exactly as in Mixe; Maid. *-n* infinitive ending. "continuative" *-its*, *-ats* (forms of the verb to be); Cf. Miw. *-utcu* to live, also a continuative; Mukne *tcira* always, continually.  
 24. big: *mī*, *mīk*, *mīx* (V. also old) Cf. Yok. *moxodo* old; Muk. *muk* adult; Tak. *mahai*.  
 25. little: *mutsk*, Cf. Muk. *pusut*.  
 26. round: *pīk* Cf. Miw. *pol*; Yok. *buk-*; Wint. *bakak*.  
 27. Numbers:<sup>1</sup>

40. louse: *ag* Cf. Muk. *vax*.  
 41. bedbug: *tit* Cf. Maid. *diʔ* louse.

## (3) PLANTS:

42. wood, tree: *kep*, *kip* Cf. Miw. *kapum*, bark; Yok. *yaphin*; Muk. *xipw*, tree.  
 43. brush, bush, forest: *yuk* Cf. Miw. *yomyum*, brush; Yok. *yawud*; Maid. *yo*, flower.  
 44. tobacco: *xuyge* Cf. Miw. *hutia*.  
 45. moss: *sayk* Cf. Muk. *sasuk*.  
 46. fruit: *uts* Cf. Muk. *owos*.  
 47. flower: *pux* Cf. Maid. *pu*, to blossom.

## (4) MAN:

48. person, people: *hay* Cf. Maid. *maidik*; Miw. *miw*; Muk. *muwe*; Coos *mā*; Yok. *mai*.  
 49. man: *yayek*, *yadyek* Cf. Miw. *nāŋa-yak*, Yok. *muk-yamk*. (also Coos *-iyag* plural suffix in terms of relationship).  
 50. woman: *tosdyek* Cf. Miw. *ocayak*, Yok. *latc-yamk*.  
 51. old man: *mīx* (also "big") Cf. Maid. *muk*, big; Yok. *moxodo*; Muk. *muk*, adult.  
 52. foe, enemy: *was* Cf. Mukne *wayas*.

53. youth, boy: *nakn* Cf. Yokuts *notco*.  
 54. father: *tyedj*, *tat* Cf. Maid. *te*; Yok. *-atet*; Muk. *ete*, grandfather; Win. *tata*.  
 55. mother: *tagh*, *nana* Cf. Maid. *na*, *ne*; Miw. *ita*; Yok. *-ajaj*; Mukne *uta*, parents: Tak. *ni-*, *-hin*; Kal. *ni*; Low. Chinook *-naa*; Coos *e'n-ātc* (*-ātc* kinship ending); Coos *nikla* "mother!" (voc.); Tsim. (Nass R. dialect) *nē-ʔi* "my mother" (*-i* "my"), *nā-ā* (voc.).  
 56. grandfather: *ap* Cf. Maid. *opa*, *pa*; Miw. *apa*, father; Mukne *apa*, father; Win. *apa*; Yok. *bapa*, *bap'*, father's mother; Tsim. (Nass R. dial.) *nō-beb-i'*, my mother's brother, *bip'* (voc.).  
 57. elder brother: *ats* Cf. Miw. *ata*, *tatci*; Mukne *taka*.  
 58. younger brother: *its* Cf. Maid. *tu*, *tī*; Miw. *tcate*; Mukne *tave*; Miw. *iDi'* (Sapir MS.).  
 59. younger sister: *uts* Cf. Wint. *utcu*; Miw. *iDa'* (Sapir MS.).  
 60. uncle: *haym* Cf. Maid. *yam*, *kam*; Miw. *kaw*; Yok. *kawa*, *komoy*.  
 61. elder sister: *tsyō* Cf. Maid. *cti*; Miw. *De'De'* (Sapir).<sup>1</sup>  
 62. aunt: *tsugu* Cf. Yok. *guiha*, *nusus*.  
 63. child: *uyg* Cf. Miw. *aysi*, son; Mukne *inis*, son.  
 64. son: *may* Cf. Mukne *mos*.  
 65. daughter: *nij*, *nyis*.  
 66. diminutive or endearing suffix (suggested by Sapir) *-s*, *-c*, *-j* (e. g. *nī-j*, daughter; Cf. *uyg*, child. Pen. stem perhaps *\*ayn*, child; dimin. *\*ayn-si* > Mixe *nī-s*, Miw. *ay-si*, son, Mukne *ini-s*, son). With stems ending in *-t*, *-d* this old diminutive combines in Mixe to form *-ts*, *-tc*, *-dj*, hence: *tyed-j*, father (probably dim. form of *tat*); *at-s*, elder brother: Miw. *ata*; *it-s*, younger brother: Maid. *tī*, Miw. *iDi'*; *ut-s*, younger sister: Miw. *iDa'*. This dimin. *\*-si* survives also in other Pen. dialects: Miw. *ay-si*, son; S. Coast Miwok (Barrett) *laiyi-s*, man; *kuleyi-s*, woman; *hena-s*, boy; *oyi-s*, old man; *potci-s*, old woman (?); Mukne *ini-s*, *mo-s*, son; Wintun *utcu*, younger sister (diminutivized < *\*utu* < *\*uta?*); Tak. *-xi*, *-x* < *\*-si*, *\*-s* (in *hap-xi*, child, *haap-x*, one's children, cf. *haap-*, child in other combinations); Chinookan (Wishram dialect) *-c* in *-k!acu-c*, paternal grandfather, *-gak!u-c*, maternal grandfather, *-k!i-c*, paternal grandmother (these stems are etymologically related to respective reciprocals: *-qcE-n*, *-gaka-n*, *-gia-n*), further in *wi-n-am-c*, my father (stem *-am*) and *wa-n-aq-c*, my mother (stem *-aq*); Coos *-ca*, endearing suffix (e. g. *húumik-ca* "dear old woman"; *umá-ca-*

- tc*, *úma-c* "grandmother": vocative *úma*. This Penutian *\*-si* diminutive is characteristic, it would seem, as contrasted with its undoubtedly cognate Hokan *\*-tsi* (*\*-ʔtsi*). — (E. S.)<sup>1</sup>  
 67. I: *ēs*, *-s*, *-es* Cf. Maid. *-s*, *-mus*; Tak. *-xi* "me", from < *\*-si*.  
 68. I: *n-* Cf. Miw. *kan*; Yok. *na*; Muk. *kan*; Wint. *nanu* "my"; Coos *n*; Low. Ump. *na* "I", *-n* "I, me"; Tak. *-n*, *-n* (trans. subj.); Chin. *-n-* "I, me" (Wishram dial. also indep. *na*).  
 69. thou: *migs*, *m-* Cf. Maid. *mī*, *-mam*, *-mem*; Miw. *mī*; Yok. *ma*; Mukne *mē*; Wint. *mī*; Tak. *ma*; Chin. *-m-*, *-mī-*; Tsim. — *n* (three); *m-*.  
 70. he: *yī* Cf. Maid. *-i*; Miw. *i*.  
 71. we: *-m*, *-em*, *-ma* Cf. Miw. *-m*, *-me*; Yok. *mai*; Mukne *makse*, *mak*; Tak. *-am*; Coos *-ami*; Tsim. *-Em*.  
 72. ye: *-t*, *-te*, *-la* Cf. Miw. *-tos*, *-ton*, *-tok*, *-tc*.  
 73. which: *wud* Cf. Mukne *watt* "someone"; Coos *wit*; Low. Ump. *watc*.

## (5) BODY PARTS AND ACTIVITIES:

74. eye: *win*, *is* "to see" Cf. Maid. *hin*; Miw. *cīn-tī*, eye, *cīy*, to see; Yok. *cil*, to see; Mukne *xin*; Wint. *wini*, to see, *ca*, eye; Tak. *al-xi-g-*, *-xi-k-*, (Tak. *-xi-* < *\*-si-*), also *-xanw-* ("to look") < *\*-san-w-*.<sup>2</sup>  
 75. mouth: *aux* Cf. Miw. *awo*; Yok. *xa*, *ca*; Mukne *xai*.  
 76. tongue: *yane* Cf. Maid. *eni*; Miw. *nepit*, *letip*; Yok. *tadzat*, *palat* "project tongue"; Mukne *lase*; Wint. *tahal*; Tak. *ela*; Coos *helta*; Low. Ump. *t'al*.  
 77. to drink: *ug* Cf. Miw. *uccu*; Yok. *uk*; Mukne *ukis*; Tak. *ūgw-*.  
 78. to speak: *mog* Cf. Maid. *mo-*, *ma-*, action with mouth; Miw. *mo-*, answer; Mukne *mons*.  
 79. to answer: *azoy* Cf. Miw. *has-*, ask; Mukne *osehe*.  
 80. word: *kops* Cf. Maid. *ka*, say; Miw. *ka-*, say; Mukne *ko*, say.  
 81. to call: *wo* Cf. Maid. *wo*; Miw. *wo*; Low. Ump. *waa*, say, speak, tell; Chin. *wawa*, talk; Tak. *yaway-*, talk (dissimilated from *\*waway-*?).  
 82. nose: *hikb* Cf. Maid. *hiku*; Miw. *huk*; Mukne *hus*.

<sup>1</sup> Nominizing suffix *-c* = Mukne *-s* verbalizing suffix (e. g. *rit-s* "language" < *rite* "to speak"; = Tak. *-(a)x* infinitive suffix of intransitive verbs < *\*-(a)s*; = Low. Ump. *-s* verbalizing suffix (*waas* "language" < *waa* "to speak").

<sup>2</sup> In other words we have two old Penutian stems: *\*(i)sa* or *\*(i)say* (> Miw. *cīy-*, Wint. *ca*, Mixe *is*, Tak. *-xi-*) and *\*(i)san*, *\*(i)sal* > Miw. *cīn-ti*, Yok. *cil*, Mukne *xin*, Maid. *hin*, Tak. *-xan-w-*, Tsim. *saal* "to notice", perhaps also Coos *xil-*, "to look around". — E. S.

<sup>1</sup> *c-* of Maidu *cti* and *-sy-* of Mixe *tsyō* may be diminutivizing.

83. ear: *tatsk* Cf. Miw. *tokoc*; Yok. *tuk*; Mukne *tuksus*.
84. hand: *kī* Cf. Maid. *ka-*, with the hand; Miw. *eku, uka* (< \**esu*. Miw. *k* = Mukne *s*, regularly. — E. S.); Yok. *ko*, to hit with hand; Muk. *isu*; Wint. *kupum*.
85. left hand: *ana* Cf. Mukne *an-si*.
86. to take: *mats* Cf. Mukne *max*, get; Low. Ump. *matc-*, to lay; Tak. *matslag-*, put, place; (Pen. base \**mats*- > Tak. *mas-g-*); Chin. (Wishr. dial.) *-x-ima*, to lay, *-a-l-ima-lx*, to put into water; Tsim. *mag-*, to put down.; Maidu *me*, to catch.
87. to give: *mo*, to have: *mid* Cf. Maid. *me*; Miw. *am-*; Muk. *xum, cumi*.
88. to do, make, work: *dun* Cf. Miw. *tauha*; Yok. *tūc*; Muk. *tun* finish.
89. to put, place: *-wits* Cf. Maid. *wi-*, pull, press; Miw. *wik-*; Tak. *-wiik*, to spread out.
90. foot, leg: *tik* Cf. Maid. *tek*, jump; Miw. *tek*, kick, *hate*, foot, *tīyī*, hip; Mukne *teke*, walk on toes.
91. knee: *koc*, Cf. Tak. *gouk*; Low. Ump. *qoq*; Chin- *-q loxl*.
92. to go: *ots* Cf. Maid. *u-*; Miw. *u-*.
93. to walk: *wag* Cf. Miw. *wī-n, weeta*; Yok. *wadix*, pass by; Mukne *wati*, come, *wate*, go; Tak. *wi-*, to go about.
94. to go: *y-* Cf. Maid. *i-ye*; Miw. *yoc-*; Chin. *-ya, -i-*; Tsim. *yaa*; Tak. *yan-*; (Cf. Hokan \**iya*, to go).
95. action with the foot, walk, trail, etc.: *pa-* (*pason*, to follow, *paboy*, to chase, *pesamb*, to go out) Cf. Maid. *be-*, with the foot, *paiyi*, hunt, track; Miw. *puy*, move, depart; Mukne *paya*, run, *payta*, hunt.
96. to stay: *wī* (also in: *wic*, a bed)<sup>1</sup> Cf. Tak. *way-*, to sleep; Kal. *wai*, to sleep; Tsim. *woq*, to sleep; Coos, *haya-ti*, to lie down (Coos *h* often comes from *w*); Yok. *woi-*, to sleep.
97. to sit: *uy* Cf. Maid. *in-*; Yok. *ūy*, to lean; Mukne *one*.
98. bone: *pak* Cf. Maid. *-pok, -puk*; Wint. *pak*.
99. skin: *po* Cf. Maid. *pu, posa*.
100. neck: *yok-n* Cf. Yok. *ogun*; Tak. *gwen*; Coos *kwin-ts*; Low. Ump. *kwintitcu*.
101. rib: *hac* Cf. Maid. *tci*; Miw. *kutc*, bone; Mukne *lcatc*, bone.
102. phallus: *tsuk* Cf. Maid. *utcu*, piss; Yok. *lcuyo*; Mukne *lcoxo*, pudenda.
103. testicles: *istca* Cf. Miw. *cau-tal*; Mukne *lcatia*.
104. anus: *pxut* Cf. Miw. *poti*, navel; Yok. *potodo*, intestines; Mukne *pultus*, belly; Wint. *pot*.
105. to urinate: *tatsp* Cf. Miw. *ota, otso*; Mukne *lcala* (Cf. Wint. *tcumu-s*; Tak. *xan*. — E. S.).
106. heart, belly, thought: *hot* Maid. *hon*; Yok. *hut, hon*, to know, *hoy*, heart; Mukne *xutu*, belly; Coos *haw-*, to imagine, think; Low. Ump. *hai*, opinion; Tak. *hewhaw-*, to think.<sup>2</sup>
107. fear: *tsök* Cf. Miw. *ceki*; Yok. *dotc*; Mukne *susu*.
108. love, like: *tsok* Cf. Maid. *-sak-*; Yok. *lcik*; Mukne *otciko*.

<sup>1</sup> < "Sleeping instrument". See *-s* nominalizing suffix. — E. S.

<sup>2</sup> Maidu *ho-n* and Yokuts *ho-ŋ* probably nouns in *-n*, cf. "infinitive" and noun-forming *-n*, from base \**ho*- < Pen. \**haw-*, \**hau-*; Mixe *ho-l* probably factitives in *-l* from same base. — E. S.

## Editorial Note

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Ancestral Mixe-Zoque is now supposed by most authorities to have been the language of the Olmecs, the oldest of the archeologically known high cultures of Mesoamerica (Campbell and Kaufman 1976).

Sapir's "Mexican Penutian" (Mixe-Zoque and Huave) was expanded by Whorf (1935) to include Mayan, Totonac, and Uto-Aztecan. Greenberg (1956) accepted the addition of Mayan and Totonac but excluded Uto-Aztecan.

Greenberg has recently (1987) reiterated his version of Mexican Penutian as part of a hemisphere-wide classificatory scheme bolstered by extensive lexical comparisons. Neither Whorf's nor Greenberg's claims have met with favorable reaction from specialists in Mesoamerican languages (see Campbell 1979: 964).

The connection of Huave to Mixe-Zoque, proposed by Radin (1916) and accepted uncritically by Sapir, is now considered improbable. The most likely affiliation of Huave is with Otomanguean (Campbell 1979: 964).



## COOS-TAKELMA-PENUTIAN COMPARISONS

EDWARD SAPIR† AND MORRIS SWADESH

1. Introduction
- 1.1. Date of manuscript
- 1.2. Description
- 1.3. Phonology
- 1.4. Why withheld
- 1.5. Symbols and arrangement
2. Sapir's comparisons

1. The Coos-Takelma-Penutian comparisons presented here were made by Edward Sapir. Morris Swadesh has prepared them for publication and has provided the introductory information and discussion.

1.1. Sapir's manuscript, which now forms part of the Franz Boas Collection of the American Philosophical Society, evidently dates back to about 1914, the publication year of Leo J. Frachtenberg's *Coos, An Illustrative Sketch, Extract from Handbook of American Indian Languages* (BAE-B 40.2.297-429). It surely represents an important part, though far from all, of the lexical evidence Sapir refers to in *A Characteristic Penutian Form of Stem* (IJAL 2.58-67), published in 1921. In this article he concurs with Frachtenberg's suggestion of Penutian affinities of certain Oregon languages, stating:

All this is very interesting to me, as it chimes with conclusions or hypotheses I had arrived at independently. On the appearance of Frachtenberg's Coos grammar it soon became clear to me that the morphological and lexical resemblances between Takelma and Coos were too numerous and fundamental to be explained away by accident or plausibly accounted for by borrowing. The appearance of Frachtenberg's Siuslaw material has only tended to confirm this impression, further, to make it perfectly obvious that Coos and Siuslaw, as Frachtenberg announces, are divergent representatives of a single linguistic stock. Meanwhile comparisons of Takelma, Coos, and Siuslaw with Dixon and Kroeber's Penutian group of California (Costanoan, Miwok, Yokuts, Wintun, and Maidu disclosed an astonishing number of both lexical and morphological correspond-

ences. . . . In spite of our slight knowledge of most of the Californian languages involved, I succeeded in getting together what I believe to be a quite respectable mass of evidence tending to unite the southern languages with those of Oregon into a large and highly differentiated "stock".

In the same article Sapir refers to evidence for still further Penutian relationships. It is possible that other manuscripts will yet be discovered containing this material. Much of it may have been in the form of marginal annotations made by Sapir in books and reprints, like those compiled in *Comparative Penutian Glosses* by Edward Sapir, in the Boas Collection.

1.2. The present manuscript consists of 13 pages 8 x 11, handwritten in Sapir's usual small writing. There are 152 numbered groups of cognates, with columns for Coos, Takelma, Penutian. There is no other title. At least two shades of ink are distinguishable, a dark blue for all but set 152, and a lighter blue for the latter and for additions to the first 151 sets. Since the additions include items in the Coos column marked "Mil." (that is Miluk dialect of Coos) and four annotations of 'see L.U.' (that is, Lower Umpqua or Siuslaw), one may infer that the main list was made before and the added notes after the appearance of Frachtenberg's Coos and Siuslawan sketches. The original Coos items must then have been based on Frachtenberg's Coos Texts, which appeared in 1913. This assumption is corroborated by the fact that Sapir's copy of Coos Texts has marginal glosses of Takelma comparisons in what seems to be the same ink as the manuscript list, and there are 'L.U.' annotations in the lighter ink. All the foregoing observations on the ink used in the manuscript were made by inspection only. The identifications seem for the most part quite obvious, except for those parts of the manuscript which have been most affected by light.

Besides the entry numbers the manuscript has a set of check marks varying with a diagonal criss-cross at a few points. Sapir used such marks to register a later critical reexamination of his work. That is, at some time after he had made the list, he must have gone through it again, with constant reference to the sources, checking the entries which seemed plausible and putting the criss-cross by the ones that on reflection seem improbable. During this process he would often insert additions to the original material. In the present manuscript, we find that the criss-cross sometimes confirms and sometimes overrides an earlier hesitancy reflected by parenthesized question mark or annotations (e.g. in 57 after the Yokuts form: "perhaps better to Tak. -ha-n, no. 55"). Three asterisks between entries 55 and 56 may be a pause mark, showing where Sapir had temporarily stopped in his check-up. A short horizontal line between 86 and 87 is evidently another pause mark.

1.3. The manuscript does not include any full analysis of phonological relationships. However, one finds phonological notes at various points. Some of these merit general comment. The occurrence of Yokuts *d* for earlier *l* is indicated or implied in a number of places (8, 9, 19, 50, 54, 71, 72, 74, 78, 79, 83, 84, 87, 94, 95); Newman's work<sup>1</sup> has since shown that this is a regular dialectal development in Wikhamni, while the other dialects preserve the lateral. In two cases (10, 23) we have Wintun *ʃ*, Takelma *s* reconstructed to *ʃ*; item 7, disregarding the first Coos form (Hanis dialect), suggests that *ʃ* or *ʃ* might be a better reconstruction. The development of Takelma *x* from earlier *s* is posited in 11, 35, 41, 61, 75, 99, 121, 123. The origin of Takelma *s* from earlier *c* is suggested in 129. This fits in with the fact that Takelma has no *c* even though it has *s* and the combination *sʔ*, the latter being pronounced as a glottalized affricate. Sapir's idea was evidently that pre-Takelma *s* changed to *x*,

<sup>1</sup> See Stanley S. Newman, *Yokuts*, Viking Fund Publications in Anthropology 2 (1944), p. 16.

coinciding with original *x*, and that new instances of *s* developed out of older *c* and *ch*. The evidence in general seems to bear out Sapir's theory, but the proof is complicated by the presence of more than one *s*-sound in Yokuts, Coos and perhaps other Penutian languages, and by the existence of two *x*-sounds in Coos and Siuslaw. Robert Shafer has attempted a clarification of Penutian *k* and *x*-sounds,<sup>2</sup> but he does not fully succeed; his material is insufficient in quantity and does not properly distinguish between probable cognates and similarities which might have resulted from borrowing. However, the problem may be expected to yield to patient research in the future.

Where Sapir gives two or more spellings for a word, they may be variant phonetic recordings of one and the same form, dialect variants (as in Yokuts), or functional variants (e.g. verb stem and aorist stem in Takelma). The first kind of variation is here eliminated to the extent possible by using phonemic spellings. The other two types have been retained because of their value in tracing phonological relationships.

For Yokuts it was desirable and easily possible, by consulting Newman's monograph and with additional data kindly provided by Newman, to specify the dialect of most of the cited forms. Where Sapir gives a single form and it coincides with the Yawelmani dialect, it has been labeled Yawelmani (Yy). Where Sapir's form is from another dialect or includes more than one dialect, the Yawelmani has been added after Sapir's Yokuts entry.

1.4. Why did Sapir not publish his Coos-Takelma-Penutian evidence?<sup>3</sup> The answer is perhaps suggested by the following remarks (IJAL 2.59, 1921):

Unfamiliarity with Alesa (Yakonan) and Kalapuya made it impossible for me to follow

<sup>2</sup> Penutian, IJAL, 13.205-19 (1947).

<sup>3</sup> Some of Sapir's comparisons and structural observations are included in L. S. Freeland, *The Relationship of Mixe to the Penutian Family*, IJAL 6.28-33 (1930).

the chain of evidence geographically. Nevertheless, Chinookan points of contact soon manifested themselves too persistently to be brushed aside. After hesitating for a long while to take up seriously the possibility of affiliating Chinook, one of the most isolated and morphologically specialized languages in America, with the Penutian languages of Oregon, I now find myself forced by the evidence to admit such an affiliation as not only possible but decidedly probable. . .

The greatest surprise was still awaiting me. Tsimshian . . . Should it be possible to demonstrate (and I am fairly sanguine that it can be demonstrated) that Tsimshian is a detached northern offshoot of Penutian, we would be compelled to face a most interesting fact in linguistic differentiation and in the distribution of American tribes.

These comments show that Sapir considered the Coos-Takelma-Penutian relationship to be part of a larger grouping which he felt could be demonstrated. Evidently he was awaiting the appearance of Kalapuya data and was hoping to work out in detail the relationship of Chinookan and Tsimshian. He felt sufficiently sure of himself to publicly state his theory, but perhaps he thought it well to wait with the specific lexical data until he could present the evidence for the fuller picture. The case would then be comparable to that of Sapir's theory relating Na-dene and Sino-Tibetan.<sup>4</sup> When students asked Sapir why he did not publish his evidence for this connection, he said it might be better to hold off until he had worked out and published the full details of Athapaskan phonology. However, in retrospect, one can only regret that this material was not published long ago.

1.5. Sapir's 1914 orthography is here modernized and spellings are given in phonemicized form to the extent possible. In the case of Takelma, we take the aspirates to be clusters of stop with h and the glottalized to be clusters with glottal stop; Takelma accent is here reduced, with reasonable justification inferred from Sapir's de-

scription,<sup>5</sup> to two types, a normal accent (') with tonal variations according to position in the word, and a rising or sustained long accent (˘) occurring on long vowels or on vowel-sonant groups in contrast to falling tone for the normal accent in this position.

Points of phonetic usage: χ is for back velar spirant, c is for sibilant affricate (ts), ɕ for shibilant affricate, double letters are used for long vowels, ɾ is for voiced velar spirant (in Coos). The languages are abbreviated by using the first letter for Takelma, Coos, Siuslawan, Yokuts, Wintun, the first two letters for Chinook, Miwok, Maidu, Mukne (Costanoan—Freeland's term). Yy is used for the Yawelmani dialect of Yokuts.

For convenience in printing, Sapir's columnar arrangement of the manuscript has been dropped. Sapir's diagonal cross for improbable comparisons is retained, his check marks are omitted. His parenthetical question marks, also indicating doubt, are retained but are placed after rather than before the entry. Other than in such matters of arrangement, punctuation and phonetic symbols, the materials are given as listed by Sapir.

2. 1. T kuu-x-wife (?) (see S); Mi kule, kulei *wife, woman*, Ma kūla *woman*. 2. C k'waaχaχ *bow*; T gál' *bow*; Mi kono, W kul-sak *bow*. 3. C walwal *knife*; T wiili-*knife*; Mi hulaya *knife*. 4. tūu *good* (aor. tuuwuu-k- *to be good*); Mi towi-s *good*. \*5. C asoo *again*, asoow-is *second*; Mi os(s)a, otta *two*. 6. C e'n-eeɕ *mother*, niika *mother!*; T hin-, ni-mother; W nen-ɕu, nenin, Ma ne, Mu ana *mother*. 7. C ɕuuł *nose*, Miluk ɕin-nuuq; T sin-, sinii-x- *nose*; W ɕinik, suno, Y tüpük *nose*, Yy tiniɕ. 8. C helta *tongue*; T elá *tongue*; Ma eni, W tahal, Mi le-mtep, le-tip, Mu las, lase, lasa, Y talxaɕ, ?aladis, m-ada-ɕ *tongue*, Yy talxaɕ *tongue*, ?aalat- *to lick*. 9. C kχla *leg*; T k'el- *leg*; W koli *leg* (< \*k'wili ?), Mu kolo, koro *foot*, Mi kollo

<sup>4</sup> See discussion (by Morris Swadesh) of Athapaskan and Sino-Tibetan by Robert Shafer, IJAL 18.178-81 (1952).

<sup>5</sup> Takelma, Handbook of American Indian Languages, 40.2.17-18 (1922).

foot, Y kada-ša lower leg, Yy kalassa?. 10. C Miluk čil-li leg; T sal- foot (<\*tal-?); W šal-ma (<\*tel-?).

11. T xūu?n night (for x:s, cf. xí water below); W sinol night. 12. T bée sun, day. póo now, today; Ma pokó sun, W po day, Y ?opo-do sun, ?op-di day, Yy ?op moon. 13. T nōox rain-, W luha rain. 14. T p?ii fire; W po fire. 15. T s?áaw lake; W čahi lake. 16. T sōm mountain (<\*tōm?); W toł, čoł mountain. 17. T tǎn rock; W šon rock. 18. C šximł black bear; T xǎmk grizzly bear; W šilai bear, grizzly bear. 19. T -s?il red; W tulu-ka, tede-kit red. 20. C lǎri good; W lai yok good.

21. T má thou; W mi thou. [see 47]. 22. T pam- up, pam-ís sky; W panti-be up, panti on, upon. 23. tqanł- (?) [to hit, to strike with instrument]; T saansan-, sana- to fight with, spear; W šila to shoot (<\*šana?). 24. T -t present participle, adjective suffix; W -u-t future participle, -t adjective suffix with subjective noun, Ma -do- present participle. 25. T -khi?, -ki? if; W -kila conditional. 26. C -uu interrogative suffix; W -wi interrogative. 27. T -de?, the? I (intr.), future -tee, -thee; W -da I, Mi -t, -te I, me, my. 28. C iin not; T ?ánii? not; W eleu (<\*ene-u?), Y am, Yy ?ohom, Mi (E.) ela. 29. T yaan-, yana- to go; W hara to go. 30. T pǎnx hunger; W bira to be hungry.

31. C tkw- to kick; T tkuunkan-, tkuun- to kick; W čow(a) to kick. 32. -eenii reciprocal verb suffix, -inii (relatives) to one another; T -an- reciprocal verb suffix; W -pu-ra reciprocal verb suffix (?). 33. T ?al- to (?), ka-nǎn in; W el in, into. 34. T pay- out of house (vb. prefix); W pat out. 35. C yipsn three (?) (see S [šiinχ]); T xipiní three; Ma sapwi three, Yy šoopin, Mu kapan, kaphan, kapxan three. 36. C šuuł- to set fire to, čil- to burn, čweel fire; T -s?ülüü-, -s?ül- to set fire to, to catch fire; Ma sa, Y ?ošit, Yy ?ošit, Mu šoto fire. 37. C mee human being; Mu ama person, Ma mai-dü Indian, mai-ki boy, Y may person. 38. T yap?á person; W yapaitu person, Ma yepi man, husband. 39. T

tak-ax- head; Mu taxa-š head. 40. C χwilluχw head (?); T ?ülü-k?-i- hair of head; Mu ut, uri, uli hair, Yy ?oťow head, Ma ono head.

41. C ši to drink; T xí water; Mu si water, Ma sewi river, Mi kik water. 42. C šipič arrow; Mu tep-s, řemo-x, čemo arrow. 43. C lqawe to die; T lohoy-, loho- to die; Mu laku- dead. 44. C cimsimt to sleep (plur., redupl. <\*řim-t or reformed from \*iřřim > \*t-iřřim); Mu eřen, even, etin-i to sleep, Mi eř, Y ?eřřim, Yy ?eřřam a sleep-inducing substance. (Is Esselen acin- after all merely borrowed from Costanoan?). 45. T ti interrogative enclitic; Mi mau-ti who? hi-ti what? Ma -de interrogative, Y ti enclitic, Mu -sa, -s (<\*-ti). 46. C n- I; T -?n I—him, -n (fut.) I—him; Ma ni I, W ni, Yy na?. 47. T má thou; Mu me, men, mene, Mi mi, Yy ma?, W mi, Ma mi thou. 48. C štaa earth (?) (see S [šā?ay]); T tkǎa earth; Ma kau ground. 49. Ch -k-, -x- my; T ki I, -te-k, -t-k my, kōom we; Mu ka, kan, kana I, Mi kanni I, -ka, -ka-n my. 50. C -en numeral suffix so and so many times; T -n, -(t)án adverbial numeral suffix; Mu -na adverbial numeral suffix, Ma -nini, Y -d, -l, Yy -? . . . il'.

51. C puuχw- to spout; T phoophaw-, phoow- to blow; Ma bö to blow. 52. T mená bear; Y moly bear, Ma möde brown bear. 53. T maan- to count; Ma -mak- to know, count, measure. 54. C -enii to do, to make something; T -(a)n(a)- causative verb suffix; Mi -ne causative, Y -la, -da causative (for l < n, cf. no. 50), Yy -aala. 55. C -n, -ni-, -eene plural element found in few nouns (e.g. mee-n human beings, ceey-eene small pl., če-ni-xet short pl.)—its irregularity and rarity show it to be survival from remote past; T -ha-n, -an noun plural (not very frequent); Y -n, -in plural of pronouns, -in numeral collective, W -l dual of pronouns, -li-t dual obj., -le-t plur. obj., -li-n dual pos., -le-n plur. pos., Ma -nono many (?).

56. C -e, -ii petrified noun plural (e.g. tummeeł-e old men, timił-i men, keneeyes-e hunchbacks); -a petrified noun plural (e.g. ašimaq-a big pl.); Y -i, -a noun plural (for

Y ablaut, e.g. ?onmid: ?onemad-i, cf. C toomil: tummeeł-e, knes: keneeyes-e), Yy -i, -a subject case with plural stems. \*57. C hinna *so and so many each*; Y -hin collective (e.g. yapkan-hin *many trees*) (perhaps better to T -ha-n, no. 55). 58. T ?uuk<sup>w</sup>- *to drink*; Yy ?ugun- *to drink*, Mu ukis, Mi uhu. 59. T ka *that* (indef.); Y ka *that* (vis.), Mi i-ka *that*. 60. C t *that there*, ta *so, such*, te- article with pos. pronoun; T ii-ta (ka) *that yonder*; Y ta *that* (inv.), Yy ʔa *that*.

61. C -is noun suffix (often suffixed to verb stems: ʔeey-is *language* ʔee-c *he spoke*), -s, -t-s, -en-is nouns of quality; T -(a)x infinitive (often used as verbal noun: S ?ipn-ax *speech*); Mu -s noun-forming from verb stems (e.g. niç-s *language* < niç *to speak*), W -s verbal noun suf., Mi -s noun ending (?), Y -oʃ noun suf. 62. C -ne *it is* (e.g. n-ne *it is I*); T -(a)n-, -in- petrified intransitive suffix; Y -in- intrans. (?), Mi -ne, -ñe intransitive verbifying. 63. C ii-ta emphatic particle; ii-ta(ka) *that*; Mi i-, i-ni, i-sa, i-mo, i-ka, i-ti *that*. 64. T -n noun ending (e.g. yiwi-n *speech* < yiw *to speak*); Ma -n infinitive ending. 65. T -áʔn *person, people of*; Yy -ʔ . . . inin *people of*. 66. C aʔaax *maternal uncle*.; T has- *maternal uncle*; Y ?agaʃ *mother's brother*, Yy ?aagaʃ. 67. C çintʔin *eyebrow*; Y çimejid *eyebrows and lashes*. 68. C cneex *beard*; Y jamoʃ *beard*, Yy daamut. 69. C k<sup>w</sup>in-c *throat, neck*, k<sup>w</sup>in- *to swallow* (Coos kw: T k<sup>w</sup>, cf. k<sup>w</sup>ees-is *wind*, T k<sup>w</sup>ält); T k<sup>w</sup>en- *neck*; Yy ?oogun, Ma kuyi *neck*. \*70. ʔpene *wings, feathers*; Y paʔada *fur feathers* (?).

71. T telk-án *buttocks*; Y teda *anus*, Yy ʔootoʔ. 72. T nihwík<sup>w</sup> *black bear*; Y duʔuxun *bear* (<\*luʔuxu-). 73. teec *lice* (see S); T tʔelá *louse* (?); Y tehet *head louse*, Yy tiʔiʔ. 74. T láap *leaf*; Y dapdap *leaf* (<\*lap-). 75. T bix-ál *moon* (?) (x < ʃ); Y ?upiʃ *moon* (cf. sun), Yy ?op. \*76. C tʔeen *soot*; Y çehen *fog*. 77. T tk<sup>w</sup>á *thunder*; Y ʔakaʔa *thunder*. 78. C lahł-is *earth*; Y dügüt *earth* (<\*lügüt). 79. T hok<sup>w</sup>-ál, -hók<sup>w</sup>h-al *hole* (<\*-ʃok<sup>w</sup>al); Y ʃogod *hole* (<\*ʃogol), Yy ʃogol. 80. T tkism- *green*; Y çiiʔimat *green*.

81. T -tkém *black*; Y çimgutan *black*. 82. T mii *now, then* (particle); Yy ?amaʔ *and then, then*. 83. C liixlii *to pass out, to pass by, landing place*; Y day (<\*lay), lay *to step, to kick*. 84. C al-ʃ *toy*; T loo-l-, loo- *to play*, loo-sí *toy*; Y do *to play* (<\*lo). 85. C tooh-, tous- *to hit, strike*; T tʔomom-, toom- *to hit, kill*; Y do *battle*, (?), doʃ *to beat, overcome* (?), Ma -tul- *to break flat thing* (?), tup-, tus- *to break* (cf. 117). 86. C ʔou- *to eat*; Y duy *to eat* (<\*luy). 87. T -(a)l-, -lha- continuative, frequentative; Y -ad (<\*al) continuative, -li frequentative. 88. C mauç- *to chew* (up) (cf. Ch); Y mök *to swallow*, Yy meeki-. \*89. C nix(t)- *to touch*; Yy niʔi- *to squeeze with hand*. 90. C tou- *to fall*; Y ?ot- *to fall*.

\*91. C tç- *to come in*; Y tax- *to come*. 92. C ʃanx- *to shake* (see S); T sʔełeł-, sʔeel- *rattle* (?); Y ʔaʔit *to shake*. 93. C çau- *to come apart, to pull apart*; Yy ʔaʔay- *to break*, Y ʔaw *to overcome*. 94. T heleł-, heel- *to sing*; Y ?üdük-, Yy ?ilik- *to sing*. 95. C weleç- *to stoop, to lie down*; Y wodo *to dodge* (<\*wolo), Yy wolooyee-. 96. C wʃkin- *to touch with stick*; Yy woʔo- *to hit with a stick*. 97. C yak<sup>w</sup>-, yak<sup>w</sup>-t- *to pick, to gather* (see S); Y yam- *to gather seeds*, yitw- *to gather*. 98. T -koyo-kʔ-, -koy-kʔ- *to touch, nudge*; Yy koyo- *to butt*. 99. C xil- *to look around* (?); T -xanaw- *to look* (out) (?); Y ʃil'i- *to see*, Yy ʃil'i-. \*100. C xint- *to go fast, to run* (?); Y ʃilit- *to jump*, Yy ʃilit-.

101. T wayaan-, way- *to sleep*; Y woy- *to sleep*, Yy wooʔuy-. 102. T mahäy *large*; Y meʔ, maʔ, may- *large*, Yy maʔaahay. 103. T khay- *woman, girl*; Yy gaaʔiña *woman, girl*. \*104. T tolá *hollow tree*; Y ton, toña-ʃ *digger pine*. 105. C kós *shell used for ornament*; Y guʔiç *beads*. 106. T sʔixi *dog*; Y çeʃeʃ, çexa, Ma sü, Mu çuçu *dog*. 107. T häay *cloud*; Ma yaa *cloud* (?). 108. T ní, nii- *teats*; Ma mini *nipples* (dissimilated <\*nini?). 109. T -kʔotkʔat-, -kʔoot- *to break in two*; Ma -kot-, -kut- *to divide*. 110. T keke-k, kel-k- *to drill for fire*; Ma -kel- *to perforate*.

111. C qal- *to dig* (?); T kʔolol-, kool- *to dig*; Ma -kol- *to bore* (?). 112. T kala-p-, kal-p- *to twist* (thread) *by rolling*; Ma -köl- *to*

roll. 113. T *kʔataay-*, *kʔaat-* to pick, pluck; Ma *-ket-* to graze. 114. T *lopap-*, *loop-* to pound (acorns, seeds); Ma *-lop-* to move with friction (?). ×115. C *six-* to shake off; Ma *-sil-* to shake (?) (see no. 92 [in different ink, showing that comparison with 92 was probably made after the original entry and after the entry had been marked with criss-cross]).

×116. T *tama-kʔ-*, *tam-kʔ-* to choke; Ma *-tap-* to squeeze (?). 117. T *-tkʷelkʷal-*, *tkʷeel-* to break in two; Ma *-tala-* to crush (?). 118. T *tʔalal-*, *taal-* to crack; Ma *-tala-* to crush (?). 119. C *-aami* I, we 2, or we-thee, you 2, or you; T *-(i)k-am* we (fut. subj. intr.), *-(a)nak-am* we (fut. subj. trans.), *-am* us, *-t-ám* our; Mi *-ma(si)* our, *-m*, *-me* us, me (subj. 1 [sic]). 120. T *-nk* he (fut. trans. subj.); Mi *-k*, *-kō* him, he (subj. 1, including future), W *-k* he (past).

121. T *-xi* me, I (subj. of passive) (<\*si); Ma *-s(i)* I, Mi *mu-su*, *mō-s*, *mu-ʃu*, *ʃi-ma* I—thee. 122. C *-aaʔ* is thou, ye 2, or ye—me, us 2, or us; W *-s-ka*, *-s-ke-n* thou, ye 2, ye (*-ka*, *-ke-* as in Ma *-nka-no* thou, ye 2, ye, *-nka-s* we 2, *-nke-s* we?), Mi *-s* thou, *-tok-su* ye (subj. 3: present and perfect). 123. T *-x* non-agentive (quasi-passive or reflexive), *-al-x* intransitive (*-x* < \*s); Ma *-us* reflexive, Mu *-s-tap*, *-s-tapse* impersonal, passive (?), Y *-wi-ʃ*, *-wi-s* reflexive, Mi *-si* passive. 124. C *χeen-is* sick; T *xil-ám* sick (<\*xin-án); Mi *hali* sick. 125. T *-moloʔmal-*, *molʔmal-* to turn things over, stir food in basket-bucket; Mi *mole* to spill.

126. T *phili-phal-*, *philphal-* to squash (insects), to whip (children); Mi *pilapa* to pinch (?). 127. T *-hit*, *-thit* plural of adjectives; Mi *-ti* plural of adjectives and verbs, W *-te* subjective pronoun plur. 128. T *-k* inferential past; Mi *-ke*, *-ka* past. 129. T *-sii*, *-saa* agentive (*-s-* < \*e-); Y *-iʔ*, *-ic* agent, Yy *-iç*. 130. C *-a-ʔeiwat* causative frequentative (*-eiwat* frequentative), *-iya-t* causative, *-e-ʔet* (*-a-ʔat*) causative passive (*-et*, *-at* passive); Y *-i*, *-u*, *-a* causative.

131. T *-(a)paʔ* let us!; Ma *-pō*, *-pe*, *-peʔe* let us! ×132. C *-qm-*, *-χm* to be in a condition, to be in the act of; Mi *-imi* continuative (?). 133. C *-ʔ* instrumental noun suffix; Mu *-cu* comitative (?). 134. C *-et* (*-at*) past passive; Y *-t* passive, *-n-it* future passive. 135. *-iiyas* plur. of nouns of relationship, *-iiye*, *-eeye* adjective plur.; Mi *-ya* noun plur. 136. C *han* about to, *hanʔ* shall, will; Y *hi* future particle. 137. C *kʷa* it seems, as if, *hakʷa-l* as if, kind of; Y *akam* perhaps, it seems. 138. C *hiʔ* particle indicating surprise; T *hís* almost, trying to but in vain; Y *hiʔa* perhaps. 139. C *hei* emphasizing particle, *hi* enclitic emphazier indeed; Ma *-hehe* only, just. 140. C *qa-l* down, below, under (<qa + al, qa- is local adverbial prefix), *qa-lin* from under (<qa- + alin); Y *ʔadid* down, low, below (<\*ʔalil).

141. C *yuu* very, very much; Yy *yow* and, also, again. 142. T *-taʔ* subordinating suffix of intransitive aorist; Ma *-we-te* after having (for *-we-* cf. *-wea* and *-weu* temporal suffixes), *-ce-te* when, while, *-ya-tan* past participle (for *-ya-* cf. *-yak* temporal suffix). 143. T *-naʔ* subordinating suffix of inferential past and transitive aorist; Ma *-wono* past participle (*-wo-* assimilated to *-no*, <we- as above). 144. T *-maʔ* subordinating suffix of aorist passives, *-tát* from, to, in—direction, *-t* locative (occurs in very few isolated adverbs: *kʷčn-t* in back, behind < *kʷen-* neck, nape, back), *-(a)tá* local adverbial suffix; Ma *-di* in, on, at (?), Mi *-ta* for, Mu *-ta*, *-ta-k* locative, *-ta-ʃ* in, on, at. 146. T *-kʷa-* comitative verb suffix; M *-kō* having. ×147. C *witin* blood; Mi *weteti*, *wetete* loc. ×148. C *-ume* where . . . is; Mi *-m*, *-mō* locative, Mu *-me* with, at the house of, *-m*, *-mo*. 149. C *-a* imperative with object of third person; Mu *-i* imperative with object of third person. 150. C *-is*, *-inis* place of; Y *-lis* habitual place of (*-l-* frequentative).

151. T *-(á)n* aorist passive; Y *-han* passive in dependent clauses. 152. See S [*-uus* locative]; Y *-w* locative.

## Editorial Note

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# Comparative Penutian Glosses

Edited by Victor Golla

Based on "Comparative Penutian Glosses of Sapir,"  
edited by Morris Swadesh (1964)

## Introduction

It was Sapir's custom to enter linguistic notes, both comparative and descriptive, in the margins of his books and offprints, especially dictionaries and grammars of American Indian languages. In this way, he frequently began various researches which he pursued throughout his lifetime. One of the most important of these was the gathering of comparative data substantiating his theory of a Penutian stock enlarged to include languages of Oregon, the Plateau, British Columbia, and Mexico. The broad outline of this theory was first presented in the introductory paragraphs of "A Characteristic Penutian Form of Stem" (Sapir 1921b, this volume), but with no comparative lexical data. That Sapir had what was to him a satisfying amount of such data is clear from a few published allusions (see especially Sapir 1920c: 265, note 1) and miscellaneous citations in his letters to Kroeber (see Golla 1984: 201-204, 242-244, 314-315) and other colleagues. Only a few fragments of Sapir's Penutian data reached print during his lifetime, the most substantial being the comparisons incorporated into L. S. Freeland's "The Relationship of Mixe to the Penutian Family" (Freeland 1930, this volume). Unfortunately, most of Sapir's comparative Penutian working files seem not to have survived. What these may have consisted of is hinted at in a passage in a letter from Sapir to Robert Lowie, dated July 6, 1918:

Just at the moment I am carding some of my Penutian-Takelma-Coos-Siuslaw-Chinookan-Tsimshian correspondences. It is technical work, of course, but quite interesting, as many lines of historical linguistic research are opened up. Yes, my boy, Tsimshian. Not a bit isolated. Very specialized in development, but showing clear threads, in my humble and heterodox opinion, binding it to Oregonian "stocks" (Lowie 1965: 27).

No collation of the sort Sapir refers to in this passage is known to exist among his surviving papers. A 14-page handwritten list containing 315 sets, later published by Morris Swadesh as "Coos-Takelma-Penutian Comparisons" (Sapir and Swadesh 1953, this volume), seems to have been compiled quite early in Sapir's Penutian research (probably in 1915); it includes no Chinookan, Tsimshian, Plateau Penutian, or Mexican Penutian material. Under these circumstances, it is useful to publish as many as can be retrieved of the marginal jottings that were Sapir's raw material. Unsystematic and abbreviated as they are, they nevertheless indicate the breadth of Sapir's knowledge of the data and the general dimensions of his theory of Penutian comparative phonology and grammar.

The comparisons in sections 1 through 5 below were culled by Morris Swadesh from several books left to him by Sapir. The work was done in 1953, and Swadesh's original manuscript is in the Boas Collection of the American Philosophical Society (ms. 20[P1.4]). A decade later, Swadesh published these lists under the title "Comparative Penutian Glosses of Sapir" (Swadesh 1964). For the present work, Swadesh's lists were thoroughly checked against the publications annotated (although the copies with Sapir's notes could not be found), and against the sources of most of Sapir's comparative glosses. A number of errors in transcription have been silently corrected. Translations of the glosses—for the most part omitted by Sapir (or Swadesh)—have been supplied where they are not obvious from the context. In a few (but far from all) instances where Sapir cited a language without giving a specific form, it has been possible to identify the form Sapir had in mind. These and all other editorial interpolations appear in brackets.

Swadesh, both in his 1953 manuscript and in his 1964 publication, cited all forms in a normalized orthography. To minimize future philological difficulties, the original orthographies have been restored wherever possible. This includes all of the forms in Wintu, Tsimshian, Coos, and Lower Umpqua in the publications that Sapir annotated. Lacking access to Sapir's original marginalia, I have retained Swadesh's orthography for these, but in many instances his retranscriptions have been supplemented (in brackets) by the orthography of Sapir's probable source (most frequently Sapir's own published work on Takelma). This, unfortunately, could not be done with Sapir's citations of his still unpublished Chinookan field data. Swadesh described his normalization conventions as follows (1964: 182-183):

Back velar voiceless spirant is shown by /X/ as against /x/ for the front type, /G/ is a velar voiced stop, /ɣ/ is a velar voiced fricative; /i/ is central vowel, /u/ is front-rounded; double letters are used for long vowels, but length is disregarded in Chinook, where it is non-distinctive. The Takelma stops are given in the system adopted for Coos-Takelma-Penutian comparisons (Sapir and Swadesh, 1953): /p t/ and so forth for Sapir's /b d/ and so forth, and also for his *p' t'* in final or preconsonantal position. Aspiration, in positions where it is distinctive, is represented by /h/; glottalization by a separate /ʔ/ after the character; /sʔ/ is phonetic glottalized [ts]. The Takelma tonal accents are interpreted as normal and rising, the latter found only on long vowels and on vowel-sonant sequences; it is assumed, on the basis of Sapir's treatment of tone, that the sustained (on sequences of "inorganic" vowel plus sonant) and the rising may be phonemically equivalent. The acute sign is used for the normal accent in its different forms, and the inverted circumflex is used for rising or sustained long accent. Comparable phonemicization has not been attempted for the other languages.

The comparisons in the last section (6) are marginalia from Sapir's copy of Franz Boas's *Tsimshian Texts, New Series* (1912), which was apparently not available to Swadesh in 1953. It is now owned by Professor John Dunn of the University of Oklahoma, who graciously provided the editor with a photocopy of the book and a list of all annotations in Sapir's hand. This material is presented in the same format as the comparisons in sections 1-5.

Abbreviations for the languages cited by Sapir, and the sources from which most of his data were obtained, are as follows:

Tak. = Takelma (Sapir 1909c, 1912h; section references to the latter are given where appropriate).

Coos = Hanis and Miluk Coos (Frachtenberg 1913b, 1914a).

L.U. = Lower Umpqua-Siuslaw (Frachtenberg 1914b, 1917).

Ts. = Tsimshian (Boas 1911, 1912).

Chin. = Chinook (Boas 1911; Lower Chinook unless otherwise indicated).

Wish. = Wishram Chinook (Sapir's fieldnotes).

Yok. = Yokuts (Kroeber 1907).

Miw. = Miwok (Barrett 1908).

## 1. Wintun

The following are comparative glosses found in Sapir's copy of Roland B. Dixon's "Outline of Wintun Grammar" (1909). Dixon's frequently inaccurate forms are here supplemented by phonemic forms from Alice Schlichter's *Wintu Dictionary* (1981) and Harvey Pitkin's *Wintu Grammar* (1984). Section references to the latter are given in parentheses. Swadesh's normalizations of the Miwok and Yokuts forms cited by Sapir have not been checked against the original sources (Barrett 1908 and Kroeber 1907).

-ibi, -be, present [-be·, visual evidential (262.11)]: Miw. -bus, bi·s, continuative.

-liba, -libo, future [-le-, inevitable future (241.61) + -ba·, -boh, durative auxiliary (262.12)]: Miw. -bo, fut. imperative.

-kila, conditional [-kele, hearsay evidential (243.12)]: cf. Tak. -khi?, -ki? [-k'iε, -giε conditional suffix, §71].

-wu, -u, imperative [-u-, imperative stem formant (222)]: Miw. -pa (?).

-ut, future particle [= ?]: cf. Tak. -tu [?].

-s, forms nouns from verbal stems [-s, general aspect (322)]: cf. Tak. agentive -ʔs [-εs §80] (?).

-wi, interrogative [-(w)u·, 1st person interrogative suffix (241.75)]: Coos -uu [-ū interrogative, Frachtenberg 1914a: 372].

-t, used with adjectives, where the noun is in the subjective case [-t, particular aspect (320)]: cf. Tak. -t [-t' adjectival suffix, §108.1].

-da, first person [-da, 1st person subject (243.21)]: Tak. -the?, -te? [-t'eε, -deε §60].

eleu-ibida tconmina 'I am not dancing' [ʔelew, negative auxiliary (262.422)]: cf. Tak. áni? [áni negative particle, §113.3].

ni hara-kila 'if I go' [har- 'to go, move away from speaker']: cf. Tak. yana- ['to go'].

-s, verbal noun [-s, generic aspect (322)]: cf. Coos -is [-is nominalizing suffix, Frachtenberg 1914a: 365].

birā'ibe-wi 'is he hungry' [bira-- 'to be hungry']: Tak. pānx [bānx 'hunger'].

tcona-bem 'he kicks' [č'on-, č'una- 'to kick']: cf. Tak. tkuuntkan- [t'guunt'gan- 'to kick off'].

- tcon-pura-ibi-da 'we kick each other' [-p'ure-, reciprocal (241.41)]: Tak. -an- [reciprocal, §55, being compared here with -ra-].
- yā'paitū 'person' [ya-paytu 'person, white man, guardian spirit']: Tak. yapʔá [yap!a 'person, people'].
- el 'in, into' [ʔel]: cf. Tak. al- ['face, with eye, to, at', §36.15].
- pat 'out' [pat]: Tak. pʔay- [p!a-i- 'down', §37.13].
- xan 'away from' [xan]: Tak. hee- [he<sup>ee</sup>- 'off, away', §37.3].
- panti 'on, upon' [pan 'on top' + -ti, locative suffix (500)]: Tak. pam- 'up' [bam- 'up into air' §37.15].
- "Sometimes the locative particle is repeated after the verb, and in some cases two particles may be used together": cf. Tak. for use before verbs and in postposition with nouns [§37.93].
- kūlūn' 'edge's' [kulu 'edge (of basket)' + -n, genitive case]: Tak.-Coos-Maidu-Yok. type of stem [i.e., disyllabic, with repeated vowel, the "characteristic Penutian type of stem" discussed in Sapir 1921b].

## 2. Tsimshian (Boas 1911)

The following are comparative glosses found in Sapir's copy of Franz Boas's *Tsimshian* (1911). The page on which a gloss is found is given in brackets. Forms not marked "Tsimshian" are in the Nass River dialect.

- bax- 'up along the ground' [300]: Tak. paa- [bā<sup>a</sup>- 'up', §37].
- y!aga- 'down along the ground' [300]: Coos qa-yaa-č [qayá<sup>ate</sup> 'down-stream'].
- ts'ElEM- 'into, from the side' [301]: cf. L.U. q-cii [q-tsi 'inside'] (?).
- na- 'out of the woods in rear of the houses to the houses' [303]: cf. Tak. noo [nō<sup>u</sup> 'downriver'], hināw [hina<sup>u</sup> 'upriver']; Coos nooč [?], L.U. Inū 'outside, outdoors'].
- lagauk- 'from the side of the house to the fire' [303]: for -k- cf. L.U. adverbs in -k.
- spī- 'out of water' [304]: Tak. pay- [ba-i- 'out (of house, water)'] (?).
- lôgôl- 'under' [305]: Coos qat [qat 'below, under'].
- lāx- 'to and fro, at both ends' (Nass), lagax- (Tsimshian) [309]: cf. Chin. laX (?).
- sa- 'off' [309]: Tak. xam- [xam- 'into the water'] (?).
- hīs- 'to do apparently, to pretend to' (Nass), sīs- (Tsimshian) [316]: Tak. his [his, hīs 'nearly, almost, trying', §114.7] (?).
- wadi- 'like' (Tsimshian) [317]: cf. Wish. tiwi.
- xpī- 'partly' [326]: Coos x- [? discriminative prefix, Frachtenberg 1914a: 324].
- hwīn- 'innermost part' (Nass), wun- (Tsimshian) [329]: Tak., Chin. [= ?].
- qa- 'location' (Nass), g-i- (Tsimshian) [331]: cf. Coos, L.U. [= ?].
- an-, used to transform verbs into nouns, and express abstract terms, local terms, and even instruments (Nass), n-, nE- (Tsimshian) [333]: cf. Coos n- [n- 'in, at, to, on, with'], prob. = a-n- 'it-on', cf. Chin. -n-.

- yu...-k<sup>u</sup> 'one who has' [334]: cf. Tak. comitative -k<sup>w</sup>- [-(a)gw- §46].
- ha- 'instrument' [334]: cf. Tak. wa- [wa- instrumental, §38] (?).
- iagai 'already, however, rather' (Nass), y!agai (Tsimshian) [339]: cf. Coos, Tak. [= ?].
- en, causative [344]: Tak. -an- [-an- §45].
- sk<sup>u</sup>, expresses primarily the elimination of the object of the transitive verb (Nass), -sk (Tsimshian) [344]: Tak. -xa-, -x- [-xa- intransitivizing suffix, §53].
- A, instead of -sk with words ending in p, t, s, ts, q, x, L, and sometimes in l (Tsimshian) [346]: Not at all. Evidently suffix has different meaning from -k<sup>w</sup>. Cf. Coos -ani (?).
- s, used in Nass and in Tsimshian in place of -k and -tk after k, x, k<sup>w</sup>, q, and x [346]: cf. Tak. -x.
- ES, a few times after p in place (?) of -sk, denotes back of object (Tsimshian) [347]: Tak. -xa-.
- d, indicative of many transitive verbs [347]: cf. Coos [-t, transitive, cf. Frachtenberg 1914a: 328].
- gā<sup>o</sup> 'to take' (Tsimshian) [348]: Chin. [= ?].
- dzak 'dead', dzák-d-u 'I kill' (Tsimshian) [348]: cf. Coos ck<sup>w</sup>i-t-s [tskwíts 'he speared him'].
- reduplication of words beginning in hw (Nass), w (Tsimshian) [372]: cf. Coos (see vocabulary under w-) [Frachtenberg 1913b: 194-195].
- smax 'meat' (Nass), cf. Tsimshian sami 'bear' [377]: Tak. xǎmk [xam`k 'grizzly bear'].
- iē' 'to go (sg.)' [381]: cf. Tak. [?yana- 'to go'], Chin. [= ?].
- Lô 'to go (pl.)' [381]: cf. Coos [= ?].
- gaksk 'to wake up (sg.)' (Tsimshian) [381]: Tak. [= ?] (?).
- EM 1st pl. objective (Tsimshian) [381, 384]: cf. Tak. [-am, §62].
- awā'ō 'proximity', awā'ot 'near him (his proximity)' (Tsimshian) [393]: Tak. wāa-ta [wā<sup>a</sup>-(da) 'to, at-him'].
- gwa<sup>o</sup> 'that' (Tsimshian) [394]: cf. Chin. [= ?].
- ī, demonstrative element (Tsimshian) [395, 406]: cf. Tak., Chin., Coos.
- nda 'where' [406]: Chin. ta-n, ša-n, Tak. ne'k-ti [nék'di 'who?', §105].
- L, imperative of transitive, indef. obj. (Nass), -l (Tsimshian) [407]: cf. Coos ł.
- dZE, tSE, weakens statements [408]: Wish. -čī<sup>?</sup>, Coos na-cii [natsī, Frachtenberg 1914a: 387], ci [tsī, restrictive particle, Frachtenberg 1914a: 394].
- ōptSE 'else, lest' [408]: Wish. pu.
- amī 'if' (event assumed as not likely to happen) (Tsimshian) [409]: Tak. mīi<sup>?</sup>wa [mī<sup>i</sup>ewa 'probably, perhaps'].

### 3. Coos (Frachtenberg Texts)

The following are comparative glosses found in the vocabulary section of Sapir's copy of Leo Frachtenberg's *Coos Texts* (1913b).

- a'lɛc 'toy': Tak. lou-sí [lo<sup>u</sup>-s-i].
- a'lqas 'fear': Tak. hin<sup>ʔ</sup>x [hin<sup>ɛ</sup>x] (?).
- álts- 'to be in the wrong place, to be mistaken': Tak. ílts<sup>ʔ</sup>-ak<sup>w</sup> [ílts!<sup>w</sup>-ak<sup>w</sup> 'bad'].
- ai<sup>w</sup>- 'to kill (pl. object), to take away': Tak. ey-yi- [ei[y]-i-].
- a<sup>u</sup>q- 'to take off': L.U. aaq- [āq-].
- e<sup>ɛ</sup> 'thou': Tak. [see Section 4 below].
- e<sup>ɛ</sup>nātc 'mother': Tak. ni- [ní-].
- ís 'we two (inclusive)': L.U. -ns [-ns].
- ix- 'canoe': Tak. ěy [ei].
- ilx- 'to look': Tak. liw- [liw-].
- ilxá'ka 'they': Tak. [see Section 4 below].
- īte, emphatic particle: Tak. [cf. hi (§114)].
- īn, negation: Tak. [see Section 4 below].
- ī'n-ta 'not so, bad': Tak. [cf. hīt (hīit) 'no' (§113)].
- īl- 'to tell, to say, to send': Tak. hiim-t- [hi<sup>m</sup>-d- 'to talk to'] (?).
- yEQ- 'to go away': Tak. yew- [yèu- 'to go back, return'] (?).
- yat- 'to coax, to persuade': Tak. yamat- [yamat- 'to ask (tr.)'] (?).
- yí'psɛn 'three': Tak. xípini [xíb<sup>i</sup>nì].
- yí'qa 'nevertheless, right away': Tak. [= ?].
- yux<sup>u</sup>- 'to rub': Tak. yuluyal- [yuluyal-].
- yūwíl- 'to divide': Tak. yowo-, yows<sup>ʔ</sup>- [yowo-, yo<sup>u</sup>ɛs- 'to start (when startled)'] (?).
- yūt- 'to tear off': Tak. yonk<sup>ʔ</sup>- [yonk!<sup>-</sup> 'to pull forcibly'] (?).
- waha<sup>x</sup>tcas 'sickness': Tak. hawax [hawàx 'rotteness, pus, foul odor'] (?).
- wa'lwal 'knife': Tak. wiil-ii [wi<sup>l</sup>í ' (stone) knife'], wayá [wayà 'knife'].
- wā'wa 'little girl': Tak. waiwii [waiwí 'girl, female'].
- weste'n 'so many times': Tak. [= ?].
- wint 'forehead': Tak. uluk<sup>ʔ</sup>-i- [ü'lük!<sup>-</sup>i- 'head-hair'] (?).
- wispā'ya 'arrow': Tak. wilāw [wilāu] (?).
- wíl 'to look far, to search': Tak. wow-lt- [wo<sup>u</sup>-ld- 'to go far, go to get'].
- wēL-, wīL- 'to twist': Tak. wiik<sup>ʔ</sup>- [wí'k!<sup>-</sup> 'to put around (neck, head)'].
- wī'n- 'to cheat': Tak. wiim-at- [wi<sup>m</sup>-ad- 'to exercise supernatural power upon'].
- ha'yatí 'to lie down (pl.)': Tak. wayaan-, way- [waya<sup>n</sup>-, wai- 'to sleep'].
- ha<sup>w</sup>- 'to think, to imagine': Tak. hewe-haw [hewe-haw-].
- han, temporal particle: Tak. [= ?].
- han- 'to wrestle': Tak. hemem- [hemem-].
- hant- 'to pick out, to choose': Tak. henee-t- [hene<sup>ɛ</sup>-d- 'to wait for'] (?).
- hak- 'to crawl': Tak. waka-xa- [wage-xa- 'to climb up'].
- hala'qes, halí'qas 'relatives of husband': Tak. wayaw- [wayaũ- 'daughter-in-law'].
- halt! 'now': Chin. alta.
- halk<sup>u</sup>- 'to take off': Tak. weet-k- [we<sup>ɛ</sup>t<sup>-</sup>-g- 'to take away from, deprive of'] (?).
- halq-, helāq 'to climb up': Tak. hilw- [hilw-].
- halq 'fir-tree': Tak. xó [xò] (?).
- he, temporal particle: Tak. [see Section 4 below].

- héilta 'tongue': Tak. elá- [elà-].  
 hên, particle denoting hearsay: Tak. [= ?].  
 henī- 'a while, a long time': Tak. [see Section 4 below].  
 he'lmī 'tomorrow': Tak. [see Section 4 below].  
 helq-, he'laq 'to arrive': Tak. wowk- [wo<sup>u</sup>g-].  
 hîtç, particle denoting surprise: Tak. [see Section 4 below].  
 hī'k'am 'monthly courses': Tak. wu<sup>u</sup>lh-am- [wū<sup>u</sup>lk-am- 'to have first menstrual courses'] (?).  
 hū<sup>u</sup>'mīk- 'old woman': Tak. wuun- [wu<sup>u</sup>n- 'to be, grow old'] (?).  
 pēnL- 'to tear off, to come off': Tak. potpat- [bot'bad- 'to pull out (somebody's hair)'].  
 pā<sup>e</sup>w- 'to smoke (a pipe)': Tak. phoy-amt- [p'oy-amd- 'to smoke out (wasps)'] (?).  
 pā<sup>a</sup>- 'to fill': Tak. pu<sup>u</sup>k<sup>?</sup>- [bū<sup>u</sup>'k!-], Chin. paal-.  
 pīls- 'to tear, to smash to pieces': Tak. philiphal- [p'ilip'al- 'to squash, whip'].  
 pīlx<sup>u</sup>- 'to break, to crush': Tak. pilw- [bilw- 'to jump (at), fight with'] (?).  
 pīdj- 'to come up (from water), to appear': Tak. piis- [bī's- 'to look up, lift up one's head' (used only in myths)].  
 pūx<sup>u</sup>- 'to spout': Tak. phowphaw-i- [p'ōyp'aw-i- 'to blow'].  
 mēanī'yas 'parents, grown-up people': Tak. ma- [má- 'father'].  
 māha- 'to watch, to look after': cf. Hokañ.  
 mā'qaL 'crow': Tak. mēl [mēl].  
 mā'luk<sup>u</sup> '(Indian) red paint': Tak. máanx [mānx 'white paint'] (?).  
 mā<sup>a</sup>L! 'flood': cf. Chin. ma<sup>l</sup>-ni.  
 ma'x<sup>u</sup> 'vulva': Tak. min- [min- 'vagina'] (?).  
 mītsī'le 'pregnant': Tak. mix<sup>w</sup>ī- [mAhwī-].  
 mī<sup>e</sup>la 'liver, waist': Tak. p<sup>?</sup>āñ [p!<sup>?</sup>āñ 'liver'].  
 mī'laq 'arrow': Tak. smélaw<sup>?</sup>x [sméla<sup>u</sup>εx].  
 mī'naqas 'pole': Tak. māl [māl 'salmon-spear shaft'].  
 dā'mīl 'strong, male being, husband': Tak. tomxáw [domxàù 'big crooked-nosed salmon'].  
 dī<sup>l</sup> 'something': Tak. al-tīl [al-dīl 'all'].  
 tē 'that there': Tak. [= ?].  
 tēw- 'to be in upright position': Tak. t<sup>?</sup>ēpe-, teep- [t!ēbe-, de<sup>e</sup>b- 'to get up'].  
 ta, conjunction: Tak. [= ?].  
 tat'n- 'to fix, to divide': Tak. t<sup>?</sup>īlī-, tīln- [t!īlī-, dīln- 'to distribute to'].  
 te'lex- 'crosspiece': Tak. tele-p- [dele-b-] 'to stick into', tala-k- [dala-g- 'to pierce nose, ears'].  
 tī'k- 'to stand': Tak. tiiktak- [dī'k'dag- 'to erect, cause to stand up'].  
 tī'lpī 'gopher': Tak. thīis [t'ī's].  
 tīyet- 'to store up food': tu<sup>u</sup>lt<sup>?</sup>al- [dūlt!al- 'to stuff (basket) with'].  
 tīw- 'to coil': Tak. t<sup>?</sup>uukuuy-, tu<sup>u</sup>k<sup>w</sup>- [t!ūgūi-, dū<sup>u</sup>gw- 'to wear (garment)'].  
 tī<sup>n</sup>tc 'remnants of meal': Tak. t<sup>?</sup>ayay-, taay- [t!ayai-, dāi- 'to go to get something to eat'] (?).  
 tō<sup>h</sup>- 'to hit, to strike': Tak. toy-k<sup>?</sup> [dui-k!- 'to push'] (?).

- tō<sup>u</sup>s- 'to hit, to strike': Tak. t<sup>o</sup>mom-, toom- [t<sup>o</sup>mom-, do<sup>u</sup>m- 'to kill'].  
 tkwā'tuk<sup>u</sup> 'shoulder', t<sup>ε</sup>kwā'tkwis 'elbow': Tak. tk<sup>wi</sup>ntk<sup>w</sup>- [t<sup>g</sup>wi<sup>n</sup>t<sup>g</sup>w- 'upper arm'].  
 tek-elm- 'to dive, to sink': Tak. tkel<sup>?</sup> [t<sup>g</sup>el<sup>ε</sup> 'drop, fall'].  
 tqanL- 'to hit, to strike (with instrument)': Tak. tk<sup>w</sup>el-tk<sup>w</sup>al- [t<sup>g</sup>wel<sup>t</sup>g<sup>w</sup>al- 'to break in two'].  
 tqaiL- 'to put on a belt': Tak. tkenc<sup>?</sup>- [t<sup>g</sup>ents!- 'to put about one's middle'].  
 tEQ!e<sup>n</sup> 'soot': Tak. s<sup>n</sup> [s<sup>n</sup>-in 'wood-coals'] (?).  
 t!c- 'to shove, to push': Tak. t<sup>?</sup>osot<sup>?</sup>as [t<sup>o</sup>s-ot<sup>!</sup>as- 'to walk around'].  
 t!kw- 'to kick': Tak. tkuuntkan- [t<sup>g</sup>u<sup>n</sup>t<sup>g</sup>an-].  
 t!kwā 'roof': Tak. tkuup- [t<sup>g</sup>u<sup>u</sup>b- 'to cover over, put lid on'].  
 nī'k!a 'mother (vocative)': Tak. ní- ['mother'].  
 s<sup>ε</sup>aL! 'pitch': Tak. séel [séel 'black paint, writing'], k<sup>w</sup>ā! [k<sup>!</sup>wal<sup>!</sup> 'pitch'] (?).  
 s<sup>n</sup>l 'hair on penis': Tak. s<sup>ē</sup>n- [s<sup>ē</sup>n- 'hair'].  
 s<sup>n</sup>l- 'to drop (of liquids)': Tak. tk<sup>w</sup>il-i- [t<sup>g</sup>wili-] (?).  
 sōxt- 'to trade, to exchange': Tak. -xoot- [-xo<sup>u</sup>d-] (?).  
 stō<sup>u</sup>q- 'to stand, to be in an upright position': cf. Tak. [= ?] (?).  
 sq- 'to seize, to take': Chin. -šk- (?).  
 sla '(male) friend, cousin': Tak. snāa [snā 'momma!' (vocative)] (?).  
 cī- 'to drink': cf. Yana sī-.  
 canx- 'to shake': Tak. s<sup>?</sup>el- [ts<sup>!</sup>!el- 'to rattle'].  
 cīma- 'to draw by means of breath': Tak. s<sup>?</sup>usm- [ts<sup>!</sup>!us-m- 'to chirp'].  
 cī't!a 'pet': Tak. c<sup>?</sup>ixi [ts<sup>!</sup>!u'xi] 'dog'.  
 cūL- 'to set fire to': Tak. s<sup>?</sup>ul-k<sup>?</sup>- [ts<sup>!</sup>!ül-k!-] (?).  
 tseγi- 'to crush': Tak. c<sup>?</sup>atat-, saat- [ts<sup>!</sup>!adad-, sa<sup>a</sup>d- 'to mash'] (?).  
 tSEL- 'to stand, to lie side by side': Tak. xoxok<sup>w</sup>- [-xoxogw- 'to string salmon'] (?).  
 tsā<sup>a</sup>nte 'on the back' (borrowed from the Siuslaw teā<sup>a</sup>n- 'to lean backwards, to recline'): Tak. xaah-am- [xa<sup>a</sup>h-am- 'back, waist'] (?).  
 tsn- 'to stretch': Tak. tin-k<sup>?</sup>- [din-k!-] (?).  
 tsk<sup>u</sup>- 'to hit against, to strike against, to spear': Tak. saak<sup>w</sup>- [sa<sup>a</sup>gw- 'to shoot (arrow), paddle (canoe)'].  
 tsx- 'to take': Chin. -šk- (?).  
 tsqal- 'to defecate': Tak. xalaxam- [xalaxam- 'to urinate'] (?).  
 ts<sup>l</sup>im 'summer': Tak. sama- [sāma-].  
 tci<sup>n</sup>tsā<sup>a</sup>t 'friend': Tak. k<sup>w</sup>hinax- [k<sup>w</sup>inax- 'kinsman, relative'], Upper Tak. k<sup>w</sup>hū<sup>n</sup>akst [k<sup>w</sup>ū<sup>n</sup>àks-t<sup>!</sup> 'his relatives'].  
 tcils 'penis': Tak. khál [k<sup>!</sup>ál].  
 tcō<sup>u</sup>-, tcō<sup>xu</sup> 'to jump': soo-<sup>?</sup>k- [s-ó<sup>u</sup>εk-].  
 tcū! 'nose': Tak. sin- [s<sup>n</sup>-in-].  
 tc<sup>h</sup>i 'raft': Tak. sil [sil 'canoe' (in verbs)].  
 tc!a- 'to walk': Tak. s<sup>?</sup>aaak- [ts<sup>!</sup>a<sup>a</sup>g- 'to step'].  
 tc!icí'lís 'sweet', tc!icäl- 'to be sweet': Chin. [= ?].  
 tc!il- 'to burn': Tak. -s<sup>?</sup>ul-k<sup>?</sup>- [-ts<sup>!</sup>!ül-k!- 'to set fire to'].  
 tc!ilte! 'hammer': Tak. s<sup>?</sup>al-s<sup>?</sup>al- [ts!<sup>!</sup>alts!<sup>!</sup>al- 'to chew'].  
 tc!ō<sup>u</sup>- 'to lie down, to go to bed': Tak. s<sup>?</sup>oot- [ts<sup>!</sup>!ó<sup>u</sup>d- 'to touch, strike against'].

kwe'li'yes 'intestines, a person created from the intestines': Tak. kwāas [gwās 'entrails'].

kwē'ik 'girl', kwē's 'young woman, girl': Tak. khayʔ- [k'ai-].

kwīl-, k!ʰhīl- 'to burn': Tak. kuł-kʔ- [gūl-k!- 'to blaze, glow'], cf. Tak. k'wínax : k'ūʰnax [for phonological detail].

kwīt- 'to leave': Tak. kʔotot-, koot- [k!odod-, goʰd- 'to bury'].

kwīL- 'to dig (clams)': Tak. kʔolol-, kool- [k!olol-, goʰl- 'to dig'].

kxla 'foot, leg': Tak. sal- [s'al- 'foot'], kwel- [gwel- 'leg'] (?).

k!ā 'rope': Tak. kʔankʔan- [k!ank!an- 'to twist (hazel switch)'].

k!āi 'to listen, to keep quiet': Tak. skekʔii- [sgek!i- 'to listen'].

k!walxa'ya 'butter-ball' [duck sp.]: Wish. [= ?].

k!wā'sis 'wind': Tak. kwālt [gwal't].

k!wéhe 'willow': Tak. kwʔāay [k!wāi 'grass'].

k!wints 'throat, neck', k!wīn- 'to swallow': Tak. kwēn- [gwen- 'neck, nape'].

g-ā'we 'sea otter': Tak. tkam [t'gām 'elk (hide, hide armor)'] (?).

k-ī'nwīs 'lazy', k-ī'nāʰ 'tired': Tak. kenaw- [genaw- 'lie curled up dog-fashion'].

k-ōw- 'to munch, to pick and eat': Tak. kʔowoo-, kuuw- [k!owoʰ-, guʰw- 'to throw a mass of small objects'].

k!em- 'to practice': Tak. kʔemn- [k!emn- 'to make, treat as'].

k!s!līs 'green': Tak. tkism- [t'gis-m-] (?).

k-éle 'shouts': Tak. skelw- [sgelw- 'to shout'].

qanō'tc 'outside': Tak. nōoʔs [nóʰes 'next door'].

qal- 'to dig': Tak. kʔolol-, kool- [k!olol-, goʰl- 'to dig'], -holohal- [-holohal- 'to dig into (ashes)'] (?).

qal- 'to cry (sing.)': cf. Chin. [= ?].

qā'ya 'breath': Tak. hekehak- [hegehag- 'to breathe'] (?).

qā'yīs 'sky, day, world': Tak. hāay [hāi 'cloud'] (?).

qai'na 'cold': Tak. tkuun-p- [t'guʰn-p-] (?).

qaʰwa 'evening, night', qaʰm(tc) 'evening': Tak. hoo-xá [hōʰxá 'yesterday', §112.2].

qetōʰ 'to be in suspended position, to hang': Tak. xataxat-na- [xadaxat-na- 'to hang up in a row'].

q!al- 'to take out': Tak. kwʔalkw- [k!walgw- 'to let alone'].

q!ā'na 'young': Tak. kwʔal-thaa [k!wál-t'aʰ 'youngest (of two or more)'].

q!élé 'pitchwood': Tak. kwʔäl [k!wal].

q!m- 'to eat, to cook': Tak. kʔuum-an- [k!uʰm-an- 'to fix, prepare'] (?).

xā'yusLāte 'relatives by marriage after death of person causing that kinship': Tak. ximní- [ximní-].

xān- 'to be sick, to be sorry', xā'nīs 'sick': Tak. xilām [xil-àm 'sick, dead person, ghost'].

xā'ka 'he, she, it': Tak. haaʔka [hāʰʰega 'that yonder', §104] [see Section 4 below].

xō'xweł 'frog': cf. L. Chin. [= ?].

xʰkwī'nāte 'maternal aunt': Tak. xaka- [xagá-].

- xwélap 'lungs': cf. L. Chin. [= ?].  
 xwi'nLís 'snot': Tak. xǐn [xǐn].  
 xwí'lux<sup>u</sup> 'head': Tak. xuul-i- [xu<sup>u</sup>l-i- 'brains'] (?). [See different comparison in Section 4 below.]  
 xqas 'white': Tak. tkúy<sup>2</sup>s [-t'gú<sup>i</sup>es.].  
 xlís 'slime': Tak. xlá<sup>2</sup>px [xlé<sup>ε</sup>p-x 'roundish dough-like cake of deer-fat or camass'].  
 x-íl- 'to look around': Tak. xanan- [xanan- 'to look out (pl.)'] (?).  
 lEqa<sup>u</sup>we 'to die (sing.)': Tak. loho- [loho- 'to die'].  
 lE'γī 'good, nice': Tak. túu [dū] (?).  
 laa- 'to put around': Tak. láat- [lá<sup>ad</sup>- 'to put (belt) around waist'].  
 látciya- 'to call by name': Tak. laalaw- [la<sup>a</sup>law- 'to name, call'].  
 laix<sup>u</sup>- 'to jab': Tak. laaw-t-an- [lāu-d-an- 'to hurt'].  
 lewī 'it is, that is': Tak. laalii- [la<sup>a</sup>l-i- 'to become'].  
 lem- 'to be in upright position, to stand (of inanimate objects)': Tak. lem<sup>2</sup>- [lemk!- '(people) move, go, to take along (pl. obj.)'] [see lim- below].  
 le'xalx 'string': Tak. laaw- [la<sup>aw</sup>- 'to twine (basket)'].  
 lē'xūm 'buzzard': Tak. moxó [moxò].  
 lic- 'to shake, move (intransitive)': Chin. -la.  
 líclay- 'to swing': Tak. lewe<sup>2</sup>law- [lewe<sup>ε</sup>law- 'to swing (shells) in one's ear'], smilismal- [- smilismal- 'to swing'] (?).  
 lí'kwit 'feathers': Tak. xlíwi [xlíwi 'feathers worn in war-dance'] (?).  
 l<sup>ε</sup>x-íl- 'to like, to love': Tak. miil- [mīli<sup>i</sup>-d- (?)].  
 l, abbreviated form of dī<sup>ɥ</sup> ['something']: Chin. l-.  
 la- 'to go': Tak. yaan- [ya<sup>an</sup>-] (?).  
 lim- 'to put inside (pl. object)': Tak. lemek<sup>2</sup>- [lemek!- '(people) move, go, to take along (pl. object)'] (?) [see lem- above].  
 l<sup>ε</sup>yuwíl- 'to move, to wiggle': cf. Ts. [= ?].  
 lh- 'to get well', lhe- (the-) 'to rest': Tak. likii-n- [ligi<sup>i</sup>-n- 'to rest'].  
 lḡ'nas 'name': cf. L.U. liin [līn].  
 lk<sup>u</sup>- 'to sew': Tak. lep-t- [lep<sup>'</sup>-d-] (?).  
 lkwilt 'red': Tak. al-s<sup>2</sup>iil [al-ts<sup>'</sup>lil] (?).  
 lqalk<sup>u</sup>- 'to bite': Tak. lek<sup>w</sup>el- [legwel- 'to suck'].  
 Lala<sup>w</sup>- 'to bark, to growl, to shout, to wail': Tak. khewekhaw-al- [k<sup>'</sup>ewet<sup>'</sup>aw-al- 'to bark at'] (?).  
 L<sup>o</sup>wa 'son (vocative)': Tak. khapa- [k<sup>'</sup>abá- 'son'] (?).  
 Lōc 'clam': Tak. kós [gòs- 'clamshell'] (?).  
 Lkwa<sup>a</sup>- 'to cut off': Tak. skóot- [sgó<sup>u</sup>d- 'to cut'] (?).  
 Lx- 'to drift (away)': Tak. thiyii- [t<sup>'</sup>iyi<sup>'</sup>- 'to float'].  
 L!tā 'land, earth, country, ground, place': Tak. tkāa [t<sup>'</sup>gā].  
 L!ka- 'to string': Tak. tpaak- [t<sup>'</sup>bá<sup>g</sup>- 'to tie up (hair, sinew)'].  
 L!kw- 'to cover up': Tak. tpook-tpak- [t<sup>'</sup>bo<sup>u</sup>k<sup>'</sup>t<sup>'</sup>bag- 'to put away'].

L!k- 'to pour, to spill': Tak. tkiiy-al-x- [t'giy-al-x- 'tears roll down one's face'].  
 L!le- 'to come out (from water)': Tak. theek- [t'écg-].

#### 4. Coos (Frachtenberg Grammar)

The following are the comparative glosses found in Sapir's copy of Leo Frachtenberg's *Coos* (1914a), omitting comparisons duplicating those in his copy of *Coos Texts* (Section 3, above). The page on which a gloss is found is given in brackets.

he'nīye 'a while', he'nīhen 'many times' [313]: Tak. he?ne [he'εne 'then', §112.3], hem-tí [hemdi 'when', §113.2].

in, negative particle [314]: Tak. ánií? [ániε §113.3].

"*Hiatus* . . . Broadly speaking, it may be said that the coming-together of two vowels of like quantities and qualities is avoided by means of infixing a weak *h* between them" [314]: cf. Tak. ["inorganic"] -h- [§24].

helmī'hīs 'next day' [314]: Tak. te-wénxa [dewénxa 'tomorrow', §112.2].

xwī'lux<sup>u</sup> 'head' [316]: Tak. uluk?i- [ü'lük!-i- 'head-hair'] [see different comparison in Section 3].

ŋ-, 1st person [321]: Tak. -a?n [-áεn 1st person sg. transitive subject (aorist)], -an [-án (future), §63].

eε-, 2nd person [321]: Tak. -te?, -?t [-de?, -'εt', 2nd person sg. possessive, §90].

nkwā'xLa 'with bows' [322]: Tak. kál? [gálε 'bow, gun'].

mítsīltī'ye 'become pregnant' [323]: Tak. max<sup>wii</sup>? [mAhwīε] ? = mix<sup>wii</sup>? [see also Section 3].

ntc!a'ha 'equipped with walkers [i.e., legs, feet]' [323]: Tak. s<sup>2</sup>aaks<sup>2</sup>ak- [ts!a<sup>k</sup>'ts!ag- 'to step'].

-t, transitive [327]: Tak. -s-, from -tx- [indirective, §47].

-ts, transitive [327, 329]: Tak. -s-, from -t-s.

-ī, ē<sup>i</sup>, neutral [= mediopassive] suffix [327, 334]: Tak. -īi [-ī, suffix forming verbs of position, §57].

-s, general nominal suffix [328]: Tak. -s [§87.8] (?).

-aai, intransitive [332]: cf. Tak. -xa- [§53].

yōyōε<sup>wai</sup> 'is stopping' [332, 364]: cf. Tak. yo-, yowo- ['be sitting'] (?).

-me<sup>u</sup>, reciprocal [332]: cf. Tak. -an- [§55].

-ts-xEM, -t-xEM, reflexive [333]: cf. Tak. -k<sup>wi</sup>-, -k<sup>wi</sup>- [-gwi-, -k<sup>wi</sup>- §54].

láatsxEM 'put herself in' [333]: cf. Tak. las<sup>2</sup>ak-, lask- [lats!ag-, lasg- 'to touch'].

-ē<sup>i</sup>wa(t), -ō<sup>u</sup>wa(t), frequentative [336]: cf. Tak. -ēcha, -īiha [-ēcha, -īiha §43.6].

ghamī'yat 'I brought it out' [340]: Tak. hemek- [hemeg- 'to take out, off'].

-ānī, transitive [341]: Tak. -an- [causative, §45].

- tsak<sup>u</sup>kw-, -tskw- 'to spear' [341]: Tak. saak<sup>w</sup>- [sa<sup>a</sup>gw- 'to shoot (arrow), paddle (canoe)'] [see Section 3].
- tqa'nL- 'to strike' [341]: Tak. saansan- [sa<sup>a</sup>nsan- 'to fight'] [see Section 3 for different comparison].
- it̄ tqanLLä'nī 'they mutually strike one another' [341]: Tak. sana-x-in-iyān- [sana-x-in-iyān-].
- wil- 'to fight' [342]: Tak. te-wiliw-alt- [de-wiliw-ald- 'to fight with, "go" for' (< wiliw- 'go, proceed, run')] (?).
- āyu, -ē'yu, -īyu, (past) passive [327, 344]: Tak. -yaw- [-iauw-, impersonal, §58].
- āyā<sup>u</sup>, past participle [347]: Tak. -īya [§83] (?).
- ā, in formation of past participle [347]: from -ii, [-i] cf. L.U. and umlauting force in Coos.
- k-éla 'hand' [348]: Chin. -kši, -kšn (?).
- tē'L 'this' [348]: Chin. ti-ka.
- it̄, suffixed to verbs that are transitivized by means of the transitive suffix -āya, 3 pers. obj. [348]: cf. Tak. [= ?].
- enī, verbalizing suffix, 'to do, make something' [349]: Tak. causative -an- [§45].
- a, transitive verbs [354]: cf. Tak. [§44-51] (?).
- is, nominalizing suffix [360]: Tak. -(a)x, [intransitive] infinitive [§74].
- ōnīs, -sī, verbal noun formants [363]: cf. Tak. passive [(aorist)] -an [§66].
- L!x-īnt 'he examined it' [364]: Tak. xiik- [xi'ig 'to see'] (?).
- e<sup>ε</sup>nāte 'mother', nī'k!a 'mother!', vocative [366]: Tak. ni- [nī-(xa) 'his mother'], -hin [(wi-)hīn '(my) mother'].
- teká<sup>x</sup>t̄sī 'granddaughter!', vocative [366]: cf. Chin. [= ?].
- ā'tate 'paternal aunt' [366]: Tak. that- [t'ád-].
- mī'nkate 'son-in-law' [366]: Tak. mot-, moo- [mot', mó<sup>u</sup>-] (?).
- ēx, -īyēx, -īyētēx 'pertaining to ...' [367]: Tak. -?ixi [-ē'ixi 'belonging to', §108.10].
- yīqāntēimēx mā 'the last [= previous] generation' (< yīqantē 'behind') [367]: Tak. -imik<sup>ʔ</sup>i [-imikli, suffix forming adjectives from temporal adverbs, §108.7].
- slāate 'cousin' [371]: cf. Tak. snāa [s-nā 'momma!' vocative, §91] (?).
- en, multiplicative suffix, 'times' (in numerals) [373]: Tak. -an, -tan [-an, -dān §111].
- hī'mē 'children' [374]: Tak. haap- [ha<sup>a</sup>p<sup>i</sup>- 'small child'].
- mā 'human being', mēn, plural [374]: Tak. -(h)an [§99].
- L!tā'yas 'village', derived from L!tā 'earth, ground, country' [375]: ? from λ'taay- [L!tāy-] (cf. L.U. λ'ay [L!á<sup>ai</sup>] 'place, world, people', λ'ayuus [L!ayū's], locative form) + -as. [See Section 3 for Takelma comparison].
- hū<sup>u</sup>mī'k-ca 'dear old woman' [375]: cf. Chin. wi-na-m-š wa-n-aq-š.
- ī, found suffixed to the article, expressing instrumentality [377]: cf. Ts. -ii (-ī) (?).
- final reduplication [380]: cf. Tak. [§30].
- tcō<sup>x</sup>tcōx 'rabbit' [381]: Tak. hōow [hōū] (?).
- he 'usually, frequently, habitually' [384-5]: Tak. -wi<sup>ʔ</sup> [-wi<sup>ε</sup> 'every, §101] (?).

- e<sup>ε</sup>, expresses slight surprise at a state of affairs that has come into existence contrary to one's expectations [389]: cf. Chin. š-.
- hîc, indicates surprise [391]: Tak. hîs [his 'nearly, almost, trying', §114.7].
- L 'must, necessarily' (exhortative particle) [392]: Chin. λX (?).
- hamîL, mîL, îL 'let me, I should like to, better, you may, please, a while' (exhortative particle) [392]: Ts. amii [ami], Tak. mii<sup>2</sup>wa [mî<sup>ε</sup>wa 'probably, perhaps', §114.6].
- ŋ'ne, 1st person (independent pronoun) [396]: L.U. -n.
- e<sup>ε</sup>ne, 2nd person [396]: L.U. -nX [-nx].
- î'sne, dual inclusive [396]: L.U. -ns.
- î'cne, 2nd person dual [396]: L.U. -c [-ts].
- xwîn'ne, dual exclusive [396]: L.U. -Xun [-xûn].
- lîn'ne, 1st person plural [396]: L.U. -nł, inclusive, -nXan [-nxan], exclusive.
- cîn'ne, 2nd person plural [396]: L.U. -či [-tcî].
- îlxä, 3rd person plural [396]: cf. Chin. ł (?).
- ŋtet, 1st person singular reflexive (cf. tet 'body') [400]: Tak. -ta<sup>2</sup>x [-da<sup>ε</sup>x restrictive suffix, "denoting the isolation of the person," e.g. 'only I', §103].
- la<sup>u</sup>, ha<sup>u</sup> 'he, it is' [401]: Tak. haa<sup>2</sup>- [hā<sup>aε</sup> demonstrative stem, §104].
- lewî 'it is' [402]: Tak. laaliî- [la<sup>a</sup>l-i<sup>i</sup>- 'to become'].
- tc, adverbial suffix of modality [405]: Tak. -xa, -x [adverbial suffix, §112.2].
- î 'when, as, since, while' [409]: Tak. ísi<sup>2</sup> [i<sup>i</sup>s-i<sup>ε</sup> 'despite, although, even if', §114.4].
- ā'watu 'whether or not' [411]: Wish. awa-či<sup>2</sup> 'or'.
- nouns as qualifiers [412]: cf. Tak. [§88].
- k!al- 'to shout' [413, 416]: Tak. skelw-, skelew- [sgelw-, sgelew-].
- cx-îmł 'bear' [415]: Tak. xămk [xam<sup>2</sup>k 'grizzly bear'].

## 5. Siuslaw (Frachtenberg Grammar)

The following are comparative glosses found in Sapir's copy of Leo Frachtenberg's *Siuslawan (Lower Umpqua)* (1917). The page on which a gloss is found is given in brackets.

- nx + k becomes nak [446]: cf. Wish. -tX-k becomes -t-k.
- wînx- 'to be afraid' [446]: cf. Tak. hin<sup>2</sup>x [hin<sup>ε</sup>x 'fear'].
- îmts, indirect object of first person imperative [501]: cf. Tak. -xi [?].
- lân- 'to call by name' [514]: Tak. laalaw- [la<sup>a</sup>law-].
- wîltc- 'to send' [520]: cf. Coos will- [wîl- 'to look for, to search'] (?).
- t, present tense [527]: cf. Wish. [= ?].
- matc- 'to be in a horizontal position', ma<sup>a</sup>tc- 'to lay' [536]: cf. Tak. mas<sup>2</sup>ak-, mask- [mats<sup>2</sup>ag-, masg- 'to put'].
- a, nominal object of an action, also the local idea of rest [= accusative case-ending] [541]: cf. Yokuts -a.

- a, modal adverbs [557]: cf. Tsim. adv. -a.  
 qā'wī 'blood' [560]: cf. Chin. [= ?].  
 -a<sup>ε</sup>mū, nominalizing suffix indicating place [563]: cf. Coos -ame.  
 -t, adjectival suffix [564]: cf. Tak. -t [-(i)t' §108.1].  
 tsamī'tSEM 'chin' [565]: Coos cneex [ts'inä'x] 'beard'.  
 -wī, suffix found in a small number of nouns [565]: cf. Coos -eyeewe [-eyäwe, noun of agency, Frachtenberg 1914a: 364].  
 tsxan- 'to comb one's hair' [565]: cf. Chin. [= ?].  
 duplication of final consonants [567]: cf. Tak. [§30].  
 tcaq- 'to spear' [568]: Tak. saak<sup>w</sup>- [sa<sup>a</sup>gw- 'to shoot (arrow), paddle (canoe)'].  
 hīq<sup>u</sup> 'wildcat' [570]: Tak. yāk<sup>w</sup> [yāk<sup>w</sup>].  
 stem amplification [573]: equivalent to Tak. aorist verb stem [§39-40].  
 tqūl- 'to shout' [575]: Tak. skelel- [sgelew- 'shout', sgelēl- 'keep shouting'] (?).  
 xā'tslūn 'four' [586]: = 2 x (2), -n cf. Tak. -an, -tan [- an, -dān multiplicative suffix, §111].  
 qō'x<sup>u</sup>m 'offshore, out in the water' [589]: Tak. xam- ['in river, into water', §37.16] (?).  
 sīm, sīm̄k 'there' [589]: cf. Ts. [= ?].  
 āl-dū 'likewise' [592]: Tak. altii [aldī 'all'].  
 ʷ 'and' [592]: Coos il [il 'surely, indeed'], Tak. altii-l, -tīil [aldī-l, -dīl 'all, everything'].  
 āL 'now' [593]: L. Chin. alta, aḷqa.  
 hánhan 'indeed, to be sure' [594]: Coos han [temporal particle].  
 nà, particle of interrogation [599]: L. Chin. na.

## 6. Tsimshian (Boas Texts)

The following are comparative glosses found in the vocabulary section (pp. 256-284) of Sapir's copy of Franz Boas's *Tsimshian Texts, New Series* (1912).

- aya- 'successfully': Chin. aiaq.  
 awā' 'proximity': Tak. wa- ['to, together with'].  
 ap 'bee': Wish. wa-ba.  
 am- 'only': Wish. nai-ma, L. Ch. nām-ka.  
 amī 'if': cf. Tak. mī'wa ['probably, perhaps'] (?).  
 amúks 'to listen': (cf. mū 'ear?').  
 al 'but': L.U. ʷ ['then, so, and', introductory particle] (?), Coos il ['surely, indeed'].  
 ā'olks 'servant': cf. Kwakiutl ɛlk<sup>u</sup>.  
 ał 'not' (in interrogative sentences): cf. Na-dene.  
 ēmx 'beard': Chin. -miqcu.

- yā<sup>o</sup> 'to go, sing.': Chin. -ya, Tak. yana-.
- y!ān 'excrement': Tak. xā<sup>a</sup>n- 'urine' (?).
- y!ltk, pl. y!ly!ltk 'to return': Tak. yèw-.
- yēi, pl. y!kyēi 'fat': cf. L.U. [= ?].
- y!ū<sup>o</sup>ta 'man': L.U. hīt-c (?).
- wak 'brother', waik 'elder brother': Tak. wā<sup>a</sup>-, Chin. áwi.
- walp, pl. huwálp 'house': Tak. wili.
- wâ 'to invite': Tak. wō<sup>u</sup>- ['to go for, go to get'] (?).
- wôq 'to sleep': Tak. wai-, Yok. woi.
- wun- 'innermost part', wun-gâus 'brain' (cf. gaus 'head'): Chin. -wan, Tak. ha-εwin-i-(dē) ['inside of (me)'].
- wul 'being': Tak. walá ['really, come to find out'] (?).
- wulī<sup>o</sup>l, pl. wulwulī<sup>o</sup>l 'to rub': Tak. yul-, final red[uplication].
- hau 'to say': ? < \*waw-.
- ha<sup>o</sup>wīn 'before': Tak. ha'wi- ['still, yet', §113.2] (?).
- hats! 'hardly, now': demon, ha- (cf. Coos [hE 'the', ha 'his, her, its']).
- hā<sup>o</sup>x 'goose': cf. Tak. [há<sup>ε</sup>k<sup>a</sup>a].
- haldεm- 'upward': cf. Tak. hilw- ['to climb'].
- hī- 'beginning': L.U. hīq!- ['to begin'].
- hâ 'to shout': L.U. ha!-.
- hân 'salmon' ... SE-wī-hâ'n 'twins (= making plentiful)': cf. Nootka.
- hūm 'to smell something': cf. Chin.
- hū<sup>o</sup>t 'to escape, pl.': Tak. ho<sup>u</sup>gw- ['to run (without expressed goal of motion)'].
- hū<sup>o</sup>tk, pl. hukhū<sup>o</sup>tk 'to call, summon': L.U. hant'-.
- huk- 'expert' (par.): Tak. yok'y- ['to know'] (?).
- bεn, pl. ga-bε'n 'belly': Chin. -wan (?).
- bεlā<sup>x</sup> 'moss': Tak. bils.
- bā<sup>o</sup>lx, pl. bīlbā<sup>o</sup>lx 'ghost': Tak. bilàm ['having nothing, empty'] (?).
- pē 'liver': cf. Tak. p!ān.
- bū<sup>o</sup>, pl. gabū<sup>o</sup> 'to blow': cf. Tak., Coos, Chin.
- p!iā<sup>o</sup>r 'to relate': Tak. p!al-g- ['to tell a myth to'] (?), L.U. pūtk-na- ['to speak'] (?).
- p!ē!-mū 'ear-ornament': cf. p!al 'button'.
- p!iā<sup>o</sup>n 'smoke', x-p!iā<sup>o</sup>n 'to smoke (= to enjoy smoke)': cf. Southern Paiute.
- m 'thou (transitive subject)': cf. Chin., Tak.
- MES- 'reddish' ... MESī<sup>o</sup>n 'copper': cf. Hokan, Algonquian.
- MESx 'breast': Chin. -mxtc 'heart'.
- m!an- 'up through the air': cf. Hokan 'up, sky'.
- mag 'to put down one object', mak-sk 'to put down several objects': cf. Tak. [masg- 'to put'].
- mā<sup>o</sup>lk 'to burn': cf. Tak. [me<sup>ε</sup>l- 'to blaze'].
- ma!l, pl. mε!má! 'to tell': cf. Tak. [malg- 'to tell, speak to'].
- mū 'ear': Hokan?
- dū<sup>o</sup>la, pl. ga-dū<sup>o</sup>la 'tongue': cf. Wintun.
- tgi- 'down through the air': Tak. t'gī'y- ['tears roll down one's face'].

- tgīn 'to drill fire, [t]gu- 'around': Tak. t'gei- ['to roll, put around'].  
 txa 'skin': Tak. t'gwā<sup>ax</sup>-an- ['to tattoo'] (?).  
 txal- 'against': Tak. = t'gwā<sup>al</sup>- ['to run about, whirl past'] (?).  
 t!ā<sup>ε</sup> 'to slap': cf. L. Chin.  
 t!ālp 'to cover with hot ashes or fire': Coos t!al 'roast'.  
 t!ū<sup>o</sup> 'to sweep, tran.', t!ū<sup>o</sup>sk, intrans.: Tak. -xa- [intransitivizing suffix].  
 t!ū<sup>o</sup>s 'to push, to beat with fist': cf. Coos tō<sup>us</sup> ['to hit, to strike'].  
 sĒksū' 'urine': cf. Tak. xā<sup>an</sup> (?).  
 sā<sup>o</sup>l 'to notice', only in negative form: Tak. -xanaw ['to look out'] (?).  
 sū<sup>o</sup>nt 'summer': Tak. sama- (?).  
 stā 'half, one side of a long thing': Chin. cí<sup>!</sup>-i<sup>x</sup>, Tak. -xdil'- ['notch'].  
 sts!ál 'beaver': Coos tĒtĉí'na (?).  
 sg-an 'gum, pitch': Coos s<sup>ε</sup>aL! (?).  
 dzab, pl. dzĒbdzáb 'to make': Tak. xe<sup>ε</sup>b- ['to do (so)'] (?).  
 dzał, pl. dzĒldzál 'to eat up, to beat in game': Tak. -xeml- ['to desire to eat'] (?).  
 ts!Ē- 'inside of a thing' (only in the form ts!Ē-wā<sup>!</sup>lb 'inside of house'): L.U. [qtsī  
 'inside'].  
 ts!ats!á 'hail': cf. Tak. [ts!ele-m- 'to hail'].  
 ts!al, pl. ga-ts!Ēlts!ál 'face, eye': Tak. tĉ!elei- ['eye'].  
 ts!ī<sup>o</sup>p 'to tie, to close eyes': Tak. -ts!libib- ['to shut (doorway, hole)'].  
 n-, nĒ-, nominal prefix: Chin. [illegible].  
 nā'ya 'mother!' (said by girl): Tak. [s-nā 'momma!' (vocative)].  
 nĉ'tsĒks 'fish-tail': Chin. -lict.  
 n!axn!ó 'to hear': Uto-Aztecán.  
 gā<sup>o</sup> 'to take sing. obj.': Chin. -ga.  
 gū'p!Ēl 'two round objects': Tak. gā'm ['two'].  
 gun- 'to cause' (par.): Haida (?).  
 gwa<sup>o</sup> 'that': cf. Chin.  
 gwā<sup>ns</sup> 'cooked, done', sĒ-gwā<sup>nar</sup> 'to cook': disyllabic stem.  
 ksāx 'to go out, pl.', kSER 'to go out, sing.': ? = \*ksaxwax<sup>u-</sup>.  
 g-ī<sup>o</sup>-tĉ 'to swell, to flood', g-ī<sup>o</sup>n 'to cause to swell': cf. Tak. [-(a)n-, causative].  
 qa 'rabbit' (?): Athabaskan.  
 gal-, qal- (par.) 'empty': cf. Tak. k!wal- ['let alone'] (?).  
 galā'r 'cedar': Chin. -cgan (?).  
 gā<sup>o</sup>d 'heart, mind': Tak. gūxw- [= ?] (?).  
 gōx, qōx 'to peck', q!āx, pl. q!ālx 'to pluck': note infix -l-.  
 la- 'not quite in the right manner' (par.): Chin. la'āx.  
 lĒt 'excrement' (?): Tak. là'.  
 lámdzĒx 'to enter, pl.': Coos ĩm- ['to put inside (pl. object)'].  
 laq 'to take name' (?): Tak. lā<sup>al</sup>law- ['to name, call'].  
 lō'ĉ 'neck-ring of cedar-bark': Chin. -lxwa (?).  
 lu- 'in': Chin. -l-.  
 lū<sup>o</sup>p-k 'to sew': Tak. [lep'd-, lebe-].  
 ĩĒb 'smooth', ĩĒ'lĒp 'to smoothen': infixed -l-.  
 łantk, pl. łáántk 'to move', łā<sup>o</sup>l, pl. ĩĒĩā 'ol' 'to move something': Chin. -la.

lâ° 'to slide': L.U. sLōx<sup>u</sup> ['to descend, slide down'].

lâtk 'to move': Chin.

lôga 'to go, pl.': Coos la- ['to go'].

lka'ak 'sister' (said by man): Chin. -lxt (?).



Section Eight:  
Wakashan and Salishan Languages



## Introduction

Within a few weeks of assuming his duties as Chief of the Anthropological Division, Geological Survey of Canada, in September 1910, Sapir set out for British Columbia for linguistic and ethnographic field work on the Nootka of Vancouver Island. A genetic connection between Nootka and Kwakiutl had been proposed by Boas (1891:678-679), and although this was accepted by Powell (1891), who provided the family with the name "Wakashan," the details of the relationship remained to be worked out. This was the sort of task Sapir relished, and his first report on his Nootka work (1911e) was a preliminary survey of Nootka-Kwakiutl comparative linguistics. He apparently continued to work on the project intermittently for several years. The notes he accumulated, now in the Franz Boas Collection in the Library of the American Philosophical Society (manuscripts 497.3 B63c W1a.2 and W1.3; cf. Freeman 1966: 216, item 1954, 380, item 3836), formed the basis of an extensive "Wakashan Comparative Vocabulary" (American Philosophical Society Library, manuscripts 497.3 B63c W1a.26 and W1.1; cf. Freeman 1966: 380, items 3837-3838) prepared by Morris Swadesh in 1950-51, which is published for the first time in Volume XII of *The Collected Works*.

Sapir visited the Nootka twice, from September to December, 1910, and from September, 1913, through February, 1914. His principal informant was Tom (Sayach'apis), an elderly blind man (1918i, 1921e, and 1922y). From Sayach'apis and others Sapir obtained an extraordinarily detailed record of Nootka language and culture, including 71 texts, several of considerable length. During the second trip Sapir taught two of his young interpreters, Frank Williams and Alex Thomas (the latter a grandson of Sayach'apis), to take phonetic dictation; he arranged for them to continue to transcribe texts and collect other data after his departure (1915j: 172). This collaboration was explicitly modeled on the relationship Franz Boas had developed with his Kwakiutl interpreter, George Hunt, and proved just as successful, particularly in the case of Thomas (Golla 1984: 133-134). In addition to providing documentation of many aspects of Nootka culture from a native point of view, Thomas's contributions eventually more than doubled Sapir's collection of Nootka texts. Although Sapir worked on these materials fairly steadily during his Ottawa years, he was able to see only a small fraction of it into print until very late in his career. The three papers (1911e, 1924g, and 1929e), the short monograph (1915a), and the set of annotations (1916c) that are reprinted here represent nearly all of Sapir's published work on Nootka linguistics before 1939 (for his publications on Nootka ethnography see 1911e, 1912a, 1913b, 1914b, 1915h, 1919e, 1921e, 1922y, 1922aa, and 1925c, all in Volume IV).

"Some Aspects of Nootka Language and Culture" (1911e), subtitled "The Linguistic Relationship of Kwakiutl and Nootka," is one of two studies published together as the first fruits of Sapir's 1910 field work. (The other part, "The Nootka Wolf Ritual," appears in the full article reprinted in Volume IV.) Sapir's aim here is to provide Wakashan comparative linguistics with a firm structural basis. He outlines the basic sound correspondences between Nootka and Kwakiutl; he sketches the parallels in morphology and provides a number of cognate affixes; he discusses related morphological processes, particularly reduplication; and he broaches comparative syntax in a treatment of pronominal systems and conjunctions. He concludes with a list of 40 apparently cognate stems and affixes.

The short monograph on "Abnormal Types of Speech in Nootka" (1915a) belongs together with Sapir's description of consonant symbolism in Wishram (in 1911g), his paper on male and female speech in Yana (1929d), and his experimental study of the psychology of sound symbolism (1929m) as an expression of his enduring interest in the points of contact between formal linguistic structures, social categories, and psychological universals. This paper is sometimes cited in the sociolinguistic literature as a pioneering study of variation correlated with such factors as age, sex, class, and ethnicity. In fact, Sapir's subject here is not sociolinguistic variation as such, but a set of literary-rhetorical devices used in both formal and informal Nootka discourse to index the social categorization of the topic (having thus a clear link to Sapir's discussion of "recitative" in Southern Paiute myths, 1910d). Typically, these are regular patterns of phonetic alteration used in traditional narratives to identify the speech or actions of salient mythic characters or of socially stereotyped groups such as foreigners, deformed individuals, or outcasts. At least some of these devices are regularly used in conversational interaction for a variety of interpersonal ends, including affection, mockery, and social exclusiveness.

"The Rival Whalers, A Nitinat Story" (1924g), a short text obtained from Sayach'apis in 1913, is provided with a word-by-word analysis in order to present a "serviceable" introduction to Nootka linguistic structure. Publishing an analyzed text in lieu of a full grammar was a device Sapir had earlier resorted to for Wishram (1911g: 673-677) and for Yana (1923m). In Sapir's hands what could easily be a mere pastiche of disconnected information is crafted into a tightly organized descriptive statement. Most major inflectional and derivational processes are explained (with several paradigms given in full), a wide range of morphophonemic alternations are exemplified, and the complex morphosyntax of Nootka words is thoroughly explored. Although superseded as a formal presentation by the grammatical sketch in *Nootka Texts* (Sapir and Swadesh 1939) — the orthography of which is also fully phonemic — "The Rival Whalers" remains the best pedagogical introduction to Nootka linguistic structure.

"Nootka Baby Words" (1929e) is a brief report on the Nootka baby-talk register — a small set of lexical substitutions, phonological alterations, special morphological devices, and other special features used by or in speaking to small children — and should be read in conjunction with the paragraph on the use of

the diminutive in baby talk in "Abnormal Types of Speech in Nootka" (1915a: 3-4).

During the 1930s two of Sapir's students, Morris Swadesh and Mary Haas, carried out further Nootkan field work under Sapir's direction (cf. Swadesh and Swadesh 1933). In the summer of 1934 arrangements were made for Alex Thomas to come to Yale for intensive work with Swadesh, with a view to preparing some Nootka materials for publication. The eventual result, published in the year of Sapir's death, was a major volume on Nootka linguistics containing a selection of Sapir's (and Thomas's) texts, a grammatical sketch, and a list of lexical elements (Sapir and Swadesh 1939, Volume XI). A second volume of texts, largely Alex Thomas's, was published by Swadesh after Sapir's death (Sapir and Swadesh 1955). Even so, over half of the texts, many of considerable ethnographic interest, have remained unpublished, as have virtually all of Sapir's Nootka ethnographic notes. (See Volumes XI-XII.)

Besides those specifically concerned with Nootka or Wakashan linguistics, the papers reprinted in this section include two that deal wholly or in part with Salishan languages. "Noun Reduplication in Comox" (1915f), a Straits Salish language, is based on data that Sapir collected during his first visit to the Nootka in 1910 in typically incidental fashion, from a Nootka man whose mother was Comox. The short list of "Salishan-Wakashan Comparisons," published posthumously (as part of Swadesh 1949), was apparently compiled by Sapir at the time of his Comox work or shortly afterward (see Golla 1984: 108). It is all that survives of Sapir's own lexical evidence for the "Mosan" hypothesis, the genetic linkage of Salishan, Wakashan, and Chimakuan originally proposed by Frachtenberg (1920: 295; see also Swadesh 1953: 26-28) and incorporated by Sapir into his general classification of North American languages (1921a and 1929a).

Sapir also prepared a phonetic retranscription of, and notes to, the anonymous 18th century Nootka vocabulary published by Boas in "Vocabularies from the Northwest Coast of America" (1916c); this contribution, which appears in Volume XII, is a minor work, but not without interest. The vocabulary was taken at Nootka Sound, in the northern part of the Nootka dialect chain, whereas the dialect with which Sapir was familiar, that of Barkley Sound and Alberni Canal, was near the southern end of the chain. Sapir's notes include numerous observations on the differences between the two dialects and may be read as a preliminary essay on Nootkan internal diversity.



## THE RIVAL CHIEFS.

A KWAKIUTL STORY

RECORDED BY GEORGE HUNT.<sup>1</sup>

### SYNOPSIS.

FAST-RUNNER and THROW-AWAY are chiefs of the Kwakiutl, and close friends. The latter makes up his mind to give a feast of salmon-berries, and sends his four attendants to invite his own clan and his friend Fast-Runner. After Fast-Runner has been assigned his seat and the feasting-songs have been sung, four canoes that Throw-away has been careless enough not to have cleaned out are brought in, filled with berries and boxes of grease, and put before Fast-Runner and his clan and three other chiefs. Fast-runner, instead of proceeding to eat of the food, lies down on his back and covers his face with a blanket, while his fellow-clansmen, observing that he is displeased, follow his example. After a long silence, Fast-Runner's attendant arises and tells his fellowmen of the dirty treatment accorded their chief, in that Throw-away has not washed out the canoes before using them as food-receptacles. Throw-away rebukes his friend for his haughtiness; Fast-Runner expresses unwillingness to eat of the dirty food, and, to show his superiority in wealth, sends for his copper "Sea-Monster" and puts it into the fire. Throw-away retaliates by putting in his own copper, "Looked-at-askance," in order to "keep the fire burning." Fast-Runner meets this by sending for a second copper, "Crane," and putting this also into the fire so as to "smother it." Throw-away, not possessing another copper, tries to borrow one from his fellow-clansmen, but is unable to do so. Hence he virtually confesses himself beaten by his rival, and his fire "has died out." The guests thereupon leave.

The following day Fast-Runner returns the feast, and sends his attendants to invite his friend Throw-away. The latter is assigned his seat, and the feasting-songs are sung. Then four feasting-dishes are filled

<sup>1</sup> [The text as originally written down by Mr. Hunt has been kindly revised by Mr. EDWARD SAPIR, whom I have to thank for having changed the system of spelling to that now adopted by Professor Boas in his Kwakiutl Texts of the Jesup Expedition Publications. For the explanation of letters and sounds see Vol. III of that series, p. 5.—EDITOR.]

with crab-apples, wild cherries, and grease, and put before Throw-away and his fellow-clansmen. Throw-away does not eat, but returns his friend's insult by saying that he will not taste the dirty food offered, and then sends his four attendants home. They soon come back, however, with the copper "Day-Face," which Throw-away puts into his rival's fire. Fast-Runner arises and says that his fire has been "extinguished." He then puts on the recklessness of the Fool-Dancer, and, with his father-in-law's leave, sends his attendants to the latter's house to break four of his new canoes. They return with the fragments. Fast-Runner puts these on the fire so as to "build it up" again, and wishes by the heat to drive away his friend, who is lying on the ground near the fire. The intense heat causes Throw-away great physical pain, but he does not flinch and holds his ground. After the blaze has begun to die out, he gets up and eats of the crab-apples, thus showing that his rival's deeds have not in the least affected him. Then the guests of Fast-Runner are directed by his attendants to leave, and they do so.

Some time later Throw-away secretly informs his fellow-clansmen of his intention to give a winter-dance in order to outdo his rival. Fast-Runner, however, hears of this, and determines to do likewise. As preparatory to the winter ceremonial, Throw-away has his son and daughter "disappear," whereupon Fast-Runner, not to be behindhand, causes his two sons and two daughters also to "disappear." At the approach of the ceremonial period, Throw-away has a Sea-Monster mask carved out for his daughter, who is to be a war-dancer, and a Grisly-Bear mask for his son. The "disappeared" children of Throw-away are "caught," songs are sung, the Sea-Monster and Grisly Bear perform the proper ceremonies, and a canoe is given to Fast-Runner.

Fast-Runner then begins with his winter-dance and begs his people to stand by him in his attempt to shame Throw-away. The following day all are invited into his house to eat, whence they repair to the singing-house. Here they sing and dance continuously through the night. The next day the "disappeared" Grisly Bears and warriors of Fast-Runner are sent for and brought in four canoes. A slave is scalped, pursued, and butchered by the Fool-Dancers, Cannibals, and Grisly Bears, and his body eaten up by the Cannibals. Fast-Runner's recklessness in sacrificing a slave shows him to be a richer man than Throw-away, who is now clearly outdone. Fast-Runner gives Throw-away his slave's scalp. In the evening the Grisly Bears are "tamed" and the two war-dancers sing their secret songs. The attendant asks one of the war-dancers what she wishes done to her, and she requests that they be put into the fire. So the war-dancers are tied down on boards, a high wall of fire-wood is put



## III

- q!ē'nemē q!a'mdzekwa lā'xa g·ā'la Kwā'kug·uła. Wā,  
 many salmon-berries to the first Kwakiutl (clans). Well,  
 hē'x·idaem<sup>l</sup>lā'wisē Tsex<sup>wi</sup>dē ɛnē'k'a: "ɛya, qāst, la<sup>m</sup>ō'x  
 right away, it is said, Fast-Runner said, "O friend! Now that  
 ē'k·ōs wā'ldemaqōs qa ē'k!ēx<sup>idēs</sup>ens g·ō'kulōtēx qaxs  
 good your word, so that may be happy tribe, for  
 your  
 xE'nLElaēx ɣu'lsa," ɛnē'x·laē. Wā, hē'x·idaem<sup>l</sup>lā'wisē  
 very they are he said, Well, right away, it is said,  
 downcast," it is said.
- 5 Ts!EX<sup>i</sup>dē axk·ā'laxēs a<sup>yi</sup>'lkwē qa ē'x<sup>witsē</sup>wēsēs g·ō'kwē.  
 Throw-away asked his attendants that they sweep out his house.  
 Wā, g·i'l<sup>em</sup>lā'wisē gwāł ē'kwase<sup>wa</sup> g·ō'kwaxs laē'da  
 Well, as soon as, it is said, finished was swept house when then the  
 out the  
 a<sup>yi</sup>'lkwē mō'kwa yaē'łtsemtsa dene'mē. Wā, lā'x·da<sup>x</sup>-  
 attendants four hung about their cedar-bark Well, then they,  
 waists the (belts).  
 ɛlaē Lē'ɛlālaxa Kwā'kug·ułē qaēs g·i'gama<sup>ē</sup> Ts!EX<sup>i</sup>dē. Wā,  
 it is said, to invite the Kwakiutl for their chief Throw-away. Well,  
 went  
 g·i'l<sup>mēsē</sup> g·āx ɛwē'laēLēxs la'ē axk·!ā'lē Ts!EX<sup>i</sup>dāxēs  
 as soon as came all in, when then asked Throw-away his  
 they
- 10 a<sup>yi</sup>'lkwē qa lās ē'tsē<sup>stasē</sup>wēs ɛnemō'kwē Tsex<sup>wi</sup>dē. Wā,  
 attendants that they go call again his friend Fast-Runner. Well,  
 hē'x·ida<sup>mēsa</sup> mō'kwē a<sup>yi</sup>'lkwa ē'tsē<sup>staq</sup>. Wā, g·i'l<sup>mēsē</sup> g·ā'xē  
 right away the four attendants again called Well, as soon as came  
 him.  
 Tsex<sup>wi</sup>dē g·ā'xēLa, la'ē Ts!EX<sup>i</sup>dē axk·!ā'laq qa lās  
 Fast-Runner came into then Throw-away asked him that he go  
 house,  
 k!wā'g·a<sup>lił</sup> lā'xa ɛneqē'walčlasēs g·ō'kwē. Wā, g·i'l<sup>mēsē</sup>  
 sit down at the rear of his house. Well, as soon as  
 in the house  
 k!wā'g·a<sup>lił</sup>EXs la'asa k!wē'łē k!wē'łlāla dE'nx<sup>ida</sup>, yī'sa  
 he sat down in the then the feasters sang feasting- began to sing with  
 house, when songs
- 15 mō'sgemē k!wē'la<sup>layō</sup> q!a'mq!emdema. Wā, g·i'l<sup>mēsē</sup> gwāł  
 four means of feasting songs. Well, as soon as they finished

k!wē'ᵉlālēda k!wē'ᵉlaxs la'ē LElē'LEMēda mō'ts!aqē ɣwā'ɣu-  
to sing the feasters, then they were brought four (long) small  
when

ɣwaguma. Wā, la'ēm hāwē'xaEM ts!ō'xwEGENTSEᵉwaxs la'ē  
canoes. Well, then never they were washed inside then they  
when

qup!ā'ᵉlaxSELāyōwa qlē'nEMē qla'mdzEKᵘ lāq. Wā, lā-  
were used for pouring in many salmon-berries into Well, lā-  
them.

ᵉmē'sē ᵉna'ɣwāEM ᵉnā'ngōyâlēda mō'ts!aqē ɣwā'ɣuɣwagumaxa  
then all half full the four (long) little canoes

qla'mdzEKwē. Wā, lā'ᵉlae axᵉ'ᵉ'tSEᵉwa mō'sgEMē de'ngwats!ē 5  
salmon-berries. Well, then it is were taken four (round) grease-boxes  
said

L!ē'ᵉna qaᵉs k!u'nq!EGEMāda ᵉnā'ᵉNEMSGEMē lā'xa  
olachen-oil so that were put in the each one (box) into

ᵉnā'ᵉNEMts!aqē ɣwā'ɣwaguma. Wā, g'i'ᵉEMᵉlā'wisē gwāᵉ  
each (long) small canoe. Well, as soon as, it is finished  
said, they

k!u'nqasōxs la'ē LE'ᵉLEbENTSEᵉwa ɣwā'ɣwagumē qaᵉs lē  
were put in, then it was lifted up at small canoe, so that went  
when each end the they

ha'nx'dzamōlēLEM lāx TSEXᵉwi'dē LEᵉwē's ᵉNEᵉmē'mōtē. Wā,  
was put down at Fast-Runner and his clan. Well,  
in front

lā'ᵉlaēda ᵉNEᵉmts!aqē ha'nx'dzamōlēLEM lāx Ō'dzēᵉstalisē 10  
it is said one (canoe) was put down in front at Wrong-around-  
the World

LEᵉwē's ᵉNEᵉmē'mōta Maa'mtag-ila, yixs SE'ᵉN!EMāc ᵉNEᵉmē'-  
and his clan Maa'mtag-ila, while Sun tribe the

mōtas TSEXᵉwi'dē. Wā, lā'ᵉlaēda ᵉNEᵉmts!aqē ɣwā'ɣwagum  
clan of Fast-Runner. Well, it is said one (long) small canoe  
the

ha'nx'dzamōlēLEM lā'xa G-ē'xSEMē lāx g'i'gamaᵉyasē K'i'm-  
was put down in front at the Chiefs (clan) to their chief Met-by-

k-ᵉQEWēdē. Wā, lā'ᵉlaēda E'ᵉlxLaᵉ ha'nx'dzamōlēLEM lāx  
(Chiefs). Well, it is said last one was put down in front at

Llā'qwag-ila yixs g'i'gamaᵉyasa Lā'alaxSENTlayō. Wā, 15  
Copper-Maker when he was chief of the Breakers-(of-all-Tribes). Well,



k!ē's<sup>ε</sup>mēx'dēx    gu'xa<sup>ε</sup>ʃelasa    q!a'mdzekwē    la'qwaq,    qaxs  
not    he began to pour the    salmon-berries    into these,    for

hē'mENā<sup>ε</sup>mā'axel    tlē'latslēxa    tlē't!elēma    (hē'em    gwō<sup>ε</sup>yō'sēda  
they were all the time    soaking-recep-    what was    (that is    what he  
tacles for that    soaked    soaked    )    meant the

ɲ!E'Lasdē    ɭE'<sup>ε</sup>wa    mā'leqasdē    ɭE'<sup>ε</sup>wa    mō'qwasdē).    Wā,    yō'<sup>ε</sup>mēts  
I hal-    and the    dried hal-    and the    (?)    ).    Well,    this is  
but-fins    but-heads    but-heads    but-heads       your

gwō<sup>ε</sup>yō's    qa    yō'sasōsō'xda    q!wā'lobesē    lā'xg'ēxs    lā'xōs  
wish    that    be eaten with spoons the    soot    now inside    in

lētō'qulēlaqōs    Ts!EX<sup>ε</sup>'d,"    <sup>ε</sup>nē'x'laē.    Wā,    lā'<sup>ε</sup>laē    hē'x'ida<sup>ε</sup>mē    5  
your feasting-dishes,    Throw-away,"    he said, it is    Well, it is said    immediately  
said.

Ts!EX<sup>ε</sup>'dē    ɭā'xulīa.    Wā,    laE'm<sup>ε</sup>laē    k!ēs    <sup>ε</sup>nē'x'ts!ōts  
Throw-away    got up in the    Well,    then, it is    not    he said  
house.    said,

wā'ldema    lā'xēs    a<sup>ε</sup>yi'lkwē.    Wā,    lā'<sup>ε</sup>laē    <sup>ε</sup>nē'k'a :    "ēya, qāst,  
word    to his    attendants.    Well, it is said    he said,    "O friend!

gwā'ldzās    xE'nLEl    LE'mlēmqlā'lōL.    Hā'aqōs    gwēx's    qlē'qlādē  
don't you    very    talk proudly.    That is you    as if you    much having

qa'ēs    wā'ldēmōs.    Wā'g'adzā    â'em    lāxs    gwā'ēxsdaasaōs,"  
on account    word.    Well, go on    just    to    your wish,"  
of your

<sup>ε</sup>nē'x'laē.    Wā,    hē'x'idaem<sup>ε</sup>lā'wisē    TSEX<sup>ε</sup>wi'dē    ɭā'xulīa.    Wā,    10  
he said, it is    Well,    immediately, it is said,    Fast-Runner    got up in the    Well,  
said.    house.

lā'<sup>ε</sup>laē    <sup>ε</sup>nē'k'a :    "ēya, qāst,    Ts!EX<sup>ε</sup>'d,    k!ē'sEN    <sup>ε</sup>nē'x'    qEN  
it is said    he said,    "O    friend    Throw-away!    not I    say    that I

ha'<sup>ε</sup>mapēxa    <sup>ε</sup>mā'<sup>ε</sup>mōxsēlaqwē    ha<sup>ε</sup>mg'i<sup>ε</sup>lā'yō    g'ā'xEN,    ēya  
eat the    dirty things    given for food    to me,    O

<sup>ε</sup>mō'xul.    Wā,    la<sup>ε</sup>mē'sEN    <sup>ε</sup>mā'<sup>ε</sup>mōxwālaLōL.    Â'la<sup>ε</sup>mēg'in  
dirty man!    Well,    and now I    shall meet your dirty    Truly I am  
deed.

qlē'qlādaga'<sup>ε</sup>wayōs,"    <sup>ε</sup>nē'x'laēxs    la'ē    <sup>ε</sup>yā'laqasēs  
much having among you,"    he said, as    then he    sent his

a<sup>ε</sup>yi'lkwē    qa    lās    ax<sup>ε</sup>'dēx    L!ā'qwāsē    Ts!ē'gēsē.    Wā,    15  
attendants    that    they go    get    his copper    Sea-Monster.    Well,

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- g·i'l<sup>ε</sup>EM<sup>ε</sup>lā'wisē g·āx hō'gwēLēda mō'kwē a'yī'l<sup>x</sup>sēxs la'ē  
 as soon as, it is said, came went into house four attendants, then  
 the they
- tslās lāx TSEX<sup>ε</sup>wi'dē. Wā, lā'εlaē TSEX<sup>ε</sup>wi'dē dā'x<sup>ε</sup>idxēs  
 gave it to Fast-Runner. Well, then it Fast-Runner took his  
 is said
- Llā'qwa. Wā, lā'εlaē qā'sElił qā<sup>s</sup> lā Lā'yabōts lāx  
 copper. Well, then it is walked in and he went pushed it under to the  
 said he house,
- lEQā'<sup>ε</sup>wāliłas g·ō'kwasēs <sup>ε</sup>nEMō'kwē. Wā, laE'm k·li'l<sup>x</sup>as lā'xa  
 fire in middle of house of his friend. Well, then he put out to  
 the floor of the fire with it
- 5 k!wē'lasē. Wā, hē'x<sup>ε</sup>idaEM<sup>ε</sup>lā'wisē Ts!EX<sup>ε</sup>i'dē ō'gwaqa ax<sup>ε</sup>'dxēs  
 his feast. Well, immediately, it is said, Throw-away also took his
- Llā'qwē L!ESAXELā'yō. Wā, laE'm<sup>ε</sup>lāxaa'wisē Lā'yabōts lā'xēs  
 copper Looked-at-askance. Well, then it is said also he pushed it under to his
- k!wē'lasdema lēgwē'ła. Wā, laE'm<sup>ε</sup>laē x·ā'x·iq!as lā'xēs  
 feast-place fire. Well, then it is tried to burn it in his  
 said he
- k!wē'lasdema lēgwē'ła qa k·l'ē'sēs k·li'l<sup>x</sup>ēda. Wā,  
 feast-place fire in order it should die out. Well,  
 that not
- laE'm <sup>ε</sup>nEMA'x·ES I.ō<sup>ε</sup> lEQwi'lās lEQwā', yī'sēs Llā'qwax·dē.  
 then just as if with he made fuel, with his past copper.  
 fire with
- 10 Wā, lā'εlaē TSEX<sup>ε</sup>wi'dē ē't!ēd <sup>ε</sup>yā'laqasēs mō'kwē  
 Well, then it Fast-Runner again sent his four  
 is said
- a'yī'lkwa qa lās ax<sup>ε</sup>'ē'd <sup>ε</sup>nE'msgEMē Llā'qwasē AdE'mgulē.  
 attendants that they go take one (other) his copper Crane.  
 and (round)
- Wā, g·i'l<sup>ε</sup>EM<sup>ε</sup>laxaa'wisē g·ā'xda<sup>ε</sup>x<sup>u</sup> hō'gwēLElaxs la'ē tslās  
 Well, as soon as again, it is came went into house, then gave  
 said, they when they it
- lā'xēs g·i'gama<sup>ε</sup> TSEX<sup>ε</sup>wi'dē. Wā, ā'EM<sup>ε</sup>laxaa'wisē TSEX<sup>ε</sup>wi'dē  
 to their chief Fast-Runner. Well, only, it is said, Fast-Runner  
 again
- la Lā'yabōlēsas lāx k!wē'lasdema lēgwē'łasēs <sup>ε</sup>nEMō'kwē.  
 went pushed it under to the feast-place fire of his friend.
- 15 Wā, laE'mxaa k·li'l<sup>x</sup>as lāx lēgwē'łasēs <sup>ε</sup>nEMō'kwē.  
 Well, then again he put out to the fire of his friend.  
 with it

Wā, lae'm ɛnema'x'ES ɫō<sup>c</sup> dze'mas lēlaō'xwasa L!ā'L!eqwa  
Well, then just as if with he covered cost of the coppers  
with

lāx k!wē'lasdema lēgwē'łts g'ō'kwasēs ɛnemō'kwē, qa  
to the feast-place fire of the house of his friend, so that

k!lēō'sēs x'ī'xse<sup>c</sup>watsa lēgwē'łē. Wā, hē'ɛmēs lā'g'ılas  
it be nothing being burned fire. Well, that is reason of  
by the

ɫē'gadES k!li'lxaxa lēgwē'łasa k!wē'lasē. Wā, lā'ıla Ts!EX<sup>c</sup>i'dē  
having name putting out fire of the feast. Well, but then Throw-away  
of the

ɛnema'x'ES ɫō<sup>c</sup> mō'x'łalasēs L!ā'qwa. Wā, lae'm ɛmEX<sup>c</sup>stE<sup>c</sup>wē'sa 5  
just as if with he lighted his copper. Well, then it is in place of the  
fire with his

L!ē'ɛna ɫE'ɛwa lēqwa'. Lā'g'ılas ō'gwaqa LasLā'lasēs  
olachen- and the fuel. That is also pushing on  
grease reason of the fire his

L!ā'qwa, qa k!lē'sēs k!li'lx<sup>c</sup>ēdē k!wē'lasdēmās lēgwē'łas  
copper for its not dying out the feast-place fire of

g'ō'kwas. Wā, g'ı'ıf<sup>c</sup>EM<sup>c</sup>lāwisē TsEX<sup>c</sup>wi'dē Lā'SLEntsēs  
his house. Well, as soon as, it Fast-Runner pushed on fire his  
is said,

L!ā'qwa lā'a<sup>c</sup>lasē Ts!EX<sup>c</sup>i'dē dak!ā'łax L!ā'qwā lā'xēs  
copper, then it is Throw-away asked for a copper to his  
said

ɛnE<sup>c</sup>mē'mōta Lō'yalaława. Wā, laE'l k!lēō's L!ā'qwas. Wā, 10  
clan Hair-turned-up- Well, it is there was no his copper. Well,  
in-Front. said

la<sup>c</sup>mē' yā'k'āwē Ts!EX<sup>c</sup>i'dē lā'xēq. Wā, la<sup>c</sup>mē' k!li'lxekwē  
then he was beaten Throw-away in that way. Well, then was extinguished

k!wē'lasdēmāx'dē lēgwē'łts g'ō'kwas. Wā, ā'EM<sup>c</sup>lā'wisē la  
the past feasting-place fire of his house. Well, just, it is said, now

hō'qawelsēda k!wēł la'xsdē. Wā, la<sup>c</sup>mē' hāwē'xa yō's<sup>c</sup>ıd lā'xa  
went out the feasters the passed. Well, then they never ate with at the  
spoons

k!wē'ladzEM qla'mdzekwa. Wā, lā'ɛlaē TsEX<sup>c</sup>wi'dē ɛnEX<sup>c</sup> qa<sup>c</sup>s  
given in feast salmon-berries. Well, it is said, Fast-Runner wished that he

q!ā'ıf<sup>c</sup>ALElEX nā'qa<sup>c</sup>yasēs ɛnemō'kwē Ts!EX<sup>c</sup>i'dē. Wā, lae'm<sup>c</sup>lā'wisē 15  
find out the thought of his friend Throw-away. Well, then it is said he

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- axk·lā'laxēs a<sup>é</sup>yí'lkwē qa lās LĒ<sup>é</sup>lālx LĒ'lānEMx·dāsēs  
asked his attendants that they go and invite the ones that had been invited by his
- é<sup>n</sup>EMō'kwaxa lĒ'nsdē. Wā, laE'm<sup>é</sup>lā'wisē a<sup>é</sup>yí'lkwās LĒ<sup>é</sup>lālaq.  
friend the past day. Well, then it is said his attendants invited them.
- Wā, hē'x·é<sup>i</sup>daEM<sup>é</sup>lā'wisē g·ā'xēda LĒ'lānEMē hō'gwēla. Wā,  
Well, immediately, it is said, came the invited ones came into house. Well,
- lĒ'x·aEM<sup>é</sup>lā'wisē Tsex<sup>é</sup>i'dē k·lēs g·ā'xa. Wā, laE'm<sup>é</sup>lā'wisē  
only, it is said, Throw-away not came. Well, then it is said
- 5 TSEX<sup>é</sup>wi'dē é<sup>yā</sup>'laqaxēs a<sup>é</sup>yí'lkwē qa lās ē'tsē'staq. Wā, k·lĒ's-  
Fast-Runner sent out his attendants to go and call him Well, not, again.
- é<sup>lat</sup>la gē'x·é<sup>i</sup>dēda a<sup>é</sup>yí'lkwaxs g·ā'xāē lā'k·elax Tsex<sup>é</sup>i'dē. Wā,  
however, were long attendants when came following Throw-away. Well, it is said, the
- hē'x·é<sup>i</sup>daEM<sup>é</sup>lā'wisē TSEX<sup>é</sup>wi'dē q!ā'x·sidzēq. Wā, laE'm<sup>é</sup>lāē  
immediately, it is said, Fast-Runner led his feet. Well, then it is said he
- é<sup>n</sup>ex· qa lās k!wā'g·a<sup>é</sup>līā L!ā'salīāsēs é<sup>n</sup>E<sup>é</sup>mē'mōtē. Wā,  
wished that he go and sit down outside of his clan. Well,
- laE'm ma<sup>é</sup>ē'ma<sup>é</sup>lōkwēda a<sup>é</sup>yí'lkwās lāx wax·sanō'LEma<sup>é</sup>yas lā'xa  
then there were two on his attendants at both sides of him at the each side the
- 10 nEXwā'lāla lā'xa lEgwē'lasēs g·ō'kwē. Wā, g·i'l<sup>é</sup>EM<sup>é</sup>lā'wisē  
neighborhood to the fire of his house. Well, as soon as, it is said, he
- k!wāg·a<sup>é</sup>lī'faxs, la'as k!wē'lg·a<sup>é</sup>lēda k!wē'lasa k!wē'layā<sup>é</sup>layu  
sat down, then they began to sing feast-giver there were sung  
feast-songs the
- mō'sgEM q!a'mq!EMdema. Wā, g·i'l<sup>é</sup>EM<sup>é</sup>lā'wisē  
four songs. Well, as soon as, it is said,
- q!wē'fēdēda k!wē'lala dE'nxelaxs la'ē ax<sup>é</sup>ē'tsē<sup>é</sup>wa tsē-  
stopped the feasters singing then were taken out crab-
- tse'lwatslē mō'sgEM k·lĒk·lī'myaxla, qa<sup>s</sup> g·ā'xē mEXā'lēEM  
apple boxes four (round) boxes, and they came were put down on ground
- 15 lāx ma<sup>é</sup>stā'yasa a<sup>é</sup>wē'LElāsa k!wē'layats! g·ō'kwa. Wā, lā<sup>é</sup>lāē  
at the near by to the inside of door feasting-receptacle house. Well, it is said  
of the

ē'tlēd ax<sup>ε</sup>tse<sup>ε</sup>wēda mō'sgēmē dE'ngwāts!ē L!ē<sup>ε</sup>na. Wā, lā<sup>ε</sup>laē  
again were taken out four (round) grease-boxes (of) olachen- Well, it is said  
grease.

ax<sup>ε</sup>tse<sup>ε</sup>wēda ma<sup>ε</sup>!EX·LA sī'siuł łō'qulēfa. Wā, hē'em<sup>ε</sup>lā'wisa  
were taken out two on it double-headed feasting- Well, that, it is said,  
serpent dishes.

<sup>ε</sup>nEMē'x·LA nā'nā łō'qulēfa. Wā, hē'em<sup>ε</sup>lā'wisa <sup>ε</sup>nEMē'x·LA  
one on it grisly- feasting-dish. Well, also, it is said, one  
bear

nā'nē łō'qulēfa. Wā, hē'em<sup>ε</sup>lā'wisa <sup>ε</sup>nEMē'x·LA  
grisly- feasting Well, also, it is said, one  
bear dish.

ā'LANEM łō'qulēfa. HEM<sup>ε</sup>wēx·Lagō la'ē łō'elqulēfas 5  
wolf feasting-dish. That is all then the feasting-dishes of

TSEX<sup>ε</sup>wī'dē. Wā, lae'm<sup>ε</sup>lāwisē guxts!ā'lasō<sup>ε</sup>sa t!E'lsē. Wā,  
Fast-Runner. Well, then it is said they were poured into wild Well,  
with cherries.

lae'm<sup>ε</sup>lāwisē naE'nguyā'lēda łō'elqulēfāxa tselx<sup>u</sup>,  
then it is said were half full the feasting-dishes of crab-apples,

la'ē k!u'nq!eqasō<sup>ε</sup>sa L!ē<sup>ε</sup>na. Wā, laE'm qō'qut!as.  
then were poured into olachen- Well, then they were full  
they with grease.

Wā, laE'm<sup>ε</sup>lāxaa'wisē hē'em g'il k·ā'x·<sup>ε</sup>itsō<sup>ε</sup>sēs <sup>ε</sup>nEMō'kwē  
Well, then also, it is said, that first it was set before his friend

Ts!EX<sup>ε</sup>i'dē. Wā, g·i'l<sup>ε</sup>EM<sup>ε</sup>lā'wisē <sup>ε</sup>wi<sup>ε</sup>la k·ā'x·<sup>ε</sup>itsa 10  
Throw-away. Well, as soon as, it is said, all were set before  
the

łō'elqulēfāxs la'ē a<sup>ε</sup>yī'lkwās wā'xaxa k!wē'lē qa  
feasting-dishes, when then his attendants urged the feasters that

wā'g·ēs yō's<sup>ε</sup>ēda. Wā, hē'x·<sup>ε</sup>idaEM<sup>ε</sup>lā'wisē Ts!EX<sup>ε</sup>i'dē l·ā'xuliā.  
they go eat with Well, immediately, it is said, Throw-away stood up in  
ahead spoons. the house.

Wā, lā<sup>ε</sup>laē yā'q!eg·a<sup>ε</sup>fa. Wā, lā<sup>ε</sup>laē <sup>ε</sup>nē'k·a : “<sup>ε</sup>ya, qāst,  
Well, it is said spoke. Well, it is said said, “O friend!  
he he

k!ē'sēg'in hē g·ā'xīkē qEN p!ax<sup>ε</sup>ALē'lē lā'xōs k!wē'lādzemaqōs,  
not I that reason of that I should taste of your your feasting-objects,  
coming

yū'laxs ā'laaqōs mō'xula begwā'nema, qāst, qaxs hāwē'xaaqōs 15  
you that really are dirty man, friend, since you never

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- ts!ō'xug'indxEN washed inside my ha<sup>h</sup>maā'ts!ēx, food-receptacle yī'xōs your lēlō'qulēlaqōs," feasting-dishes,"
- ε<sup>h</sup>nē'x'laēxs la'ē ε<sup>h</sup>yā'laqasēs mō'kwē a<sup>h</sup>yī'lkwa qa lās dādag'īlī'la  
he said, it is then sent out his four attendants that they take out (some-  
said, when he
- lāx g'ō'kwas. Wā, hē'x'idaem<sup>h</sup>lā'wisē lā'x'da<sup>h</sup>xwa. Wā,  
in his house. Well, immediately, it is said, went out. Well,  
they
- k'lē's<sup>h</sup>latla gā'łaxs g'ā'xaē ē't!ēd hō'gwēla. Wā,  
not, it is said, long when came again they went into Well,  
however, they house.
- 5 lae'm<sup>h</sup>laē dāg'ī'lqelaxa Llā'qwa ε<sup>h</sup>nē'lgemāla. Wā, hē'x'-  
then it is carried in hand copper Day-Face. Well, im-  
said they the
- ε<sup>h</sup>idaem<sup>h</sup>lā'wisē Ts!ēx<sup>h</sup>ī'dē dā'x'ēidxa Llā'qwa qa<sup>h</sup>s lā'ya-  
mediately, it is said, Throw-away took the copper and he shoved
- bōlēsēs lāx legwē'łasa k!wē'lasē. Wā, lae'm o'gwaqa  
it under to the fire of the feast-giver. Well, then also he  
house of the
- k'li'lxax legwē'łasa g'ī'gama<sup>h</sup>ē Tsex<sup>h</sup>wī'dē. Wā, lā'laēda  
put out the fire of the chief Fast-Runner. Well, it is said the  
house of the
- g'ī'gama<sup>h</sup>ē Tsex<sup>h</sup>wī'dē Lā'xuliła qa<sup>h</sup>s yā'qlēg'a<sup>h</sup>lē. Wā,  
chief Fast-Runner got up in and he spoke. Well,  
the house
- 10 lā'laē ε<sup>h</sup>nē'k'a: "ε<sup>h</sup>ya, qāst, la<sup>h</sup>mō'x k'li'lxēden k!wē'lasdemāqen  
it is said said, "O friend! now extinguished my feasting-place  
he this is this is this my
- legwē'łā. Wē'g'īl la ē't!a<sup>h</sup>li<sup>h</sup>lEL k!wā'g'a<sup>h</sup>li<sup>h</sup>lōL, qen dō'qwa<sup>h</sup>ē  
fire in house. Go on now will again will you sit down so that I look  
in house in house in house
- qen wā'łdem o'gwaqa," ε<sup>h</sup>nē'x'laēxs la'ē xwā'sa lā'xēs  
for my word also," he said, it is said, as he was excited in his
- nūłemākaēna<sup>h</sup>ē. Wā, lā'laē ε<sup>h</sup>yā'laqasēs mō'kwē a<sup>h</sup>yī'lkwa qa  
fool-dance. Well, it is said he sent his four attendants that
- lās o'gwaqa dō'x<sup>h</sup>wēdex axē'łaxa lāx g'ō'kwasēs negu'mpē  
they go also look for what they might in the house of his father-in-law  
and take
- 15 ε<sup>h</sup>mō'nakula. Wā, k'lē's<sup>h</sup>em<sup>h</sup>lāwisē hō'qawelsēda mō'kwē  
Moving-Load. Well, not then, it is said, went out of four  
house the

a<sup>é</sup>yi'lkwaxs    la'ē    ɽā'xulitē    ɛmō'ɛnākula    lā'xēs    k!wāē'-  
attendants when    then    stood up in    Moving-Load    at his    sitting-  
house

lasē    lā'xēs    g·ā'xēnēɛmē    k!wē'la.    Wā,    lā'ɛlaē    ɛnē'k'a :  
place for he    had also come    as feaster.    Well,    it is said he    said,  
in house

“ɛya,    nɛgu'mp,    ɛyā'laqalas    qa    lāsē    ax<sup>é</sup>ɛ'tsɛ'wa  
“O    son-in-law !    send    that    they go    be taken  
and

mō'ts!aqa    tlē't!ɛgu'na    qas    lɛgwē'tōs,"    ɛnē'x'ɛlaē.    Wā,  
four (long)    flat-bowed canoes    for    your fire    he said, it is    Well,  
in house,"    in house,"    said.

hē'x'ɛidaɛm<sup>ɛ</sup>lā'wisē    Tsex<sup>ɛ</sup>wi'dē    ɛyā'laqasēs    mō'kwē    a<sup>é</sup>yi'lkwa    5  
immediately, it is said,    Fast-Runner    sent out his    four    attendants

ɽō<sup>é</sup>mē's    ha<sup>ɛ</sup>yā'lfa    qa    lēs    tsō'tsōxsēndxa    mō'ts!aqē    alō'-  
and also    young men    that    they    break to pieces the    four    new  
his

laq    tlē't!ɛgu'na.    Wā,    k·lēs'ɛlatla    gā'ɽaxs    g·ā'xaē  
flat-bowed canoes.    Well,    not, it is said,    long when    came  
however,

ɛwē'g·iɽela'yōwēda    tsō'gukwē    tlē't!ɛgu'na.    Wā,    lā'ɛlaē,  
carried into house on    broken    flat-bowed canoes.    Well,    then it is  
shoulders the    said they

ɛmō'x<sup>u</sup>lālayō    lā'xa    k!wē'lasdema    lɛgwē'la    g·ō'kwax    Tsex-  
were piled up    at the    feasting-place    fire in house    the house of    Fast-

ɛwi'dē.    : Wā,    la<sup>ɛ</sup>mē'    â'lax'ɛid    la    x·ix<sup>ɛ</sup>ɛ'dē    lɛgwē'las.    10  
Runner.    Well,    then    truly    now    was burning    fire in the  
the    house with it.

Wā    la<sup>ɛ</sup>mē'    Tsex<sup>ɛ</sup>wi'dē    wā'lāqēlax    Ts!ex<sup>ɛ</sup>i'dē    hē'ɽsâsa  
Well,    then    Fast-Runner    wished that    Throw-away    might run  
away from the

Llē'sala.    Wā,    la    ɛ'x·ax·ɛm    Llō'p!ēda,    qō    k·lēsL  
heat.    Well,    then    he thought it    he be roasted    if    not will  
good that

hē'ɽsâLES.    Wā,    â'ɛm<sup>ɛ</sup>lāwisē    Ts!ex<sup>ɛ</sup>i'dē    tlē'x'ɛalil  
he will run    Well,    just, it is said,    Throw-away    lay down on  
away from it.    his back

lā'xēs    k!wāē'lasē.    Wā,    â'ɛm<sup>ɛ</sup>lāwisē    ɛnex<sup>ɛ</sup>unā'ɛyas  
at his    sitting-place    Well,    just, it is said,    his blanket  
in house.

Llā'ɛya    la    tlɛ'mgu<sup>ɛ</sup>nākula.    Wā    hēwā'xaɛm<sup>ɛ</sup>lā'wisē    15  
(of) black    now    became scorched.    Well,    then never, it is said,  
bear

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- q!wē'nałelitē Ts!EX<sup>ɛ</sup>i'dāxs wā'x<sup>ɛ</sup>maē la penē'<sup>ɛ</sup>nākulē L!ē'sas  
 moved in house Throw-away although became covered with skin of  
 blisters the
- ōp!ē'g'a<sup>ɛ</sup>yas, lā'xēs â'ēnē<sup>ɛ</sup>mē <sup>ɛ</sup>NE<sup>ɛ</sup>umā'łasēs L!E'ntSEMx·dē  
 his knee at his just being face being covered past bear-skin  
 with his
- <sup>ɛ</sup>NE<sup>ɛ</sup>unā'<sup>ɛ</sup>ya. Wā, g'i'l<sup>ɛ</sup>em<sup>ɛ</sup>lā'wisē k'li'l<sup>ɛ</sup>x·â'ēnākulēda legwē'łas  
 blanket. Well, as soon as, it began to die out the fire when  
 is said,
- la'ē Ts!EX<sup>ɛ</sup>i'dē k!wā'g'a<sup>ɛ</sup>lił qa<sup>ɛ</sup>s yō's<sup>ɛ</sup>idēxēs lō'qulēda tsELx<sup>u</sup>.  
 then Throw-away sat down and ate with spoon dish of crab-  
 he out of his apples.
- 5 Wā, laE'm <sup>ɛ</sup>NEma'x·ES I,ō<sup>ɛ</sup> nē'łas k'!ē'saē ts!E'x·aLElē  
 Well, then this is just if he showed not he became sick,  
 as that
- g>wē'x<sup>ɛ</sup>idaasaq wā'x<sup>ɛ</sup>maē la legu'ła. G'i'l<sup>ɛ</sup>mēsē gwāł yō's<sup>ɛ</sup>ēdēda  
 what had been although he now he was As soon as finished eating with  
 done him burnt. spoons the
- k!wē'łasax tsE'l<sup>ɛ</sup>xwē la'ē ts!E'l<sup>ɛ</sup>waqasō's a<sup>ɛ</sup>yilkwās TSEX<sup>ɛ</sup>wi'dē.  
 feasters the crab-apples then were praised by attendants of Fast-Runner.  
 they the
- Wā, g'i'l<sup>ɛ</sup>mēsē q!wē'łidēda a<sup>ɛ</sup>yilkwaxs la'ē hō'qawelsēda k!wē'łē.  
 Well, as soon as stopped speaking attendants then went out of feasters.  
 the house the
- Wā, gā'łæm<sup>ɛ</sup>lā'wisē k'!ēō's ē'tlēd gwē'g'ilasa. Wā, laEM<sup>ɛ</sup>lā'-  
 Well, it was long, it is said, nothing again way of doing Well, then it is  
 thus.
- 10 wisē Ts!EX<sup>ɛ</sup>i'dē Lē'<sup>ɛ</sup>lāłaxēs <sup>ɛ</sup>NE<sup>ɛ</sup>mē'mōtēda Lō'yalaławaxa  
 said Throw-away invited his clan (were) the Hair-turned-up-  
 in-Front at
- gā'nulē. Wā, laEM<sup>ɛ</sup>lā'wisē nē'łasēs yā'<sup>ɛ</sup>wix·ilaēxsda<sup>ɛ</sup>ē. Wā,  
 night. Well, then it is said he told that he desired to give a winter-  
 dance. Well,
- hē'x<sup>ɛ</sup>idaEM<sup>ɛ</sup>lā'wisē <sup>ɛ</sup>NE<sup>ɛ</sup>mē'mōtas <sup>ɛ</sup>mō'<sup>ɛ</sup>las wā'łdemas. Wā,  
 immediately, it is said, his clan were grate- his word. Well,  
 ful for
- laE'm<sup>ɛ</sup>laē wāx· senā'nemaq qa<sup>ɛ</sup>s yak·â'masēx TSEX<sup>ɛ</sup>wi'dē ;  
 then it is tried to find out that he might beat Fast-Runner ;  
 said he
- lā'g'ilas <sup>ɛ</sup>nēx· qa<sup>ɛ</sup>s hē gwē'x<sup>ɛ</sup>idē. Wā, hē'x<sup>ɛ</sup>idaEM<sup>ɛ</sup>lā'wisē  
 for that said that he thus did. Well, immediately, it is said,  
 reason he
- 15 q!ā'<sup>ɛ</sup>lē TSEX<sup>ɛ</sup>wi'dax wā'łdemas. Wā, laE'm<sup>ɛ</sup>laxaā'wisē  
 watched Fast-Runner his word. Well, then it is said, also he

ō'gwaqa lē'ᵉlaxēs ʰnē'ᵉmē'mōtaxa gā'nulē. Wā, laēm'ᵉlā'wisē  
also invited his clans at night. Well, then it is said he

nē'laxēs ʰnē'ᵉmē'mōtaxs lē'ma'ē ō'gwaqaᵐ yā'wix'ilaᵐlaxa ts!awu'nxē.  
told his clan that he will also will give winter- winter.  
dance in the

Wā, laēm'ᵉlā'wisē ʰnēx· qaᵐs ā'lāgawaᵐēsēs hayō'tē Ts!EX'ᵉi'dē.  
Well, then it is said he wished that he be always equal rival Throw-away,  
to his

Wā, laēm'ᵉlā'wisē gwā'ᵉ wā'ldemasēxs la'ē hō'qawelsa.  
Well, then it is said were finished their words when then they went out of  
house.

Wā, k'ᵉ!s'latla gā'laxs la'ē x'is'ᵉi'dēda bā'bagumē 5  
Well, not, it is said, long when disappeared the boy the  
however,

xunō'x'ᵐs Ts!EX'ᵉi'dē lē'wē's ts!ā'ts!Edagēmē xunō'x'ᵐs.  
child of Throw-away and his girl his child.

Wā, hē'x'idaēm'ᵉlaxaā'wisē x'is'ᵉi'dē begwā'nemē xunō'x'ᵐs  
Well, immediately, it is said, also disappeared the man the child of

TSEX'ᵉwi'dē lē'wē's ma'ᵉlō'kwē ts!ē'dāqē sā'semaxa la'ē  
Fast-Runner and his two women children at then  
the

ē'tlēd gā'nul'ēda. Wā, lā'ᵉlaē ē'tlēd gā'nul'ēdexs  
again night. Well, it is said again it was night when  
[next]

la'ē x'is'ᵉi'dēda ʰnemō'kwē begwā'nem xunō'x'ᵐs. Wā, 10  
then disappeared one man his child. Well,

laēm'ᵉlāē ts!ē'ts!āqēda g'ā'lā Kwā'kug'uᵐa. Wā,  
then it is danced winter- first Kwakiutl clans. Well,  
said dance the

laēm'ᵉlāwisē Ts!EX'ᵉi'dē hē'laxa g'it!ē'noxwē qa lās  
then it is said Throw-away hired the wood-carver that he go  
and

g'it'ᵉ ta qaē'. Wā, laēm'ᵉlāē ts!ē'gēsē g'itā'ᵉyasa g'it!ē'noxwē  
carve for him. Well, then it is sea-monster carving of the wood-carver  
said a the

qa lō'gwētsa ts!ā'ts!Edagēmē xunō'x'ᵐs Ts!EX'ᵉi'dāxs  
that it be the supernatural girl the child of Throw-away  
treasure in house of the when she

tō'x'widēlē qō g'ā'xl nē'ᵉidelō. Wā, laēm'ᵉlā'- 15  
was to be war- if she should come should show Well, then it  
dancer herself.

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- wisē nā'nēda bā'bagumē qō nē'fīdēLŌ. Wā,  
is said grisly bear boy if he should show Well,  
a was to be the himself.
- ā'EM<sup>lā'</sup>wisē TSEX<sup>wi'dē</sup> hō'Lēlax wā'ldemas. Wā, laEM-  
only, it is said, Fast-Runner was listen- their words. Well, then  
ing to
- ēlā'wisē lā'f<sup>stōd</sup> lāx k'ī'm<sup>yaenxlaq</sup>. Wā, laE'm<sup>lā'</sup>-  
it is said near to the time of being about Well, then it  
it to meet them.
- wisē k!wā'fīdēda Kwā'kug-ulē lā'xa q!a'mdasē. Wā,  
is said sat down the Kwakiutl clans at the singing-place. Well,  
5 laEM<sup>lā'</sup>wisē TSEX<sup>wi'dē</sup> k!wā'gēlaseq, qaxs nā'xwā<sup>maē</sup> lā'da  
then it is said Fast-Runner sat with them for all they went the  
bē'bēgwānemē lā'xa q!a'mdasē. Wā, laE'm<sup>lā'</sup>wisē gwā'fEXS  
men to the singing-place. Well, then it is said finished when  
la'ē nā'nakwa. Wā, lā'f<sup>laē</sup> gā'nul<sup>fida</sup>, la'ē k'ik'ī'lnala ēwi'fīda  
then went home. Well, it is said night came, then tried to all the  
they bring back  
(the novice)
- qlē'nemula lē'lqwalala<sup>ya</sup>. Wā, laE'm<sup>lā'</sup>wisē nā'x<sup>ēdxa</sup> gaā'lāxs  
many past tribes. Well, then it is said daylight came early morn-  
in the ing when
- la'ē gwā'la. Wā, hē'x<sup>ēidaEM<sup>lā'</sup>wisē</sup> la dā'da gā'la Kwā'gūlxa  
then finished. Well, immediately, it is said, went took first Kwakiutl the  
they the
- 10 ma<sup>lō'</sup>kwē x'isā'las sā'semas Ts!EX<sup>i'dē</sup>. Wā, g'ī'fEM<sup>lā'</sup>wisē  
two disappeared children of Throw-away. Well, as soon as, it is  
ones said,
- gā'xalēsa dā'x<sup>dāxa</sup> x'isā'fax<sup>dē</sup> lā'xa L!EMa'ēsaxs la'ē  
came on the who had taken having disap- on the beach when then  
beach those the peared ones
- qā'k<sup>asē</sup>wa tō'x<sup>widē</sup>. Wā, lā'f<sup>laēda</sup> nā'nē LE'qasēs  
had her head cut war-dancer. Well, it is said the grisly bear struck with  
off the his
- gē'ts!EMē lā'xa ēwā'lasē t!egu'na. Wā, g'ī'fEM<sup>lā'</sup>wisē  
claws at the large flat-bowed Well, as soon as, it is said,  
canoe.
- gwā'fEXS la'ē g<sup>ē</sup>x<sup>ēdāyōwēda</sup> t!egu'nē lāx TSEX<sup>wi'dē</sup>.  
finished when then was given the flat-bowed canoe to Fast-Runner.
- 15 Wā, laE'm<sup>lā'</sup>wisē gwāf q!a'mtase<sup>wa</sup> tō'x<sup>widāxs</sup> la'ē  
Well, then it is said finished was sung for the war-dancer then  
when they

hō'x<sup>w</sup>esdēsa qa<sup>s</sup> lä hō'gwēL lä'xa lō'bekwē. Wā, lä'<sup>l</sup>laē  
 went up beach and went inside to the (emptied one) Well, it is said  
 they winter-dance house.

gā'nu<sup>f</sup>idEXS la'ē nanā'qamase<sup>f</sup>wēda dā'nēmē. Wā, laEM<sup>l</sup>la'wisē  
 night came when were brought to their caught ones. Well, then, it is said,  
 senses by singing, the went the

tslē'gēsē ḷō'gwā<sup>f</sup>yasa tō'x<sup>w</sup>idē. Wā, laE'<sup>m</sup>laē gā'xustāliḷēda  
 sea-monster the supernatural war-dancer. Well, then it is said came up from floor  
 treasure of the of house the

tslē'gēsē lä'xa ōgwē'waliḷasa g'ō'kwē. Wā, hē'EM<sup>l</sup>la'wisē  
 sea-monster at the rear of the house. Well, that, it is said,

wā'lōx<sup>w</sup>wēdē. Wā, laE'<sup>m</sup> gwā'ḷē Ts!EX<sup>f</sup>i'dē yā'wix'ila. 5  
 was all that Well, then finished Throw-away giving winter-  
 was done. dance.

Wā, lä'<sup>l</sup>laē TSEX<sup>f</sup>wi'dē ḷlā'yōgulsa.  
 Well, it is said, Fast-Runner changed with him  
 on the ground.

Wā, laE'<sup>m</sup>xa<sup>e</sup> TSEX<sup>f</sup>wi'dē <sup>f</sup>yā'laqasēs a<sup>f</sup>yi'lkwē qa  
 Well, then also Fast-Runner sent his attendants that  
 lās Lē'<sup>l</sup>lāla <sup>f</sup>wu<sup>f</sup>nā'ḷaxa la gā'ḷa gā'nuLa lä'xēs  
 they go invite secretly in the now long night to his  
 and

<sup>f</sup>ne<sup>f</sup>mē'mōtē. Wā, g'i'<sup>f</sup>EM<sup>l</sup>la'wise g'āx <sup>f</sup>wi'<sup>l</sup>laēLEXS  
 clans. Well, as soon as, it is said, they came all into the  
 house

la'ē ḷENē'x<sup>f</sup>itse<sup>f</sup>wē tlēx'ī'lāsa tslā'gats!ē g'ōx<sup>s</sup> 10  
 then was barred the door of the winter-ceremonial the house  
 receptacle of

TSEX<sup>f</sup>wi'dē. Wā, laE'<sup>m</sup>la'wisē nē'ḷē E'lkwās TSEX<sup>f</sup>wi'dāxēs  
 Fast-Runner. Well, then it is said told the attendant Fast-Runner his  
 of

<sup>f</sup>ne<sup>f</sup>mē'mōtaxs lE<sup>f</sup>ma'ē lāḷ k!wā'ḷaxa lā'La dzā'qwaḷtsa lā'La  
 clan that they go sit in the future evening of the future

ē'tlēdēḷ <sup>f</sup>nā'x<sup>f</sup>idel. Wā, hē'<sup>f</sup>mēsēxs lE<sup>f</sup>ma'ē <sup>f</sup>nē'kēs g'i'gama<sup>f</sup>ē,  
 again morning. Well, that is when he said his chief

yix TSEX<sup>f</sup>wi'dē qa<sup>s</sup> wē'g'īL ē'tlēdēḷ mō'mas<sup>f</sup>idelxēs <sup>f</sup>nēmō'kwē  
 that Fast-Runner that he will go will again will do harm to his friend  
 on

Ts!EX<sup>f</sup>i'dē qō lāḷ nē'<sup>f</sup>idelēs x'ē'x'isāā. "Wā, laE'<sup>m</sup>la'wisēs 15  
 Throw-away if will go will show disappeared "Well, then we are told to  
 his ones.

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- gwā'łāłāł qENS g·ō'x'wēdēLENSAQEK· qa'g·ō hā'yalā'łasōLō,"  
 be ready that we shall help him if he will be faced by  
 his rival,"
- °nē'x'laē. °nā'xwaEM°lā'wisē °nē'mē'motas °nē'k'EXS lE'ma'ē °wī'°la  
 he said, it is All, it is said, his clan said they all  
 said. when
- gwā'łāłā. Wā, laE'm°lāwisē gwā'lē wā'ldEMasEXS la'ē hō'qawElsa.  
 are ready. Well, then it is said finished their words they went out of  
 when the house.
- Wā, laE'm°lāwisē °nā'xwa ga'x'staēlaxs g·ā'laē hō'qawElsa.  
 Well, then it is said all went to bed first they went out of  
 when (as soon as) house.
- 5 Wā, laE'm°lāwisē ā'ł'EM ts!EX·°i'dxa la gā'la °nā'laxa  
 Well, then it is said they soon awoke at now long day on the  
 (late in)
- la lE'nsa. Wā, hē'x·°idaEM°lā'wisē °nā'xwa la kwā'sēda  
 now next day. Well, immediately, it is said, all went washed them-  
 they selves the
- gwē'gudza ɽE'wē's ts!ē'dāqē ɽō'°ma g·i'ng·ināNEMē.  
 winter-dancers and their women and the children.  
 (sparrows)
- Wā, g·i'l'EM°lā'wisē gwā'łEXS la'ē Lē'°lālē TSEX°wī'dāxa  
 Well, as soon as, it is said, finished when then invited Fast-Runner the
- gwē'gudza ɽE'°wa ts!ē'dāqē ɽō'°ma g·i'ng·ināNEMē qa  
 winter-dancers and the women and the children that
- 10 lās hē'yasEla lā'xa ts!ā'gats!ās TSEX°wī'dē. Wā,  
 they go breakfast at the winter-ceremonial Fast-Runner. Well,  
 and house of
- g·i'l'EM°lā'wisē gwāł ha'mā'pEXS laē'da a°yi'lkwē o'pāłaxa  
 as soon as, it is finished eating when then the attendants whispered to  
 said, they
- °nā'xwa gwē'gudza qa lās lā'xa k!wā'łasē lā'xa  
 all the winter-dancers that they go to the sitting-place to the
- q!a'mdasē lā'xa ā'ł'ē. Wā, hē'x·°idaEM°lā'wisa bē'-  
 singing-place in the inland. Well, immediately, it is said, the
- BEGwāNEMē °wī'°la q!wā'g·a'lił qa's lē ā'ł'ēsta. Wā,  
 men all arose and they went around Well,  
 inland.
- 15 g·i'l'EM°lā'wisē °wī'°la la k!USE'lSEXs la'ēda nē°nā'-  
 as soon as, it is said, all went to sit down on then the song-  
 they the ground, when

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gadē de'nx<sup>ts</sup>isa ma<sup>ts</sup>tsE'mē q!a'mq!EmdEmasa tō'x<sup>w</sup>idē.  
masters began to sing the two songs of the war-dancers.

Wā, hē'<sup>ts</sup>mēsa ma<sup>ts</sup>tsE'mē q!a'mq!EmdEmasa nā'nē. Wā,  
Well, also the two songs of the grisly bears. Well,

g'í'<sup>ts</sup>Em<sup>ts</sup>lā'wisē gwā'la nē'nā'gadē de'nxElaxs la'ē  
as soon as, it is finished song-masters singing when then  
said, the

TSEX<sup>w</sup>ī'dē yā'q!eg<sup>ts</sup>ā'la. Lā'<sup>ts</sup>laē <sup>ts</sup>nē'k'a: "ēya, <sup>ts</sup>nē'<sup>ts</sup>nEmōkwā',  
Fast-Runner began to speak. Then it is said, "O friends!

lae'ms <sup>ts</sup>wi'<sup>ts</sup>laē q!wā'lax'axwa gā'nuLēx, qās ē'k'!ēqElēLōs 5  
now you will all will dress this night, that may be happy  
you

qaE'n wā'ldEmLēx," <sup>ts</sup>nē'x'<sup>ts</sup>laē. Wā, lā'<sup>ts</sup>laē <sup>ts</sup>wi'<sup>ts</sup>la<sup>ts</sup>ma  
on account word," he said, Well, it is said all the  
of my it is said.

gwē'gudza nā'<sup>ts</sup>nax<sup>ts</sup>mēq. Wā, lā'<sup>ts</sup>laē <sup>ts</sup>nē'k'a: "Hē'LEnu<sup>ts</sup>x<sup>ts</sup>  
winter-dancers answered him. Well, it is said, said, "This we shall  
they

gwē'laLē" <sup>ts</sup>nē'x'<sup>ts</sup>laē. Wā, lā'<sup>ts</sup>laē hē'x'<sup>ts</sup>ida<sup>ts</sup>ma mō'kwē a<sup>ts</sup>yí'lk<sup>ts</sup>  
shall do they said, Well, it is said, immediately the four attendants  
thus," it is said.

qā'<sup>ts</sup>s'id qa<sup>ts</sup>s lā xá'set!alaxa lē'lādēnōkwē. Wā, g'í'<sup>ts</sup>Em<sup>ts</sup>lā'wisē  
walked and went asked to wash those who had Well, as soon as, it is  
they their bodies dances. said,

lā'da mō'kwē a<sup>ts</sup>yí'lkwaxs la'ē hō'x<sup>ts</sup>wu<sup>ts</sup>!ēda q!a'mt!Esdē. 10  
went four attendants then went out of the woods the song-experts.

Wā, hē'x'<sup>ts</sup>idaEm<sup>ts</sup>lā'wisē xwā'nal<sup>ts</sup>ēdēda <sup>ts</sup>nā'xwa gwē'gudza  
Well, immediately, it is said, got ready all the winter-dancers

Lē<sup>ts</sup>wē's ts!ē'dāqē Lē<sup>ts</sup>wa' <sup>ts</sup>nā'xwa g'í'ng'inānEmē. Wā,  
and their women and all the children. Well,

lae'm<sup>ts</sup>laē k'ik'í'lnala. Wā, a'<sup>ts</sup>Em<sup>ts</sup>lā'wisē gwā'lēxs la'ē  
then it is said they tried to bring Well, just, it is finished when  
they them back. said, they

<sup>ts</sup>nā'<sup>ts</sup>nākulaxa gaā'la. Wā, hē'x'<sup>ts</sup>idaEm<sup>ts</sup>lā'wisē lā'da mō'kwē  
daylight came early Well, immediately, it is said, went the four  
in the morning.

a<sup>ts</sup>yí'lk<sup>ts</sup> ax<sup>ts</sup>ē'dxa mō'ts!aqē awā' t!ē't!ēguna qa Lē'nkwēsēsa 15  
attendants took the four (long) great flat-bowed and tied them together  
canoes with the

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- mō'ts!aqē g'ī'lsq'iltla dzō'ḡuma. Wā, lā'ēlaē pak'ēē'ntsō'sa  
four (long) long poles. Well, it is said they were covered over with
- saō'kwē. Wā, g'ī'l'ēEm'la'wisē ḡwā'ḡexs la'ē hō'x'ēwalexsēda  
boards. Well, as soon as, it is said, they were finished then went into canoes when
- ēnā'ḡwa ḡwē'ḡudza lāq. Wā, laE'm'ēlaē k'!ēs lā'da nēnā'nē  
all the winter-dancers on Well, then it is not went the grisly bears said
- ḡē'wa' nō'ēn'ēmāla ḡō'ē ēnā'ḡwēda lē'laēnēnokwē lā'xa da.  
and the fool-dancers and all those having dances to the taking.
- 5 LaE'm'ēlaē â'Em kludzi'l lā'xa lō'bēkwē. Wā, k'!ē's'lat!a  
Then it is said just sat in house in the winter-dance Well, not, however, they house (emptied one). it is said,
- ḡā'ḡēda dāxs ḡā'xaē Eyō'ḡ'wēd lāx ḡwa'k'!ōdība'ēē  
long the taking when came back at the opposite northern end of point
- awī'ḡbēs Qā'logwisē. Wā, ḡā'x'ēlaē ha'ng'a'lēs lāx  
point of Crooked-Beach. Well, came, it is said, being in front at the of beach
- l'ēma'ēsasa lō'bēkwē. Wā, laE'm'ēlāwisē ēnē'mē nā'nē  
beach of the winter-dance house Well, then it is said one grisly bear (emptied one).
- hax'uts!ā'ḡwēwē lāx â'ḡwīwā'ēyasa ēnē'mts!aqē t!ēḡu'na.  
lay down inside in the bow of one (long) flat-bowed of bow canoe.
- 10 Wā, lā'ēlaxaēda ēnē'mē nā'nē hē'xat! ḡwā'ḡa lāx â'ḡwīwā'ēyasa  
Well, also, it is said, the one (other) grisly bear that also thus in the bow of the
- ēnē'mts!aqē. Wā, laE'm'ēlaē k'!ēs yā'wīx'ā'lag'ḡexsa. Wā,  
one (long) Well, then it is said they not moved about in canoe. Well, (= other canoe).
- laE'm'ēlāwisē q!a'mt!ētsē'wēda ma'ḡō'kwē tētō'ḡ'wīda. Wā,  
then it is said were sung for the two war-dancers. Well,
- g'ī'l'ēEm'la'wisē ḡwāḡ q!a'mtasōxs la'ē ēyā'lagēma  
as soon as, it is said, they finished were sung for then was sent a when
- ēwālotsā'yōkwē q!ā'k'ō bēḡwā'nema qa's lē q!ō'dēḡ'iwālētsa  
stout slave man that he 'go keep bow with a
- 15 dzō'ḡumē lā'xa ēwā'lēḡa'ēyasa t!ēt!ēḡu'nē. Wā, g'ī'l'ēEm'la'wisē  
pole in the large one among flat-bowed Well, as soon as, it is said, he the canoes.

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ḷā'x<sup>ɛ</sup>walēxs la'ēda bā'bak!wē ḷē'gades Qe'n<sup>ɛ</sup>widā'yō  
stood up in then a warrior named Frowned-upon  
the canoe,

haxse'mlēxsaq. Wā, lā'ēlaē ɛnemō'kwasē ɛnā'xulalēsē, ax<sup>ɛ</sup>'dxēs  
fell upon him Well, it is said his friend Warrior-all-round- took his  
in canoe. Well, the-World

k'ē'LENXē qa<sup>ɛ</sup>s k'ē'łtsēstalēs māk'inxē'ndalaxōx awē'nxa<sup>ɛ</sup>yaxsens  
sharp-edged and cut around with it close to this edge of our  
(knife) he

SE<sup>ɛ</sup>ya'x. Wā, g'í'l<sup>ɛ</sup>em<sup>ɛ</sup>lā'wisē lE'lgewē k'ē'lā<sup>ɛ</sup>yasēxs  
hair. Well, as soon as, it is said, met where it was cut  
when

la'ē nē'xōdex lE'łtsema<sup>ɛ</sup>yas x'ō'msdāsa qlā'k'ōwē. Wā, 5  
then pulled off the scalp of the head of the slave. Well,  
he

lā'ēlaē lax<sup>ɛ</sup>wultō'dxa qlā'k'ō. Wā, g'í'l<sup>ɛ</sup>em<sup>ɛ</sup>lā'wisē la<sup>ɛ</sup>sta'xs  
it is said they pushed out of canoe the slave. Well, as soon as, it is said, he went into  
the water,  
when

gā'xaēda hā'emats! lE<sup>ɛ</sup>wa' nē<sup>ɛ</sup>nā'nē lE<sup>ɛ</sup>wa' nō'enlēmāla hō'qawels  
came the cannibals and the grisly bears and the fool-dancers went out

lā'xa lō'bēkwē qa<sup>ɛ</sup>s lā qā'qāyaxa qlā'k'āxs la'ē dzEXwae'sela  
from the winter-dance and went pursued the slave then ran along  
house they when he

lāx lLemā'ēsas Qā'logwisē. Wā, hē'<sup>ɛ</sup>mēs la qāqāya'atsa  
at the beach of Crooked-Beach. Well, and that is then place of pur-  
suing of the

nē<sup>ɛ</sup>nā'nāq lE<sup>ɛ</sup>wa' nō'enlēmāla qa<sup>ɛ</sup>s sā'k'ap!ēq. Wā, lā'ēlaē 10  
grisly bears and the fool-dancers that they tried to Well, it is said,  
him spear him.

nā'paplēda waō'kwaq. Wā, lā'ēlaēda nē<sup>ɛ</sup>nā'nē lā'qap!esēs  
tried to throw several at him. Well, it is said the grisly bears tried to strike  
stones with their

xēyelyā'yōwē lāq. Wā, wē'g'aa<sup>ɛ</sup>lat!a lāx ɛnā'lanēgwēsas  
claws at him. Well, not he reached, to the beach on south side  
however, of

Qā'logwisaxs la'ē ya'x<sup>ɛ</sup>walēsa. Wā, laE'm lE<sup>ɛ</sup>l la'xēq. Wā,  
Crooked-Beach when he fell down dead Well, then dead there. Well,  
on beach. he is

hē'x'ēidaem<sup>ɛ</sup>lā'wisa nō'enlēmāla SESōx<sup>u</sup>'SE'ndxa qlā'k'ōx<sup>u</sup>'dē.  
immediately, it is said, the fool-dancers cut up in pieces the former slave.

Wā, g'í'l<sup>ɛ</sup>em<sup>ɛ</sup>lā'wisē gwāl sā'kwasōxs la'ēda hā'emats!a 15  
Well, as soon as, it is said, he finished was cut up when then the cannibals

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GEORGE HUNT

- hō'qunts!ēs lā'xa L!ēmā'ēsē qa's lā ha<sup>h</sup>mx·<sup>h</sup>i'deq. Wā,  
went down to to the beach that they go eat him. Well,  
beach
- lā'<sup>h</sup>laē ō'gwaqa<sup>h</sup>ma nē<sup>h</sup>nā'nē L!ē'wa' nō'EN!ēmāla ha<sup>h</sup>mēk·lā'la  
it is said, also the grisly bears and the fool-dancers asked to eat
- lāq. Wā, wēlax<sup>h</sup>dzē'<sup>h</sup>laē gē'x·<sup>h</sup>idEXS la'ē <sup>h</sup>wi'<sup>h</sup>laq qaxs  
of it. Well not it took, it is said, long when they (ate) him for  
all up
- ma<sup>h</sup>tsō'gug·i'ya<sup>h</sup>ēda begwā'nEMē ha<sup>h</sup>mā'pxa q!ā'k·ōx<sup>h</sup>dē. Wā,  
120 were the men eating the former slave. Well,  
5 lā'<sup>h</sup>laēda nē<sup>h</sup>nā'nē, yī'xa ma<sup>h</sup>lē' dā'nEMA, hē'x·<sup>h</sup>idaEM  
it is said the grisly bears, that is the two novices immediately  
(taken ones),
- lē'nEMax sē'ya'x·dās qa's lē'nEMap!ēq. Wā, laE'm  
took away his past hair and they took it from each other. Well, then
- ha<sup>h</sup>mg·i'<sup>h</sup>lāyō lāq. Wā, hē'<sup>h</sup>mēsēxs lē'ma'ē k·lē'lak·asō<sup>h</sup>s  
was given to Well, and that is he was killed by  
food them. when
- TSEX<sup>h</sup>wi'dē qaē's hayō'tē Ts!EX<sup>h</sup>i'dē. Wā, la<sup>h</sup>mē' yā'k·āwēda  
Fast-Runner on account rival Throw-away. Well, then was beaten  
of his the
- g·i'gama<sup>h</sup>ē Ts!EX<sup>h</sup>i'dē lā'xēs <sup>h</sup>nEMō'kwē TSEX<sup>h</sup>wi'dē.  
chief Throw-away by his friend Fast-Runner.
- 10 Wā, g·i'l<sup>h</sup>EM<sup>h</sup>lā'wisē gwāł a'mlēda ma<sup>h</sup>lē' nē<sup>h</sup>nā'nēsa  
Well, as soon as, it is said, finished playing the two grisly bears  
with the
- sā'bekwē sē'yā'sa q!ā'k·ōx<sup>h</sup>dāxs la'ē TSEX<sup>h</sup>wi'dē dā'x·<sup>h</sup>idxa  
skinned hair of the former slave, then Fast-Runner took the
- sā'bekwē sē'yā' qa's lā ts!ās lāx Ts!EX<sup>h</sup>i'dē.  
skinned hair and he went gave it to Throw-away.
- Wā, lā'<sup>h</sup>laē <sup>h</sup>nē'k'a : " Wā, qā'stā, la<sup>h</sup>mō'x  
Well, it is said he said, " Well, friend, now this
- qō'sL," <sup>h</sup>nē'x·<sup>h</sup>laē. Wā, g·i'l<sup>h</sup>mēsē gwā'łEXS la'ē hō'x·wūłta  
will be he said, Well, as soon as he finished then went out of  
yours," it is said. canoe
- 15 <sup>h</sup>wi'<sup>h</sup>lēda k·i'm<sup>h</sup>yaX·dāxa x·i'sā'łax·dē. Wā, g·i'l<sup>h</sup>EM<sup>h</sup>lā'wisē  
all those who had surrounded former disap- Well, as soon as, it  
peared ones. is said,

- dzā'qwaxs la'ē a'yī'lkwās Tsex<sup>ε</sup>wī'dē qā's<sup>ε</sup>īda. Wā, k'lē's<sup>ε</sup>lat!a  
 evening came, then attendants of Fast-Runner walked Well, not, however,  
 the (to call). it is said,
- g'ā'łaxs g'ā'xaē <sup>ε</sup>wī'εlaēLēda g'ā'lā Kwā'kug'ūla. Wā,  
 long when came all into house the first Kwakiutl clans. Well,  
 hē'x<sup>ε</sup>īdaem<sup>ε</sup>lā'wisē yā'łase<sup>ε</sup>wēda ma<sup>ε</sup>łc' nē'nā'na. Wā,  
 immediately, it is said, were tamed the two grisly bears. Well,  
 g'ī'l<sup>ε</sup>em<sup>ε</sup>lā'wisē gwā'łexs, la'aēl yā'laqwēda ma<sup>ε</sup>lō'kwē  
 as soon as, it is said, finished then it sang their sacred two  
 they with it, is said songs the
- tētō'x<sup>ε</sup>wīda. Wā, g'ī'l<sup>ε</sup>em<sup>ε</sup>lā'wisē q!wē'ł<sup>ε</sup>ēdexs la'ē dē'nx<sup>ε</sup>ēdēda 5  
 war-dancers. Well, as soon as, it is stopped speaking, then began to sing  
 said, they the
- nē'nā'gadē. Wā, g'ā'xēda ma<sup>ε</sup>lō'kwē tētō'x<sup>ε</sup>wīd <sup>ε</sup>yex<sup>ε</sup>wuł!ā'-  
 song-masters. Well, came the two war-dancers dancing as they
- l!ēl qa<sup>ε</sup>s lā'stalī'łēlē lā'xa lēqawā'ł!asa g'ō'kwē.  
 came out and went around at the fire in middle house.  
 of house, they in house of the
- Wā, la<sup>ε</sup>m<sup>ε</sup>lā'wisē gwāł dē'nxelasa <sup>ε</sup>nē'msgemē q!a'm-  
 Well, then it is said finished singing with one (round) song.  
 they
- dēma. Wā, hē'x<sup>ε</sup>īdaem<sup>ε</sup>lā'wisa yā'yaq!antemilē la lāx  
 Well, immediately, it is said, speaker of the house went to the  
 the
- q!waē'łasasa ma<sup>ε</sup>lō'kwe tētō'x<sup>ε</sup>wīda. Wā, la<sup>ε</sup>m<sup>ε</sup>lāwisē 10  
 standing-place two war-dancers. Well, then it is said  
 of the
- wulā'sē<sup>ε</sup>wēda <sup>ε</sup>nemō'kwē tō'x<sup>ε</sup>wīd lā'xēs axē'xsde<sup>ε</sup>wa. Wā,  
 was asked one war-dancer for her desired (thing). Well,  
 hē'x<sup>ε</sup>īdaem<sup>ε</sup>lāwisē tō'x<sup>ε</sup>wīdē <sup>ε</sup>nē'k'a: "Wā'łaqclēg'anu<sup>ε</sup>x"  
 immediately, it is said, war-dancer said, "We desire  
 the
- qenu<sup>ε</sup>x<sup>u</sup> lēqwi'łase<sup>ε</sup>wē lā'xwa lēgwē'łēx," <sup>ε</sup>nē'x<sup>ε</sup>łac. Wā,  
 that we be made fire into that house-fire," she said, it Well,  
 [put into fire] is said.
- lā'ēlaēda yā'yaq!antemilē e'tālas lā'xēs <sup>ε</sup>nē<sup>ε</sup>mē'mōtē yīs  
 it is said speaker of the house repeated it to his clan the  
 the
- wā'łdemasa tētō'x<sup>ε</sup>wīdē. Wā, hē'x<sup>ε</sup>īdaem<sup>ε</sup>lāwisa mō'kwē a'yī'łx<sup>ε</sup>s 15  
 word of the war-dancers. Well, immediately, it is said, the four attendants of

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TSEX<sup>ε</sup>wi'dē yā'q!eg·a<sup>ε</sup>!a. Wā, laE'm<sup>ε</sup>lāwisē <sup>ε</sup>ne'k'a: "yā, pēpEXalā',  
Fast-Runner spoke. Well, then it is said they said, "O shamans  
(dancers),

wē'g'adzâx'ins <sup>ε</sup>NE'mplēna nā'nagēg'ēxg'axg'a wā'ldemg'asg'ins  
let us for one time obey this desire of our

<sup>ε</sup>nē<sup>ε</sup>nEMō'kuk'. Wā, wē'g'a ax<sup>ε</sup>'dEX ma<sup>ε</sup>!EXsā' ts!ā'ts!ax"-  
friends here. Well, go on take two flat short roof-

SEMA qENS wē'g'i y!LEDzōdā'lasek' lāq," <sup>ε</sup>nē'x<sup>ε</sup>!aē. Wā,  
boards that we go on tie them on to them," they said, Well,  
it is said.

5 laE'm<sup>ε</sup>lāwisē Lē<sup>ε</sup>!lālasE<sup>ε</sup>wa ma<sup>ε</sup>!ō'kwē bā'bEBak!wa, yix  
then it is said were invited two warriors, that is

QENx<sup>ε</sup>widā'yōwē L<sup>ε</sup>E<sup>ε</sup>wē's <sup>ε</sup>nEMō'kwē <sup>ε</sup>nā'xulalēsē qa  
Frowned-upon and his friend Warrior-all-round- that  
the-World,

g'ā'xēs y!LEDzō'ts lā'xa ts!ā'ts!aōx<sup>ε</sup>SEMē. Wā, hē'x<sup>ε</sup>i-  
they come tie them on to the short roof-boards. Well, immedi-

daEM<sup>ε</sup>!ā'wisē ax<sup>ε</sup>'tSE<sup>ε</sup>wa ma<sup>ε</sup>!EXsa' ts!ā'ts!ETS!aōx<sup>ε</sup>SEMA  
ately, it is said, were taken two flat short roof-boards

qa<sup>ε</sup>s g'ā'xē pā'xalēlEM lā'xa ōgwēwalī'lasa g'ō'kwē.  
and they came put them down in the rear of the house.

10 Wā, laE'm<sup>ε</sup>lāwisē dā'x<sup>ε</sup>!tSE<sup>ε</sup>wa ma<sup>ε</sup>!ō'kwē tētō'x<sup>ε</sup>wid  
Well, then it is said were taken the two war-dancers

qa<sup>ε</sup>s nāENLEDzōdā'yōwē lā'xa <sup>ε</sup>nā'!<sup>ε</sup>nEMXsa ts!ā'ts!aōx<sup>ε</sup>SEMA.  
and they were laid on their backs on the each flat short roof-board.

Wā, laE'm<sup>ε</sup>lāwisa g'i'lt!a dENE'm ax<sup>ε</sup>'tSE<sup>ε</sup>wa qa  
Well, then it is said a long cedar-bark rope was taken for

yāLā'<sup>ε</sup>!ayōsa ts!ē'daqē tō'xw<sup>ε</sup>id L<sup>ε</sup>E<sup>ε</sup>wa ts!ā'ts!aōx<sup>ε</sup>SEMē.  
instrument of women war-dancers and the short roof-boards.  
tying of the

Wā, laE'm<sup>ε</sup>laxaā'wisē hē'EM g'wē'x<sup>ε</sup>!tSE<sup>ε</sup>wa <sup>ε</sup>nEMō'kwē.  
Well, then, it is said, also, that thus was done to the other one.

15 Wā, laE'm<sup>ε</sup>lāwisē gwā'!EXS la'ē ax<sup>ε</sup>'tSE<sup>ε</sup>wa L<sup>ε</sup>SL<sup>ε</sup>kwē'  
Well, then it is said they finished when then were taken thick

tĕ'mg'ik<sup>u</sup> lĕqwa' qa's qElxasustâ'lase<sup>ē</sup>wē lāx awi'<sup>ē</sup>s-  
blocks fire-wood and they were piled up at the around

tāsa lĕgwī'ĭē. Wā, â'<sup>ē</sup>mēsē la nĕxts!<sup>ē</sup>wē'da  
the fire. Well, and only then was in centre the

lĕgwī'ĭē lāq. Wā, laE'm<sup>ē</sup>lāwisē ha'lsElāEM<sup>ē</sup>la hĕłts!ā'pĕlĕda  
fire in it. Well, then, it is said, hardly could look over a

g'ĭ!t!Exsdē bĕgwā'nĕm lāx x'ixts!ā'laq. Wā, laE'm gwā'łala  
tall man in the putting head Well, then it is ready  
out into it.

qaē'da ma<sup>ē</sup>lō'kwē tĕtō'x<sup>ē</sup>wid qō lāł lāts!ō'<sup>ē</sup>yōlō lāq. 5  
on account two war-dancers if will will be put in into it.  
of the then middle

Wā, hĕ'<sup>ē</sup>maaxs la'ē <sup>ē</sup>nĕ'k'a tĕtō'x<sup>ē</sup>widē qa's lāx!ā'nōwē  
Well, that when then they said the war-dancers that should be put  
they on top

lā'xa lĕgwī'ĭē. Wā, la ax<sup>ē</sup>ē'tsE<sup>ē</sup>wa ma<sup>ē</sup>lĕxsa' ts!ā'ts!aōx<sup>u</sup>semē  
on the fire. Well, then were taken two flat short roof-boards

la <sup>ē</sup>nā'<sup>ē</sup>nĕmax'īyaak<sup>u</sup> lĕwa' la nĕlĕdzâ'yaatsa tĕtō'x<sup>ē</sup>widē. Wā,  
made just like also the now place of lying on war-dancers. Well,  
back of the

lā'<sup>ē</sup>lāē ax<sup>ē</sup>ē'tsE<sup>ē</sup>wa q!wā'xē. Wā, la'<sup>ē</sup>laxaē <sup>ē</sup>nā'<sup>ē</sup>nĕmax'īyaak<sup>u</sup>  
it is said were taken hemlock-branches. Well, then also, it were made just like  
is said, they

lō<sup>ē</sup> qĕqEX'ima<sup>ē</sup>yasa â'lak'łala tō'x<sup>ē</sup>wida. Wā, laE'm- 10  
also hemlock head-rings true war-dancer. Well, then  
the of the

<sup>ē</sup>lāwisē qEX'imdā'yō lā'xa q!ā'q!Ek'ō ma<sup>ē</sup>lō'k<sup>u</sup> ts!ē'dāqa.  
it is said were tied around to the slaves two women.  
they

Wā, laE'm<sup>ē</sup>lāwisē la nĕ'nĕlĕdzōdāyō lā'xa ts!ā'ts!ĕts!aōx<sup>u</sup>semē.  
Well, then it is said now were laid down on on the short roof-boards.  
they their backs

Wā, laE'm<sup>ē</sup>lāwisē yĭ<sup>ē</sup>ēdā'yōwēda g'ĭ!t!ē dĕnE'm lāq lāx  
Well, then it is said were tied the long cedar-bark to in  
ropes them the

gwā'łaaasasa ma<sup>ē</sup>lō'kwē tĕtō'x<sup>ē</sup>wida. Wā, laE'm<sup>ē</sup>lāwisēda  
same manner as two war-dancers. Well, then it is said  
the the

ma<sup>ē</sup>lō'kwē bā'bebak!wa <sup>ē</sup>nĕ'x'xa ma<sup>ē</sup>lō'kwē ts!ē'dāq q!ā'q!Ek'â: 15  
two warriors said to the two women slaves,

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"<sup>ε</sup>ya, sā'sEM, gu'nō gwāL!EXLā'lalaxō qa'sō lāł lax'Lā'nōł  
 "O children! do not scream if you will you will be  
 put on top

lāxg'a'da lēgwī'łēk'. Wā, hē'smaaxs k'!ē'sēLaqōs  
 on this fire. Well, that when you not

gwāL!EXLā'lalōL, wā, lā'LES mō'p!ENXwa's<sup>ε</sup>Emł k'!ēs g'āx  
 you will scream, well, then you four (times) day not come  
 will,

q!ula'x'<sup>ε</sup>idELōL. Wā, g'ī'l<sup>ε</sup>Emł<sup>ε</sup>wits gwāL!EXLā'lalōL, wā,  
 you will come to life. Well, as soon as you will you will scream, well,

- 5 la<sup>ε</sup>mē'sENU<sup>ε</sup>x<sup>u</sup> kwē'xap!ELōL qa's lēłē'laōs. Wā, la<sup>ε</sup>'ms xEK'!ā'ł  
 then we shall strike the so that you die. Well, then you will stay  
 nape of your necks away

łēłē'ł lā'xaq," <sup>ε</sup>nē'x<sup>ε</sup>laē. Wā, lā<sup>ε</sup>'m<sup>ε</sup>lāwisē <sup>ε</sup>nā'xwa yā'q!eg'a<sup>ε</sup>łē-  
 will be by this," they said, it Well, then it is said all spoke  
 dead is said.

da <sup>ε</sup>wē'wōsēlaga ts!ē'dāq q!ā'q!EK'ā. Wā, lā'laē <sup>ε</sup>nē'k'a:  
 poor women women slaves. Well, it is said said,  
 they

"Wē'g'a ā'EM ha<sup>ε</sup>lilāx la<sup>ε</sup>'mx' łāk!wē'masgranu<sup>ε</sup>x<sup>u</sup> nē<sup>ε</sup>nā'qēk.  
 "Go on only do it quickly this we are strong in our hearts

qENU'<sup>ε</sup>x<sup>u</sup> k'!ē'sē gwā'L!EXLā'la qENU'<sup>ε</sup>x<sup>u</sup> k'!ē'sēł gā'łāł qENU'<sup>ε</sup>x<sup>u</sup>  
 for we not scream so that we shall not shall be that we  
 long

- 10 g'ā'xēł ē't!ēdēł q!ula'x'<sup>ε</sup>ida," <sup>ε</sup>nē'x<sup>ε</sup>da<sup>ε</sup>x<sup>u</sup>laē. Wā, la<sup>ε</sup>'m<sup>ε</sup>laē  
 shall come shall again come to life," they said, it is said. Well, then it is  
 said they

gwā'liā. Wā, lā'laēda nō'ENlāmāła Lē'lałasō's TSEX<sup>ε</sup>wi'dē  
 were ready. Well, it is said the fool-dancers were invited by Fast-Runner

qa's lā Lā'g'iliłaxa la yā'gudzâyaatsa tētō'x<sup>ε</sup>widē, qa's  
 that go carry up the now place of lying tied on war-dancers that  
 they and board of the they

lā Lax<sup>u</sup>LE'ndēs lā'xa lēgwī'łē. Wā, g'ī'l<sup>ε</sup>Emł<sup>ε</sup>lā'wisē  
 go put it on top on the fire. Well, as soon as, it is said,

g'ā'xēda nō'ENlēmāłāxs la'ē <sup>ε</sup>nā'xwa q!wā'g'a<sup>ε</sup>liā  
 came the fool-dancers when then all stood up in  
 house the

- 15 gwē'gudza. Wā, lā<sup>ε</sup>'m<sup>ε</sup>laē xō'lexuliā. Wā,  
 winter-dancers. Well, then it is said they were all confused Well,  
 (running about).

laE'm <sup>l</sup> lāwisa it is said the	nō'EN <sup>l</sup> EMāla fool-dancers	Lā'g'a <sup>l</sup> liłaxa took up in house the	tētō'x <sup>l</sup> widē war-dancers	qa <sup>s</sup> and they		
x'í'lp <sup>l</sup> ēdē turned around	lā'xa in the	ōgwēwali'łaxs rear of house when	la'ē then they	lā <sup>s</sup> stali'łelas went around in house with them		
lā'xa in the	g'ō'kwē. house.	Wā, Well,	lā'laē it is said they	x'í'lp <sup>l</sup> ēd turned around	lā'xa at the	ō <sup>s</sup> stāli'łasa door of the
g'ō'kwē. house.	Wā, Well,	lā'laē it is said they	ē'tlēd again	lāg'iyōli'łelaxs went to rear when	la'ē then they	
hēyak'ili'łela went back to inner room	lā'xa at the	hēłk'lotē'waliē. right-hand side.	Wā, Well,	lā'laē it is said they	axā'liłaxa put down the	5
ā'lak'łala true	tētō'x <sup>l</sup> wid war-dancers	qa <sup>s</sup> and	qlulā'łēdēq. hid them.	Wā, Well,	lā'laē it is said they	Lā'g'a <sup>l</sup> liłaxa took up the
ma <sup>l</sup> lō'kwē two	qlā'qlEk'ō slaves	qa <sup>s</sup> and	lē went	lāt'łā'lił went out	lā'xa at the	gEMxōtē'waliē. left-hand side.
Wā, Well,	lā'laē it is said they	lē <sup>s</sup> stali'łelas went around with them	qa <sup>s</sup> and they	lē went	lā'xa to the	ō <sup>s</sup> stā'li- door
łaxs when	la'ē then	ēwelg'a <sup>l</sup> li'łema was stopped	ēnemō'kwē one	qlā'k'ō. slave.	Wā, Well,	
lā'laēda it is said the	ēnemō'kwē one [other]	hē <sup>s</sup> stali'łelāyā was taken around	qa <sup>s</sup> and he	lē'el went	ēwel- was	10
g'a <sup>l</sup> li'łEM stopped	lā'xa at the	ōgwēwali'łaxs rear of house	la'ē when they	ēne <sup>s</sup> ma'x <sup>s</sup> it at same time	x'í'l- turned	
plēd around	łE'łwa and the	ō <sup>s</sup> stāli'łelāxs door when	la'ē then they	wax'sanō'dxa were on each side of the		
qElxasē'lakwē piled-up	legwī'łā. fire.	Wā, Well,	lā'laē it is said	łā <sup>s</sup> nā'kulāmatse <sup>s</sup> wa were placed upright one after another the		
ma <sup>l</sup> lō'x <sup>l</sup> dē two former	qlā'qlEk'ōxs slaves when	la'ē then	lā'x'łānā. were put on they top (of pile).	Wā, Well,	laE'm <sup>l</sup> laē then it is said they	hāwē'xa never
gwā'ł!EXłalaxs screamed	la'ē when they	wē'qumāxa. were shoved down.	Wā, Well,	laE'm <sup>l</sup> laē then it is said they	łēE'łā. were dead.	Wā, 15

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g'í'l'EM<sup>l</sup>lā'wisē q!u'l<sup>x</sup>·<sup>l</sup>idEXS la'ē ax<sup>ē</sup>'tSE<sup>l</sup>wa ma<sup>l</sup>tsE<sup>l</sup>'mē  
 as soon as, it is said, burned to ashes then were taken two  
 they

xā'xEXatSEma qa<sup>s</sup> g'ā'xē ha'nEMg'a<sup>l</sup>lileM la'xa ōgwēwali'lē.  
 small boxes and came were put down on floor at the rear of house.  
 they

Wā, hē'<sup>l</sup>latla lē'da <sup>l</sup>NE'msgEMēda ō<sup>l</sup>stā'lilē. Wā, lā'<sup>l</sup>laē  
 Well, that, however, was one at the door. Well, it is said  
 it is said,

ax<sup>ē</sup>'tSE<sup>l</sup>wa g'í'l'tla k·līplā'laē qa<sup>s</sup> k·līplē'tSE<sup>l</sup>wē xā'lxEXqasa  
 were taken long tongs and they were picked up the bones of

5 <sup>l</sup>nā<sup>l</sup>NE<sup>l</sup>mō'kwē q!ā'k·ō qa<sup>s</sup> lē k·līpts!ā'lāyō lā'xa <sup>l</sup>nā<sup>l</sup>NE'msgEMē  
 each (person) slave and then were put in into the one to each (round)  
 they with tongs

xā'xatSEma. Wā, g'í'l'EM<sup>l</sup>lā'wisē <sup>l</sup>wi'ltslāxs la'ē yikuyE'ntSE<sup>l</sup>wa  
 box. Well, as soon as, it is were all in then they were covered  
 said, they

yí'sēs ye'yik<sup>u</sup>ya<sup>l</sup>ē. Wā, lā'<sup>l</sup>laē ha'ng'a<sup>l</sup>lileM lā'xa ōgwēwali'lasa  
 with their covers. Well, it is said were placed on at the rear of the  
 they floor

tslā'gats!e. Wā, lā'<sup>l</sup>laē mō'p!ENxwa<sup>s</sup>ē <sup>l</sup>nā'lās hē gwaē'lEXS  
 winter-dance Well, it is said, four times day day of that being thus in  
 house. house

la'ē yā'laqwēda tētō'x<sup>l</sup>widē. Wā, laE'm q!ulā'x<sup>l</sup>·<sup>l</sup>idbōla. Wā,  
 then sang their war-dancers. Well, then they pretended to Well,  
 sacred songs the become alive.

10 laE'm<sup>l</sup>laē ā'lax<sup>l</sup>·<sup>l</sup>id la <sup>l</sup>yā'k·ōwē Ts!EX<sup>l</sup>i'dē lā'xēq. Wā, lā'<sup>l</sup>laē  
 then it is truly then was beaten Throw-away after that. Well, it is said  
 said

Ts!EX<sup>l</sup>i'dē <sup>l</sup>nēx· qa<sup>s</sup> lē wí'naxa Mō'tsladxwē g'ā'sā lā'xa  
 Throw-away said that he would make war Nootka going at the  
 go upon the through

dZE<sup>l</sup>lā'lasa <sup>l</sup>NE'mgēsē. Wā, lā'<sup>l</sup>laē tē'nox<sup>l</sup>wēd lā'xa wā. Wā,  
 lake of the <sup>l</sup>NE'mgēsē. Well, it is said poled canoes on the river. Well,  
 they.

g'í'l'EM<sup>l</sup>lā'wisē lā'gaa lā'xa t!ēx·<sup>l</sup>lās T!E'sē la'ē yū'dux<sup>u</sup>send  
 as soon as, it is went to the road of Nootka then in three pieces  
 said, they Inlet they

LE'mx<sup>l</sup>·<sup>l</sup>idxēs <sup>l</sup>yā'<sup>l</sup>yats!ē qa<sup>s</sup> lā <sup>l</sup>wē'k·ilk·ilaqēxs la'ē ē'k·lē<sup>l</sup>sta  
 split their canoe and went carried it on their they went up  
 they shoulders when

15 lā'xa NEG·ā'. Wā, g'í'l'EM<sup>l</sup>lā'wisē lā'gaa lāx wās T!E'sē  
 to the mountain. Well, as soon as, it is came to the river of Nootka  
 said, they Inlet

la'ē	t!E'mx'ēidxēs	ēyā'ēyats!ē	qa's	yō'lx'ēidē	lā'xa	wā.
then they	sewed together their	canoe	and they	drifted down	at the	river.
Wā,	g'i'l'ēm'lā'wisē	la'x'sēyōd	lā'xa	wāxs	la'ē	
Well,	as soon as, it is said, they	arrived at mouth	at the	river	then they	
sēx'sâlē'sela	lā'xa	t!ō'kwaxs	la'ē	ā'ēm	q!ā'yaxaxs	
paddled through	at a	narrow passage when	then they	only	were startled when	
la'ē	ha'nla!EXSELASō'sa	hā'ENAL!EMē.	Wā	laE'm <sup>ē</sup> laē	!E'ē!ē	
then they	were shot at by	arrows.	Well,	then it is said	was killed	
Ts!EX'ī'dē	!E'wē's	lē'ē!ōtē.	Wā,	lā'ē!aē	ēNEMō'kwa	5
Throw-away	and his	crew.	Well,	it is said	one	
q!u'laxa	g'ā'xē	aē'daaqa.	Wā,	hē'ēmē	q!ā'lag'iltsa	
was alive that	came	back.	Well,	that is the	reason of know- ing of the	
g'ā'la	Kwā'g'uł	qēxs	!E'ēmaē	!ē!E'ē!a.	Wā,	la <sup>ē</sup> mē <sup>s</sup>
first	Kwakiutl	that	they	were killed.	Well,	then
ēyā'k-ōwē	Ts!EX'ī'dē	lā'xēq.	Wā,	laE'm	lā'ba.	
was beaten	Throw-away	after that.	Well,	then	end.	

## Editorial Note

Originally published in *Boas Anniversary Volume*. New York: G. E. Stechert, 108-136 (1906).

This paper, a contribution to the Festschrift honoring Boas on the 25th anniversary of his doctorate, was Sapir's first published work. Student records at Columbia University (Murray and Dynes 1986) show that Sapir enrolled in Boas's introductory course on "American Languages" in 1903-04 while he was an undergraduate in Columbia College, and that he continued with a second course in 1904-05 during the time he was enrolled as a Master's candidate in Germanic Philology. According to the Columbia catalogue for those years, the "translation and grammatical interpretation of Indian myths" formed part of the work of both courses, and it is entirely possible that Sapir edited "The Rival Chiefs" for this purpose. The text was one of those transcribed by George Hunt, Boas's native Kwakiutl collaborator, and the original manuscript is preserved among Hunt's Kwakiutl materials in the Columbia University Library.

George Hunt, a native speaker of Kwakiutl, gathered and transcribed large quantities of ethnographic and linguistic material for Boas during a 40-year association. Boas first met Hunt during his initial field trip to the Kwakiutl in 1886. In 1893 Boas arranged for Hunt to visit the World Columbian Exposition in Chicago as part of a delegation of Kwakiutls, and their close collaboration dated from that time. To facilitate their work Boas taught Hunt to write Kwakiutl phonetically, and Hunt began collecting texts for transmittal to Boas for editing and publication, with two of the resulting monographs explicitly co-authored (Boas and Hunt 1902-05, 1906). Boas described Hunt's work in some detail, including his orthographic practices, in his introduction to *The Religion of the Kwakiutl Indians* (1930: ix-xviii). See also Helen Codere, "George Hunt and Boas" (in Boas 1966: xxviii-xxxi).

Sapir, impressed by the productiveness of the Boas-Hunt collaboration, established similar working relationships with several native speakers, including Pete McGuff (Wishram), Tony Tillohash (Southern Paiute), Albert Sandoval (Navajo), and Alex Thomas (Nootka). The orthographic practices of these men later formed an important part of Sapir's famous discussion of the psychological reality of phonemes (1933c).

# Some Aspects of Nootka Language and Culture [excerpt]

## The Linguistic Relationship of Kwakiutl and Nootka

The Wakashan linguistic stock is divided into two main branches, the Kwakiutl and the Nootka or Aht; the former embraces Kwakiutl proper, Xaisla, and Hë'tsa'q<sup>u</sup>, the latter Northern Nootka (from about Cape Beale north to Cape Cook on the west coast of Vancouver Island) and Southern Nootka or Nitinat (south of Cape Beale to Cape Flattery). By careful comparison of the two Wakashan branches one can in part reconstruct a Wakashan "Ursprache," but the actual differences between Kwakiutl and Nootka are in fact very great; they differ perhaps as much as Slavic and Latin.

[16] As regards phonetics, Kwakiutl and Nootka, while both showing characteristic Northwest Coast features, differ rather considerably. The sonant or intermediate stop series of Kwakiutl is absent in Nootka, Kwakiutl *p* and *b* for instance being replaced by Nootka *p*. Besides the *s*-series, which Kwakiutl and Nootka possess in common, Nootka has a *c*-series, which is doubtless derived from the Kwakiutl and Wakashan *k*-series, which in turn Nootka lacks; thus Kwakiutl *g* and *k* are cognate with Nootka *tc*, *k*· with *tc*!, and *x*· with *c*. There is no *l* in Nootka, *n* corresponding to both Kwakiutl *l* and *n*. The velars *q*! and *x*, while somewhat infrequently found in Nootka, are not the regular Nootka representatives of Kwakiutl *q*! and *x*; *q*! has developed into a peculiarly harsh and choky glottal stop, which I write <sup>ε</sup>, *x* into a strangulated-sounding *h* which I write *H*, these two consonants respectively resembling Arabic 'ain and ḥâ; ordinary <sup>e</sup> and *h* are also frequently found in Nootka. As regards phonetic processes, Kwakiutl and Nootka agree in allowing no initial consonant clusters in words; initial Kwakiutl and Nootka <sup>e</sup>*m*, <sup>e</sup>*n*, <sup>e</sup>*w*, <sup>e</sup>*y*, and Kwakiutl <sup>e</sup>*l* are undoubtedly related to ordinary Kwakiutl and Nootka *m*, *n*, *w*, *y*, and Kwakiutl *l* as are Kwakiutl and Nootka *p*!, *t*!, *k*!, *L*!, *ts*!, *q*!, Kwakiutl *k*·!, and Nootka *tc*! to nonfortis Kwakiutl and Nootka *p*, *t*, *k*, *L*, *ts*, *q*, Kwakiutl *k*·, and Nootka *tc*. In both Kwakiutl and Nootka certain derivative suffixes "harden" the final consonant of the stem; thus *p*, *q*, and *t*, become Kwakiutl *p*!, *q*!, and <sup>e</sup>*l*, Nootka *p*!, <sup>ε</sup>, and <sup>e</sup>*y*. The "softening" of Kwakiutl seems to be represented in Nootka by but a few stray phonetic processes. Syllabically final glottal stops and glottally affected consonants—such as <sup>e</sup>*t* and <sup>e</sup>*p*!—which are common in Kwakiutl, are entirely absent in Nootka. Medial and final consonant clusters are not as freely allowed in Nootka as in Kwakiutl, *i* often serving in Nootka to lighten them (cf. Nootka *-qEMiḥ*, 'round thing', with Kwakiutl *-gEMiḥ* 'mask'). All final vowels and

stopped consonants in Nootka are aspirated. Peculiar to Kwakiutl is the change of *k*-stops to spirants (*x*, *xʷ*, *xʷ*) before consonants, whereas in Nootka they remain; in this point Nootka seems more archaic than Kwakiutl.

In general morphology Kwakiutl and Nootka are quite similar, [17] despite numerous differences of detail. In both the stem is, as far as its meaning allows, indifferently verbal or nominal and one or more suffixes are required to give rise to definitely verbal or nominal complexes; in Nootka a suffixed *-eʷi* is often used to substantivize a verb form. Both Kwakiutl and Nootka are absolutely devoid of prefixes, most of the elaborate grammatical mechanism being carried on by means of suffixes, to a lesser extent by means of initial reduplication, and, in Nootka, consonantal changes. The suffixes of Nootka and Kwakiutl express similar ideas and are used in more or less parallel fashion, though the number of suffixes that are etymologically related form but a small percentage of those found in either; so far about ninety Nootka suffixes have been discovered that are entirely or in part cognate to Kwakiutl suffixes. Examples of local suffixes shared by Kwakiutl and Nootka are: Kwakiutl *-ō-eyō* 'in the middle', Nootka *-eʷinʷ*; Kwakiutl *-nēqʷ* 'in the corner', Nootka *-nikw-*; Kwakiutl *-atūs* 'down river', Nootka *-atis*; Kwakiutl *-tsʷō* 'in', Nootka *-tsʷ!*; Kwakiutl *-k·E* 'top of a box', Nootka *-tcī* 'full'; Kwakiutl *-!a¹* 'on the rocks', Nootka *-!aʷaʷ*; Kwakiutl *-ēs* 'on the beach', Nootka *-is*; Kwakiutl *-itʷ* 'in the house', Nootka *-itʷ*; Kwakiutl *-xs* 'in a canoe', Nootka *-qs*, *-!ahs*. A few examples of body-part suffixes are: Kwakiutl *-!ōs* 'cheek', Nootka *-as*; Kwakiutl *-xō* 'neck', Nootka *-as-Haut* 'chest'; Kwakiutl *-āpʷ* 'neck', Nootka *-āpʷ!aʷ* 'back'. Important temporal elements held in common are: Kwakiutl *-L* 'future', Nootka *-eʷāq-L*, *-eʷiL*; Kwakiutl *-x·ēid* 'inceptive', Nootka *-ci-L*. There are some striking agreements in verbifying derivative suffixes, as: Kwakiutl *-!ēxst* 'to desire', Nootka *-!iHʷa* 'to try to get', *-st!iHʷa* 'to have as goal'; Kwakiutl *-!a* 'to go in order to', Nootka *-!as*; Kwakiutl *-k·!āla* 'to make a noise', Nootka *-eʷenʷ* (= Wakashan *\*-q!Ela*); Kwakiutl *-g·aʷt* 'beginning of a noise', Nootka *-eʷaL* (= Wakashan *\*-q!aʷt*); Kwakiutl *-q!Es* 'to eat', Nootka *-!is*; Kwakiutl *-nukʷ* 'to have', Nootka *-nakʷ*. Examples of nominal suffixes are: Kwakiutl *-aanō* 'rope', Nootka *-āēnʷl* 'long'; Kwakiutl *-gas* 'woman', Nootka *-eʷaqs*; Kwakiutl *-asdē* 'meat', Nootka *-actʷ* 'dried meat'; Kwakiutl *-mis* 'useless', Nootka *-mis* 'mass'; Kwakiutl *-p!ē-q* [18] 'stick, tree', Nootka *-p!itʷ* 'long board-like object', *-q-* 'tree'; Kwakiutl *-(x)eʷENx* 'year, season', Nootka *-qʷēitʷHʷa* 'year', *-!itʷHʷa* 'season'. On the whole it seems that Nootka has a rather larger number of derivative suffixes than Kwakiutl, many quite special ideas being expressed by means of suffixes where there seem to be no Kwakiutl equivalents. A few examples are *-atʷ* 'blanket'; *-eʷmitʷ* 'son'; *-as* 'daughter'; *-!itʷl* 'to dream of'; *-!ōēil* 'to ask for as a gift in a girl's puberty ceremony'; *-!ōlaʷ* 'to give a potlatch for'; *-yaqʷHʷa* 'to sing a song'; *-!il* 'to begin to sing a song'; *-!intʷ* 'to give a feast of'; *-!Hāʷ* 'to buy'.

Both Kwakiutl and Nootka make use of two kinds of reduplication, one in which the first consonant, first vowel, and second consonant of the stem are repeated, and one in which only the first consonant and vowel are repeated; the

1. ! denotes a "strengthening" of the preceding consonant.

former type is employed in forming iteratives, the second in forming plurals or distributives and with certain suffixes (such as Kwakiutl *-!a*, Nootka *-!as* 'to endeavor, to go in order to'; Kwakiutl *-<sup>ε</sup>yāla* 'to go to look for'; Nootka *-!iH<sup>a</sup>* 'to try to get'; Nootka *-k!qk<sup>u</sup>* 'to look like'). In Nootka the repeated vowel is in all cases the same as that of the stem, in Kwakiutl the second type of reduplication has a definite vocalism (*ē* in some cases, *ā* in others) in the reduplicating syllable. In Kwakiutl verb stems ending in vowels insert *x·* after the first, *k·* after the second syllable of the iterative, while Nootka iteratives of like form insert *L* and *y*; Nootka *sā-* 'to crawl' forms iterative *sā'LSātc*, *-tc* being probably identical with Kwakiutl *-k·*. One other striking resemblance of detail between Kwakiutl and Nootka may be noted: both Kwakiutl diminutives in *-EM* and Nootka nouns in *-kwin* 'toy' require reduplication of the stem.

In regard to pronominal development there is considerable difference between Kwakiutl and Nootka. While there is, practically speaking, but one series of personal pronominal suffixes in Kwakiutl, there are three in Nootka (represented, for second person singular, by *-e<sup>ε</sup>its*, *-k'*, and *-sok'*), of which the second and third are etymologically related: the first Nootka series is used in indicative forms of verbs, the second in subordinate clauses, interrogatives, and possessive forms of nouns, while the third seems to be confined to [19] certain modal forms. Kwakiutl has distinct forms for first person plural inclusive and exclusive, while Nootka has only one form for both. Pronominal objects are, to at least a considerable extent, incorporated in Kwakiutl; in Nootka, however, only in the case of the first person (second series) of the imperative. A great degree of complexity in pronominal forms is brought about in Kwakiutl by the combination of the pronominal affixes with syntactic (subjective, objective, and instrumental) and demonstrative elements. Nootka has none of this syntactic and demonstrative complexity of the pronoun, but a series of forms is found built up of the second pronominal series and an element *-tc* implying that the statement is not made on the authority of the speaker.

Almost all Nootka and Kwakiutl words are noun or verb forms, there being almost no particles properly speaking. Such apparent Nootka conjunctive and case particles as *<sup>ε</sup>ōnōL* 'because', *<sup>ε</sup>oyi'* 'when, if', and *<sup>ε</sup>ōkwil* 'to' are morphologically verb forms built up of a stem *<sup>ε</sup>ō-* 'a certain one, thing' and derivative verbifying suffixes. There is, however, in Nootka a syntactically important conjunctive element *<sup>ε</sup>ani'* 'that' to which may be appended pronominal affixes of the second series and which may perhaps be considered a particle in the proper sense of the word. The "empty stem," Nootka *<sup>ε</sup>ō-*, is cognate with Kwakiutl *ō-* 'something,' which, however, is used primarily in noun forms. Other Wakashan "empty stems" are: Nootka *<sup>ε</sup>ap-*, *<sup>ε</sup>am-*, Kwakiutl *āps-*, used chiefly in forming nouns of body-parts that occur in pairs, and Nootka *hił-*, *hi-* 'to be at', Kwakiutl *hē-* 'that'; peculiar to Nootka is *hin*, *hit-* (before "hardening" suffixes) 'to be or do (as indicated by derivative suffix)'.

In regard to vocabulary Kwakiutl and Nootka differ greatly. Considering the very striking morphological agreements between them it is somewhat disappointing to find comparatively few stems held in common. It is highly important, however, to note that many of these are rather colorless in content and

thus hardly to be suspected of having been borrowed in post-Wakashan times. Such are Kwakiutl *εnā-*, Nootka *εnās* 'daylight'; Kwakiutl *g·āl-*, Nootka *tcān-* 'to be first'; Kwakiutl *ax-* 'to do, be', Nootka *εoii-* 'to be'; [20] Kwakiutl *wē-*, Nootka *wi-*, *wik* 'not'; Kwakiutl *gē*, Nootka *qε* 'a long time'; Kwakiutl *εnEM-*, Nootka *εnup-* 'one'; Kwakiutl *gwē-* 'thus', Nootka *qwi-* 'to be *or* do thus'; Kwakiutl *sō-*, Nootka *sō-* 'you'; Kwakiutl *ēk·!-*, Nootka *εītc!-* 'above'. Thus Dr. Boas' first announcement in 1890 of the close relationship between Kwakiutl and Nootka has been confirmed in every way by new evidence.

### Editorial Note

Excerpt from "Some Aspects of Nootka Language and Culture", originally published in the *American Anthropologist* 13, 15-28 (1911); the article appears in full in Volume IV. Reprinted by permission of the American Anthropological Association. Sapir's ms. corrections have been incorporated.

For a much fuller presentation of the data on which this paper is based, see the "Wakashan Comparative Vocabulary," based on Morris Swadesh's reworking of unpublished materials of Sapir (now in the Boas Collection, American Philosophical Society Library), published for the first time in Volume XII. Sapir also returned to comparative Wakashan in a late paper on "Glottalized Continuants in Navaho, Nootka, and Kwakiutl, with a Note on Indo-European" (1938b, Volume II), where he showed that the glottalized sonorant consonants (*y*, *w*, *l*, and the nasals) of Wakashan have arisen from the coalescence of *ʔ* and *h* with following or preceding plain sonorants. Recent work on comparative Wakashan, which has largely been confined to studies within the Kwakiutlan and Nootkan branches, is surveyed in Jacobsen (1979).

## Abnormal Types of Speech in Nootka

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An interesting linguistic and cultural problem is the use in speech of various devices implying something in regard to the status, sex, age, or other characteristics of the speaker, person addressed, or person spoken of, without any direct statement as to such characteristics. When we say "big dog make bow-wow" instead of "the dog barks," it is a fair inference that we are talking to a baby, not to a serious-minded man of experience. Further, when we hear one use "thee" where most would say "you," we suspect that we are listening to an orthodox Quaker. In neither of these cases is there an explicit reference to a baby as person addressed or to a Quaker as person speaking. Such implications are common in all languages and are most often effected by means of the use of special words or specific locutions. Thus, in Nootka there are special words used in speaking of obscene matters to or in the presence of women; a number of "baby-words" also exist. Generally it is the speaker or person addressed that is thus signalized, but it is quite possible, though less frequent, to thus imply something also in regard to the third person. A more specialized type of these person-implications is comprised by all cases in which the reference is brought about not by the use of special words or locutions, that is, by lexical, stylistic, or syntactic means, but by the employment of special grammatical elements, consonant or vocalic changes, or addition of meaningless sounds, that is, by morphologic or phonetic means.

To enumerate all the possible types of person-implication expressed in language, from the point of view of resulting classifications of human beings, would lead one far afield. Two types, however, seem to stand out most prominently — those referring to sex-discrimination and to rank-discrimination. Several languages make a distinction between words or forms used by males and such as are restricted to females. Such a distinction, for instance, is made by certain Eskimo dialects, in which, at least in earlier times, according to Boas,<sup>1</sup> final *p*, *t*, *k*, and *q*<sup>2</sup> were pronounced by the women as the corresponding nasals *m*, *n*, *ŋ*, and *ŋ*. In Yana, an isolated linguistic stock of northern California, the forms used by the women, whether in speaking to one another or to males, differ from the fuller forms used by the latter in the unvoicing of final vowels; final *-na* (*-hi* in Southern Yana), a common noun ending, is replaced by aspiration in the speech of the women, who further lengthen final vowels to express the interrogative, while the males suffix an element *-n*. Most languages that make such sex distinctions differentiate the sexes as speakers. In Yana, however, a further discriminating factor is the sex of the person spoken to, in so far as the men in speaking to the women use the forms characteristic of the latter.

More widespread in language seems to be a discrimination of forms according to the rank or social status of the person speaking, addressed, or spoken of. Here belong the etiquette forms characteristic of several East Asiatic and Indonesian languages, by which the social grading of the speakers as inferiors or superiors in reference to one another is clearly reflected in their speech. An analogous American instance is the use in Nahuatl of reverential forms to imply respect to the person addressed or spoken of. These are morphologically nothing but indirectives or causatives in *-lia*, *-tia*, or *-tia* with reflexive pronominal prefixes; "he sleeps" is thus more politely expressed as "he causes himself to sleep." Here belongs also the use in so many European languages (French, German, Russian, and others) of second or third person plurals, instead of the more logical second person singulars, in speaking to people with whom one

<sup>1</sup> *Handbook of American Indian Languages*, Bulletin 40 of Bureau of American Ethnology, 1911, p. 79.

<sup>2</sup> See Phonetic Key at end of this paper.

is not on the most intimate terms. This usage has its parallel in Yana, where brothers and sisters address each other in the plural<sup>1</sup>; other Californian examples of a similar nature have been given by Goddard<sup>2</sup> and Kroeber.<sup>3</sup>

These preliminary remarks are intended merely to indicate the general class of linguistic phenomena to which belong the more specialized Nootka examples to be given presently. At the same time they will serve to render these latter less glaringly bizarre by providing them with parallels of a more general character. The data here presented were chiefly obtained in November, 1910, in the course of ethnologic and linguistic research for the Geological Survey of Canada among the Nootka Indians of Alberni canal, Vancouver island; the informant was Dan Watts, the young chief of the *Hōpát!as'atH<sup>a</sup>* tribe. Further data on this subject were obtained in the winter of 1913-14 from Alex Thomas, a young Indian of the *Ts!icá'atH<sup>a</sup>* tribe of the same region.

It is possible and often customary in Nootka to imply in speech some physical characteristic of the person addressed or spoken of, partly by means of suffixed elements, partly by means of "consonantal play." Consonantal play consists either in altering certain consonants of a word, in this case sibilants, to other consonants that are phonetically related to them, or in inserting meaningless consonants or consonant clusters in the body of the word. The physical classes indicated by these methods are children, unusually fat or heavy people, unusually short adults, those suffering from some defect of the eye, hunchbacks, those that are lame, left-handed persons, and circumcised males.

In speaking to or about a child it is customary to add the regular diminutive suffix *-'is* to verb or other forms, even though the word so affected connotes nothing intrinsically diminutive; affection may also be denoted by it. The *-'is* comes before temporal, modal, and pronominal suffixes. Thus, the normal *qwis'tci* "do so!" (*qwis-* "to do thus;" *-tci* second person singular imperative, "go and . . . !") is changed to *qwis'istci* "do so, little one!" when speaking to a child.

<sup>1</sup> Sapir, *Yana Texts*, University of California Publications in American Archaeology and Ethnology, vol. 9, 1910, p. 95, footnote 139; p. 101, footnote 150.

<sup>2</sup> Goddard, *Kato Texts*, *ibid.*, 1909, vol. 5, p. 143, footnote 185.

<sup>3</sup> Kroeber, *The Languages of the Coast of California north of San Francisco*, *ibid.*, 1911, vol. 9, p. 321 (Pomo).

Similarly, *qwt̄sma* 'he does so' (-*ma* third person present indicative) is changed to *qwt̄s'isma* when one is speaking about a child. In speaking about oneself or others when addressing a child, it does not seem to be customary to use the diminutive suffix except to show affection at the same time. Thus, the word *walc̄iLAH* 'I am going home' (*wal-* 'to return home;'' -*c̄iL-* inceptive; -*ah* 'I') may be changed to *walc̄iL'isAH* 'I am going home, little one' when addressed to a child for whom one wants to show love, but this form would not be used in speaking to a child that is a stranger. As might be expected, diminutive verbal and other forms occur in lullabies, in some of which the child is represented as speaking about itself. Thus, in a lullaby supposed to be sung by a whale mother to its child, occur the words 'oH<sup>a</sup>'*é̄s̄ok<sup>c</sup> :é̄miti* ('(my) little name is' ('oH<sup>a</sup>- 'to be;'' -'is- diminutive; -*ok<sup>c</sup>* 'of, belonging to;'' :*é̄miti* 'name')). Some people were said by Dan to have the habit of using the diminutive suffix in order to belittle others, as though the persons addressed or referred to were of no more importance than children as compared to themselves. If a chief does this to too great an extent, he is set down as haughty.

In talking to or about fat people or people of unusual size, the suffixed element -*aq* is used in a manner analogous to the diminutive -'is. Thus, the normal *h̄int'c̄iLwe'in̄i* 'he comes, it is said' (*h̄in-* 'empty' verb stem 'to be, do;'' -*t'*, shortened form of -*in̄i* 'to come;'' -*c̄iL-* inceptive; -*we'in̄i* quotative) becomes *h̄int'c̄iLaq'we'in̄i*; 'ots̄at̄c̄iLma' 'he goes to it' ('*o-* 'empty' noun stem meaning 'something;'' -*tsa-* 'to start for, go to;'' -*tc̄iL-* inceptive, used after vowels; -*ma* third person present indicative) becomes 'ots̄at̄c̄iLáq'ma'. Other examples are: *ha'ókwaq'ma* 'he, clumsy one, eats;'' (*ha'w-* 'to eat;'' -*ókw-* intransitive verbal suffix); and *ha'ókwaqit'hak* 'did you eat, fatty?' (-*it'* tense suffix denoting past time; -*ha-* interrogative; -*k'* second person singular).

People who are abnormally small are spoken of in forms with the diminutive suffix; moreover, in such cases, all sibilant consonants (*s*, *ts*, *ts̄!*; *c*, *tc*, *tc̄!*) become palatalized *c-* sounds (*ś*, *tś*, *tś̄!*; compare, for *ś*, Polish *ś* and Sanskrit *ç*; for *tś*, compare Polish *ć*), which sound acoustically midway between *s* and *c-* sounds; the diminutive -'is itself becomes -'iś. Thus,

*hnt'ciLwe'in* "he comes, they say" is changed to *hnt'siL'iswe'in* "he, little man, comes, they say." These *s*-forms are also used to refer to small birds, such as sparrows and wrens. Sometimes a meaningless *s* is added to the word, as in *wikáH<sup>a</sup>s tóHauk'* from *wikáH<sup>a</sup> tóHauk'* "I am not afraid" (*wik-* verb stem "to be not;" *-áH<sup>a</sup>* first person singular present indicative; *tóH-* verb stem "to be afraid;" *-uk'*, diphthongized to *-auk'* because of preceding *a*-timbred *H*, intransitive suffix). We shall meet this consonantal change again further on in another connexion.

Quite analogously to dwarfs, are addressed or spoken of those suffering from some defect of the eye. Under this category are included cross-eyed people, those who squint, and such as have one eye run out, but not the blind. Here again the diminutive suffix is used, with the added feature that all *s*-sounds and *c*-sounds are converted into the corresponding voiceless lateral stops or spirants (*s* and *c* become *l*; *ts* and *tc* become *L*; *ts'* and *tc'* become *L'*); the diminutive *-is* itself becomes *-il*. This style of speech is termed *L'aL'átck'in* "to talk in sore-eyed fashion" (cf. *L'aL'átck'sul* "one-eyed person"). Thus, *quisma* "he does so" is changed to *quwl'ilma*. Similarly, *tc'itc'ima* "he cuts" (*tc'í-* "to cut;" *-c'íL-* inceptive; *-ma* third person present indicative) becomes *L'íL'íL'ilma*. A full-grown Indian named Sammy (or *Sémi* as pronounced in Nootka), who is cross-eyed, is referred to as *lé'mi'il* "little cross-eyed Sammy." Another Indian of the same tribe, *Tó'mic*, who has only one good eye, is, in parallel fashion, referred to as *Tó'mil'il* "little one-eyed *Tó'mic*." It should be remarked that such people, particularly when adult, are apt to become offended if addressed in this fashion, and that one would not use such forms in their presence unless with the express purpose of showing contempt or of teasing. As will be seen again later on, *L'aL'átck'in* forms are used also in referring to the deer<sup>1</sup> and mink. Thus, the mythological Mink, *tc'ástimits'mit* "Mink-son," is generally referred to as *L'áltimiL'mit*.

Hunchbacks (*k'wápi'*) are also addressed or spoken of in forms provided with the diminutive suffix, a further peculiarity in these being the change of ordinary *s*-sounds and *c*-sounds

<sup>1</sup> Deer is associated with sore eyes also in other Indian mythologies. An Ojibwa example may be found in P. Radin, *Some Myths and Tales of the Ojibwa of Southeastern Ontario*, Geological Survey of Canada, Memoir 48 (No. 2, Anthropological Series), p. 3 (episode d).

to peculiar thickish *c*- sounds, pronounced with the lower jaw held in front of the upper; the diminutive *-is* appears as *-iç*. We may represent these *c*- sounds by *ç*. In this hunchback talk *qwisma'* becomes *qwîç'içma'*. Other examples are: *yâtçuk-içma'* "he is walking" (*yâts*- "to walk;" *-uk'*- intransitive verb suffix); *tç!ôtçk'minIH'içma'* "all of them are" (*tç!ôtçk'*- "to be all;" *-minIH*- plural); and *tç!áxçîL'içma'* "he spears" (*ts!ax*- "to spear"; *-çîL*- inceptive). Here again these distinctive forms are generally avoided when in the presence of hump-backed people, for fear of giving offence. However, a hump-backed child who is well known to the speaker would hardly take offence and would be addressed as described. Or, if an old humpbacked woman is good-natured, *ç*- forms may well be used when she is about, as though to show that she is happy and not easily ruffled. Here the notions of contempt and affection commingle.

In speaking of lame people the diminutive suffix is again used, this time in its normal form. Besides this, the meaningless element *LC* or *Lci* is inserted in the body of the word somewhere before the diminutive suffix, its exact position apparently depending on the whim of the speaker. Thus, *hinînr'alma'* "he comes now" (*hin*- "empty" verb stem; *-inr*- "to come;" *-al*- determinative suffix marking point of time, "now"; *-ma'* third person present indicative) becomes *hinînrLci'its!alma'* (diminutive *-is* and *-al* regularly combine to form *-its!al*) or *hiLcnînr'its!alma'* "the lame chap is coming." Similarly, the verb *tç!îtcç'alma'* "he cuts now" (inceptive *-tçîL* and *-al* combine into *-tçî'al*) is changed to *tç!îtcçLç'its!alma'* when a lame person is spoken of. The word *!a'nê'is'i* "the child" (*!a'na*- "child, son, daughter;" *-is* diminutive suffix, *i* causing preceding *a* to become unlauded to *ç*; *-i'* nominalizing element, about equivalent to our definite article) becomes *!aLcnê'is'i* "the young lame fellow," which may be used in speaking to children.

In speaking of or to left-handed people the diminutive suffix is used in its normal form, besides which the meaningless element *tch* is inserted after the first syllable of the word. Thus, *yâl'alma'* "there now he is" (*yâl*- "to be there;" *-al* and *-ma'* as above) becomes *yâl'tch'a'its!alma'* (*-is* and *-al* combine to form *-its!al*) "there now he is, poor little left-handed chap!"

Similarly, from *sukwí'ALma* "now he takes it" (*su-* verb stem "to take;," *-kwiL* inceptive suffix, changed to *-kwi-* before *-'AL*) is formed *sútcH<sup>a</sup>kwiL'its!ALma*. The diminutive suffix may also be omitted. Examples are: *hítCH<sup>a</sup>nín<sup>i</sup>* from *hinín<sup>i</sup>* "to come"; and *l!ítCH<sup>a</sup>tcilAH* from *l!ítcilAH* "I throw it down" (*l!i-* "to throw;," *-tcil* inceptive suffix; *-ah* first person singular indicative). Such a form as the last might be appropriately used in speaking to a left-handed person that one is well acquainted with and who will not take offence at being thus twitted. It is customary, particularly for jokers, to use these left-hand forms also in talking about bears, who are supposed to be left-handed.<sup>1</sup>

In speaking of or to circumcised males, forms known as *'íict'k!ín<sup>i</sup>* "to make *ct'* sounds" are used. In these the meaningless element *ct'* is inserted after the first syllable of the word. One of the *Ts!icá'atH<sup>a</sup>* Indians, named *T!ócxmís* "Slaying-while-moving-from-beach-to-beach," is often humorously referred to as *T!óctcxmís* because of his having been born circumcised. Other examples of this class of forms are: *híct'nínima* from *hinínima* "he comes;" and *háct'ók<sup>u</sup>* from *há'ók<sup>u</sup>* "to eat."

Similar phonetic changes are made in forms used to refer to one or two classes of individuals characterized by some mental quality. Thus, greedy people are addressed or referred to in forms having a meaningless *tcx* inserted after the first syllable of the word. Thus, from *'oH<sup>a</sup>sāmah* "I hunger for it" (*'o-* "empty" stem which may be rendered by "something" or "so and so;" *-H<sup>a</sup>sā-* verbifying suffix "to desire to eat;" *-mah* first person singular present indicative, used after vowels) is formed *'utcxHsāmah*. Similarly, *hinín<sup>i</sup>'ALma* "now he comes" becomes *hítcxnín<sup>i</sup>'ALma* "now he comes, greedy fellow that he is." These *tcx-* forms are also used to refer to ravens, regularly to the mythological Raven, a character noted for his gluttony.

Cowards may be satirized by "making one's voice small" in referring to or addressing them, in other words by speaking in a thin piping voice that suggests timidity.

It is interesting to notice that in several of the above usages, the notions of mere smallness, of contempt, and of affection are found side by side, and doubtless the precise nuance of feeling expressed depends much on the relations subsisting between

<sup>1</sup> According to Dr. Paul Radin, the Winnebago also consider the bear to be left-handed. In the bear clan feast of these Indians the guests eat with a spoon in their left hand.

the speaker and the person addressed or spoken of. What is meant in the spirit of pitying affection for a poor lame or hump-backed child or for a good-natured squinting old grandpa, might be intended to convey contempt when addressed to a young man and would be promptly resented as an insult. It is significant that the various types of abnormal forms of speech that we have reviewed are used with little or no reserve when speaking of the persons referred to or when addressing children, but are, on the whole, avoided when within ear-shot of adults so referred to. It seems further significant that the traits satirized are chiefly such as are inherent in a person, not merely acquired in the accidental course of events, whereby he is set apart by nature as falling short in some respect of the normal type of individual and is to that extent stamped as inferior. This may explain why blindness, which is more often acquired rather late in life than congenital, is not made the subject of speech-mockery. Added to this may be the feeling that blindness is too grave an affliction to be treated light-heartedly, an explanation which gains weight when the well-known sensitiveness of the Indian is considered.

Outside of the normal use of the diminutive in addressing or referring to children, the peculiar forms of speech that we have seen to obtain in Nootka are not easily paralleled in America. For diminutive verbal forms of the Nootka type Uto-Aztekan affords a close parallel. In Southern Paiute the regular diminutive suffix *-tzi-*, which is employed to form diminutive nouns and adverbs of all sorts, is also used as a verb suffix when speaking to or of a child. Cognate with this element is the diminutive suffix *-tzin(tli)* of Nahuatl. Derived from this is the verb suffix *-tzi<sup>noa</sup>*, "which," according to Rémi Siméon,<sup>1</sup> "serves to denote respect or love;" it is generally, like reverentials of the type already referred to, employed with reflexive prefixes. Examples given by Rémi Siméon are: *otechmo-chiuilitzino in Totecuyo* "our Lord created us" (*o* preterit prefix; *tech-* first person plural objective prefix; *mo-* third person reflexive prefix; *chiui-*, from *chiua*, because of following *-li-*, verb stem "to make;" *-li* dative suffix, *mo- . . . -li* "for himself;" *-tzi<sup>no</sup>* reverential, final *-a* being dropped because of preterit

<sup>1</sup> Dictionnaire de la Langue Nahuatl ou Mexicaine, s.v. *tzi<sup>noa</sup>*.

tense; *in* definite article, "the"; *to-* first person plural possessive prefix; *tecuyo* noun stem "lord"); and *timo-çauhtzinoa* (quoted from Olmos) "you fast" (*ti-* second person singular subject; *mo-* reflexive;<sup>1</sup> *çauh-*, from *çaua* verb stem "to fast;" *-tzinoa* reverential). These forms may be rendered in some such fashion as: "our Lord has created us for himself, revered one," and "you fast, honoured sir."

Strikingly similar psychologically to the cases of consonantal play in Nootka just considered are the peculiar consonant changes characteristic of Chinookan, employed to convey diminutive and augmentative notions respectively in all parts of speech.<sup>2</sup> The change here of *c-* consonants to *s-* consonants to express the idea of diminution further illustrates the tendency of sibilants in America to be subject to consonantal play. In Yana the phenomenon of diminutive consonantism is illustrated in the change of *l* to *n*. This process takes place regularly in forming diminutive nouns in *-p!a*; thus, *n̄nimaup!a* "little nose," from *klimau(na)* "nose." The *l-n* type of consonantal play is another one of some currency in America, and seems to obtain also in Sahaptin. This matter of consonantal play to express modalities of attitude is doubtless a fruitful field for investigation in American linguistics and should receive more attention than has hitherto been accorded it. It may be expected to turn up particularly in connexion with notions of smallness, largeness, contempt, affection, respect, and sex-differences.

Such consonant changes and increments as have been considered are evidently of a rhetorical or stylistic as much as of a purely grammatical sort. This is borne out by the fact that quite analogous processes are found employed as literary devices in American myths and songs. I have already drawn attention to the fact,<sup>3</sup> that in American mythology certain beings are apt to be definitely characterized by speech peculiarities. The employment of consonantal play or of similar devices in such cases seems always to have a decidedly humorous effect.

<sup>1</sup> This verb is intrinsically reflexive.

<sup>2</sup> See Sapir, *Preliminary Report on the Language and Mythology of the Upper Chinook*, *American Anthropologist*, N.S., 9, 1907, pp. 537, 538; and, in greater detail, Sapir, section on "Diminutive and Augmentative Consonantism in Wishram," in Boas, *Handbook of American Indian Languages*, pp. 638-645.

<sup>3</sup> Sapir, *Song Recitative in Paiute Mythology*, *Journal of American Folk-Lore*, XXIII, 1910, pp. 455-472. Takelma, Ute, Chinookan, and Nootka examples are there given, p. 471.

The culture-hero *Kwátiyāt'* of Nootka mythology is in the habit of inserting a meaningless *x* after the first vowel of a word; thus, the normal form *h̄nuse'i* "come up out of the water!" (*h̄n-* empty stem "to do, be;" *-use-*, unlauded from *-usa-* because of following *i*, "to move up out of the water;" *-i'* imperative singular) becomes, at the same time, inasmuch as it occurs in a song, with song-vocalism, *h̄x̄nusa'ê*. In the speech of the Deer and Mink all sibilants, whether of the *s* or *c* series, are transformed into the corresponding laterals (*s* and *c* to *l*, *ts* and *tc* to *L*, *ts'* and *tc'* to *L'*). Thus, the Deer says *l̄imil* for *tc̄im̄is* "black bear;" *L'ápaL* for *tc'ápat̄s* "canoe." The Nootka Deer and Mink style of talking is of particular interest for two reasons. In the first place, it will have been noticed that the consonantal changes are identical with those employed in speech about or addressed to those that have some defect of the eye, the latter type of forms, of course, being further characterized by the use of the diminutive suffix *-i'íl* (from *-i's*). Here we see at once the intimate connexion between the two types of consonant play. In the second place, the speech of the Nootka Deer and Mink offers an interesting parallel, or rather contrast, to that of the Kwakiutl Mink. This latter character regularly transforms all laterals to corresponding *s*-sounds (*l*, *L*, *l*, and *L'* become respectively *s*, *ts*, *dz*, and *ts'*), the exact reverse of the Nootka process. From the point of view of the psychology of phonetics, it is significant to observe that both Nootka and Kwakiutl have a feeling for the interchangeability of the sibilant and lateral series of consonants. But the Mink of the Kwakiutl is not content with this. He also regularly transforms all anterior palatals to corresponding sibilants (*x*, *k*, *g*, and *k'* become respectively *s*, *ts*, *dz*, and *ts'*). There are still other phonetic changes to be found in Boas' Mink texts, but they seem less regular in character than these two; the changes at times of *l* and *l'* to *y* and *y* may be instanced as one of these (thus *se'yê* for *te'lê* "dead").<sup>1</sup> Now it is perhaps significant that the change in Kwakiutl of anterior palatals to sibilants is curiously like the change of original Wakashan (Kwakiutl-Nootka) anterior palatals, as preserved in Kwakiutl,

<sup>1</sup> For data on Mink's peculiarities of speech, see F. Boas and G. Hunt, *Kwakiutl Texts* — *Second Series*, Publications of the Jesup North Pacific Expedition, vol. X, 1906, footnotes on pages 82 to 151; and Boas, *Kwakiutl Tales*, Columbia University Contributions to Anthropology, volume II, 1910, footnotes on pp. 126-151.

to *c*-consonants in Nootka.<sup>1</sup> Thus, a Mink form *nɛdzɛ* in Kwakiutl for normal *nɛg'ɛ* "mountain" is strikingly similar to the regular Nootka cognate *nutci'*. Suggestive also, à propos of the use by Mink of sonant palatal spirants (*y* and *'y*) for normal sonant laterals (*l* and *'l*), is the fact that in Nootka so-called "hardening" suffixes change immediately preceding *l* to *'y*, corresponding in such cases to Kwakiutl *'l*.<sup>2</sup> The bearing of these facts on mythological consonant play in Kwakiutl is not easy to determine; a possibility will be suggested farther on.

Consonant play as a device in mythology is not confined to America. In reading some recently published Bushman literature the writer came across striking parallels. The Bushman Mantis, who, like the Kwakiutl Mink, is a trickster, consistently changes all the cerebral clicks of normal speech into lateral clicks.<sup>3</sup> Similarly, the Baboon transforms all the clicks of ordinary speech into a compound click, consisting of cerebral followed by dental click.<sup>4</sup> Evidently a comic effect is aimed at in both these cases.

The phenomenon of consonant and vocalic play is also well illustrated in Indian songs. Song diction is an extremely important, though rather neglected, field of primitive lore, and only one phase of it can be touched on here. Song texts often represent a "mutilated" form of the language, but study of the peculiarities of song forms generally shows that the normal forms of speech are modified according to definite stylistic conventions, which may vary for different types of songs. Sometimes sounds are found in songs which do not otherwise occur in the language. Where the texts of a type of songs are in the language of another tribe, as happens so often in America, such an abnormal sound may be simply borrowed from the foreign language, as is the case with the mourning songs of the Southern Paiute, which, sung to supposedly Mohave texts, contain many examples of *l*, a sound otherwise unknown in Paiute. On the other hand, new sounds may be developed spontaneously or in imitation of foreign sounds. The former is probably the case in the frequent

<sup>1</sup> See Sapir, *Some Aspects of Nootka Language and Culture*, *American Anthropologist*, N.S., 13, 1911, p. 16.

<sup>2</sup> See Boas, *Handbook of American Indian Languages*, pp. 430, 435; Sapir, *loc. cit.*

<sup>3</sup> Bleek and Lloyd, *Specimens of Bushman Folklore*, 1911, footnotes on pp. 6 and 8.

<sup>4</sup> *Ibid.* Footnotes on pp. 18 and 22. At least this is indicated by Bleek's orthography, though possibly the compound sign is meant to indicate a special click not otherwise found.

Nootka use of  $\eta$ , a sound quite foreign to normal Nootka speech, in certain classes of songs; the latter explanation is more plausible in the case of the regular Nootka change of  $n$  to  $l$  in many songs. This  $n$ - $l$  interchange, again, is significant in so far as Kwakiutl, doubtless agreeing in this respect with primitive Wakashan, has both  $n$  and  $l$ , while Nootka, when cognate words are compared, is seen to have only  $n$  to correspond to both. Of particular interest in this connexion is the fact that such special song-sounds (Paiute  $l$ ; Nootka  $l$  and  $\eta$ ) are, at least so it would seem, pronounced with difficulty by Indians under ordinary circumstances, as in the handling of English words that contain them. The obvious inference is that one may react quite differently to the same speech-sound entering into dissimilar associations. This fact, has, of course, a much wider psychological significance.<sup>1</sup> Conventional consonant changes in songs are no more restricted to America than, as we have seen, are parallel changes in mythology. An example that happens to have come to the writer's attention lately is the change of voiceless stops to corresponding nasals plus voiced stops in the songs of the Karesau-Papua of German New Guinea. Thus, the normal *apil* becomes *ambil* in songs.<sup>2</sup>

In seeking some comparatively simple basic phenomenon, from which, as a starting point, the various types of consonant play we have illustrated from Nootka could have originated, one easily thinks of the vocalic changes or consonant substitutions that take place in the speech of those who have some specific speech defect. The most familiar case of this sort in English is lipping, which simply means that the ordinary alveolar sibilants (sometimes also stops) are changed to the corresponding dental sibilants or even interdental fricatives (and sometimes correspondingly for stops). Information was obtained of five types of speech defects found among the Nootka. The first of these is called *n̄niklin̄i* (*nini*- reduplicated stem; *-k̄lin̄i* "to make a sound of") and consists of the involuntary

<sup>1</sup> Sounds falling outside the regular phonetic system of the language may be spontaneously developed also by the operation of other systems of consonantal (or vocalic) play than are found in song diction. Thus, in Wishram (Upper Chinookan), the analogy of certain consonant changes of augmentative value (as of  $p$  to  $b$ ,  $t$  to  $d$ ,  $k$  to  $g$ ) brought about the creation of  $dj$ , a sound otherwise unknown in Chinookan, as the augmentative correlate of  $tc$  or  $ts$  sounds. See *Handbook of American Indian Languages*, pp. 638, 639, 640.

<sup>2</sup> See Father W. Schmidt, abstract of *Über Musik und Gesänge der Karesau-Papuas, Deutsch Neu-Guinea*, Bericht über den III. Kongress der Internationalen Musikgesellschaft, 1909, p. 297.

nasalizing of all vowels and continuants. Thus, the normal *hayā'akah* "I do not know" (-*ah* first person singular present indicative) is pronounced by people who have this defect *hayā'akah*. The father-in-law of Dan Watts, who is a Ucluelet Indian that came to visit his son-in-law, was observed by the writer and definitely stated by Dan to have this "nasal twang," which is due to an inability, muscular or nervous, to raise the velum so as to shut off the passage of the outgoing breath through the nose. In speaking of the elk, *nínik'iní* forms are used.

A second type of defective articulation is termed *hahát'k'iní* or *hahát'iní* (*hahat'*- reduplicated stem; *-k'iní* "to make a sound of"), and is supposed to be due to a hole in the palate. I have no clear idea as to just what the organic basis of the faulty articulation is, but, judging from the examples given of it, it seems evident that those subject to it have difficulty in articulating against the hard palate. Perhaps the speech defect is due to cleft palate. All *ts* and *tc* affricatives (presumably also lateral affricatives) become simple *t*- sounds (dental), while *s*, *c*, and *l* become interdental fricatives (*θ*). The acoustic effect is that of an exaggerated lisp. Thus, *tc!ōtck'* "all" becomes *t!ōt'k'*; *'otsi'yukwah* "I go to it" (*'o*- empty noun stem "something;" *-tsi'yukw-* "to go to;" *-ah* "I") becomes *'ot'i'yukwah*; and *tc!ōp'tc!ōp'cinil* "stretch around the neck; sweater" (*tc!ōp'tc!ōp'c-* reduplicated stem; *-inil* "at the neck") becomes *t!ōp't!ōp'θinθ*. This latter rests on the authority of Dan Watts; Alex Thomas, starting from a form *tc!ōp'tc!ōp'cinil* for "sweater," gave *t!ōp't!ōp'timil* as its *hahát'iní* correspondent. Those who are *hahát'k'iní* thus confound three distinct series of consonants in a single dental or interdental series. Such persons are imitated when addressed. The outward resemblance with the phenomena of consonant play is quite striking here.

This resemblance becomes even stronger in the case of the third Nootka speech defect of which information was obtained, that known as *ts̄iska'* (*ts̄isk-* verb stem; *-a'* verb suffix of continuative significance) or *ts̄iskaq'sul* (*ts̄isk-* verb stem; *-aq'sul*, perhaps misheard for *-ak'sul* "at the lips"). Such as are subject to it are supposed always to keep their teeth open and to be saying *ts+*. As a matter of fact, those who are *ts̄iska'*

change all *s* and *c*- sounds to palatalized sibilants (*š*). Thus, 'otsi'yukwan "I go to it" becomes 'otšš'yukwan; si'yāsan "it is mine" (si'yās- "to be mine," from independent pronoun si'ya "I," -an first person singular present indicative) becomes šš'yāšan. It will be remembered that these consonant changes are characteristic of the forms used in addressing or speaking about abnormally small adults, except that such discourse is further characterized by the use of the diminutive suffix -'is (from -'is). Here there is a tangible connexion between the involuntary consonant changes brought about by a speech defect and the consonant play used to symbolize a body defect, though it is far from obvious in this particular case what association there can be between a kind of lisp and a dwarfed condition of the body. A further point of interest is that those who are tsiska' are generally imitated when spoken of. The significance of this in the argument is obvious.

Somewhat similar to the hahát'in<sup>i</sup> speech defect, yet not to be confused with it, is that known as kakát'win<sup>i</sup> "to talk as one with missing teeth" (cf. kátxwak'sul "to have teeth missing in one's mouth"). Such persons speak with a decided lisp, substituting *θ* for *s* and *c*, *tθ* for *ts*, *tθ!* for *ts!* and *tc!*, but, it would seem, *t* for *tc*. Examples are: 'é'pinθ from 'é'pinis "apples;" 'ó'yintaθ from 'ó'yintcas "oranges;" úmiθ from tcímis "bear;" tθ!ōtk' from tclōtck' "all;" tθ!ápatθ for tclápat' (contrast the corresponding hahát'in<sup>i</sup> form: t!ápat'). Here again, one who is afflicted with this speech defect is imitated when addressed; thus, Alex Thomas, before he had caps put on his vestiges of teeth, used to be mocked kakát'win<sup>i</sup>-fashion.

A fifth, not uncommon, speech defect among the Nootka is stuttering. Stutterers, like all other persons who have something abnormal about their speech, are derided by being imitated.

The West Greenland speech defect known as kutāt'oq<sup>1</sup> is particularly instructive in that an individual speech-peculiarity, which, however, seems to be a common one in the Eskimo settlements along the coast, has become one of the dialectic peculiarities of the northern settlements of the Upernavik district. The kutāt'oq habit consists in substituting ordinary gutturals (*k*- sounds) for velars (*q*- sounds), and is evidently due

<sup>1</sup> See W. Thalbitzer, *A Phonetical Study of the Eskimo Language*, Meddelelser om Grønland, XXXI, 1904, pp. 178-180.

to the greater difficulty of bringing about a contact between the root of the tongue and the velum than farther front in the mouth. This defect, it should be noted, brings with it the confusion of two etymologically distinct series of consonants with resulting grammatical or lexical ambiguities, at least theoretically. In this respect *kutät'oq* forms are parallel to the forms resulting in Nootka from speech defects or the use of consonantal play. Children are particularly apt to be *kutät'oq*, but generally lose the habit as they grow older. However, certain adults, particularly women, always remain *kutät'oq*, whether because of the mere force of habit or because of a physiological or anatomical impediment. As for the Upernavik peculiarity, it seems clear that the *kutät'oq* habit can hardly be due to the individual disability or carelessness of all the members of the district, but that what was originally a speech defect has become socialized into a dialectic peculiarity. The analogy with the forms employed in Nootka in speaking of or addressing certain classes of people that are ill-favoured by nature is striking.

The explanation and genesis of the various types of speech mutilation in Nootka can hardly be more than guessed at, yet certain probabilities, in part already suggested, seem to stand out. In the first place, the use of definite morphological elements to indicate some characteristic of the person spoken to or of (Nootka *-is* and *-aq'*; Paiute *-tsi-*; Nahuatl *-tzinoa*) needs no particular comment, at least from the purely linguistic point of view. Further, definite points of contact have been established between speech defects and "mocking-forms," with consonantal play, on the one hand, and between the latter and myth-character forms with consonantal play, on the other. I am inclined to believe that the observation of consonant substitutions such as take place, with involuntarily humorous effect, in the speech of those that articulate incorrectly, has set the pace for the consciously humorous use of the same or similar substitutions in both mocking and, directly or indirectly, myth-character forms. The Nootka mocking-forms, with their use of the diminutive affix and of consonant play, represent a combination, both linguistically and psychologically, of the pity and affection symbolized by the use of the diminutive element and of the contempt or jesting attitude implied by the

imitation of a speech defect. A myth character whom it is desired to treat humorously may, among other possibilities, be relegated either to the class of poor talkers or to that of nature's step-children. Hence the consonant play of such characters is in part traceable either to speech defects or to mocking-forms. In passing it may be observed that the "enfant terrible" motive is fairly clear in the treatment of many humorous characters of American mythology, and that consonant play may in some cases be taken to symbolize this attitude. The socializing of the *kutät'oq* habit among certain of the Eskimo forcibly suggests the influence of the speech of children as a contributing factor in the creation of myth-character forms. The Kwakiutl Mink is a very likely example of the "enfant terrible," both in action and speech. The possibility should not be lost sight of, of the use of myth-character forms to apply to a class of people or to an individual in ordinary life. This would be an extension of the well-known American Indian habit of comparing one that is marked by some peculiarity of temper or habit with a favourite mythological character.<sup>1</sup>

There is, however, another factor which has undoubtedly exercised a great influence both on the forms of speech used by myth-characters and on the forms peculiar to songs. This is the comic or novel effect produced by the imitation of the speech of foreigners, particularly of such as speak a dialect divergent enough from the home-dialect to be funny or impressive, yet not so different as to be unintelligible and, therefore, lacking in interest. Hence we often find mythological characters in America making use of a neighbouring dialect of the language, as in the case of the Nass River *Txämsem* and other characters, who talk in the dialect of the Tsimshian proper of Skeena river.<sup>2</sup> Examples of songs whose texts are in a divergent dialect, not to speak of the common use of a totally distinct language, are frequently met with in and out of America. A well-known instance is the use by Melanesian tribes, according to Codrington, of the dialect of some neighbouring tribe for their own song diction; thus, the Melanesians of Mota (Norfolk

<sup>1</sup> A few interesting examples are given by A. Skinner, *Notes on the Eastern Cree and Northern Saulteaux*, Anthropological Papers of the American Museum of Natural History, vol. IX, 1912, p. 82.

<sup>2</sup> See Boas, *Tsimshian Texts*, Bulletin 27 of Bureau of American Ethnology, 1902, pp. 8, 18, 20, 30, 35, 46, 61-64, 78, 171.

island of Banks islands) use for their songs the dialect of Saddle island. Also in the clownish episodes of rituals, which are so characteristic of America, the impersonation and imitation of the speech peculiarities of foreigners are often resorted to and never fail to arouse a hearty laugh. In all these cases, it is rather important to observe, real accuracy of imitation is not generally attained or even aimed at, so that the foreign style often tends to reduce itself to a number of conventional vocalic and consonantal displacements. In dealing above with the change of anterior palatal *k*- sounds to *ts*- sounds in the language of the Kwakiutl Mink, I pointed out that a similar change was involved in the passage of original Wakashan anterior palatal *k*- sounds to Nootka *tc*- sounds. It is just possible that the Mink *ts*- sounds are in such cases due to an imitation of the speech of the northern Nootka tribes. The difficulty with this interpretation is that Nootka and Kwakiutl are altogether too divergent to afford more than a quite inconsiderable number of illustrative cases of the *k*- *tc* change, and of these but few would strike the naïve mind. It seems more plausible, on the whole, to assume that both the Mink and Nootka consonant changes rest on a common Kwakiutl-Nootka tendency, perhaps a tendency on the part of children to pronounce anterior palatals as sibilants. Data on the speech peculiarities of Kwakiutl children would be valuable here.

The Nootka Indians of one tribe frequently imitate the real or supposed speech peculiarities of those belonging to other Nootka tribes, the stress being primarily laid not so much on peculiarities of vocabulary and grammatical form as on general traits of intonation or sound articulation (cf. our New England "nasal twang" and Southern "drawl"). For the purposes of this paper the Nootka now spoken by the *Ts'icā'ath*<sup>a</sup> and *Hōpāt'as'ath*<sup>a</sup> of Barkley sound and the head of Alberni canal may be taken as the normal form of Nootka speech; this is, of course, purely arbitrary, but so would any other point of departure be. It is instructive to note that one or two of these tribal speech peculiarities coincide with individual speech defects.

According to the *Ts'icā'ath*<sup>a</sup> Indians, the *houcúq'lis'ath*<sup>a</sup> tribe of Uchucklesit harbour, a western inlet of Alberni canal, speak or spoke (for there are few of them left now) in a rumbling fashion

(*lʰoLʰo:énʰ*); they are said to use their throat more than the other tribes. The peculiarity referred to seems to be a more than ordinary use of velar resonance, due to a tightening of the passage between the root of the tongue and the velum or perhaps the throat.

The *Hō:áí'atH<sup>a</sup>* Indians of Sarita river and the southern shore of Barkley sound are said to speak *lʰálʰatc!inʰ*, a spluttering effect being apparently referred to. As far as can be made out, their speech peculiarity consists in a more liberal use of *tc* sounds than ordinarily. Thus, according to Alex Thomas, the *Hō:áí'atH<sup>a</sup>* say *'nátccil* instead of *'náccil* "to look at" (as a matter of fact, this usage is probably etymologically justified, as *'nac-* and, in other forms, *'nalc-* are both used as verb stems in *Ts!icá'atH<sup>a</sup>* itself); instead of pronouncing *tc!ayí'is* "give me water" (*tc!a-* noun stem "water;" *-yí-* verbifying suffix "to give;" *-is* second person singular imperative with first person singular object) they say something like *tc!atcyí'is*, though Alex maintained that it was not a full clear-cut *tc* that was inserted. At any rate, the *Ts!icá'atH<sup>a</sup>* have seized upon the *tc-* insert as a convenient means of poking fun at their *Hō:áí'atH<sup>a</sup>* kinsmen, using it in ways that are certainly not, nor meant to be, accurate renderings of the tribal peculiarity. Thus, the tribe itself is humorously referred to as *Hōtc:áí'atH<sup>a</sup>*; *Numáqemiyis*, the main inlet of their country, is similarly termed *Nutcmáqemiyis*. Evidently, we have here an example of a mocking usage, based on a tribal peculiarity, that is in form perfectly analogous to certain myth character and cripple-mocking usages (cf. inserted *x* for Kwatiyāt and inserted *tch<sup>a</sup>* for left-handed people.)

The northern Nootka tribes, beginning with the *la'ókwi'atH<sup>a</sup>* of Clayoquot sound and proceeding north, are said to speak *tāhtāna'*, which refers to a drawling or long drawn out manner of talking. Apparently the peculiarity, which is often imitated in jest, consists not so much in lengthening out vowels as in a somewhat exaggerated rise in pitch towards the end of a sentence, which gives the flow of speech a sliding cadence. The most northern Nootka tribe, the *Tc!ī'q'lis'atH<sup>a</sup>*, are said to be all stutters and are accordingly imitated in jest.

In imitating the Nitinats (*Nitina'atH<sup>a</sup>*), a group of Nootka tribes to the south of Barkley sound that speak a very divergent

dialect, the meaningless syllable *-'aq'* is always added to the word, as this syllable is supposed to be a very common one in Nitinat. This device is strikingly similar to the use of suffixed *-aq'* for large persons.

The real old *Hōpát!as'atH<sup>a</sup>* Indians, whose earliest homes were in the interior of the island along Somass river and about Sproat and Great Central lakes, were said to talk *tsiska'*, that is, to confound *s* and *c* sounds. As we have seen, this is also a well-recognized individual speech defect among the Nootka. In the case of the *Hōpát!as'atH<sup>a</sup>*, the *tsiska'* habit was simply due to the fact that they carried over into Nootka speech a linguistic peculiarity found in the Salish dialect which they originally spoke (a dialect apparently identical with or closely related to Boas' PénLát; recognized as *PinL!á'atc* by Tyee Bob, the leading man among the *Hōpát!as'atH<sup>a</sup>* to-day and whose father is still remembered to have spoken *tsiska'*).

As for the *Ts!icá'atH<sup>a</sup>* themselves, they are said by the other tribes to talk very fast. If one anywhere among the Nootka Indians talks too fast, the proverbial saying is that he is a *Ts!icá'atH<sup>a</sup>*.

It will, as we have seen, have to be admitted, that mocking forms for various classes of people are connected not only with speech defects and mythological devices, but, to a large extent, also with tribal speech peculiarities.

Finally, the possibility of a direct psychological relation between the consonant change and the type of individual or attitude it symbolizes should not be summarily ruled out of court. That such an association once established by historical causes will be felt as a direct and simple psychological association is quite obvious, also that it may become productive, by analogy, of further associations of a related sort. I would, however, even be inclined to suppose, though proof may be difficult or impossible, that certain associations of sound and character or form arose more or less spontaneously, or, to put it more correctly, by virtue of the inherent associative value of the otherwise unconnected phenomena in the mind of a particular individual or group of individuals. Such an individual association, if given outward expression, can become socialized in the same way in which any individual idea becomes socialized.

The type of association here thought of is quite parallel to the sound-colour associations familiar enough in psychology. It may be not uninteresting as a psychological datum to note that the writer himself feels, or thinks he feels, the intrinsically diminutive or augmentative value of certain consonant changes in Wishram. Moreover, the association of *ç*-consonants with humpbackedness in Nootka seems not so far-fetched after all. The thickish quality of these consonants, together with the protrusion of the lower jaw in pronouncing them, suggests to me the same squat clumsiness as the image of a hunchback. All this may, of course, be merely auto-suggestion *ad hoc*.

To summarize, evidence has been presented of the historical connexion between various linguistic and stylistic processes involving the symbolic use of sounds. These are diminutive and augmentative forms of speech, mocking-forms, myth-character and animal forms, and song forms. Moreover, further evidence has been presented to show the historical connexion of these quite specialized tricks of language with the far simpler phenomena of speech defects, children's language, and imitation of the phonetic peculiarities of foreigners. The direct association of some of the former with the types they symbolize, after the manner of primary association between data of distinct sense, has also been suggested as a possibility.

The data brought forward in this paper as to the associations obtaining in Nootka between various classes of persons, mythological beings and animals, linguistic devices designed to satirize or characterize, speech defects, and tribal speech peculiarities, may be most conveniently grouped in tabular form. The arrangement in the table is intended to emphasize the purely linguistic similarities.

#### *Phonetic Key.*

*a*, short as in German *Mann*; *é*, short and open as in English *met*; *i*, short and open as in English *it*; *o*, short and open as in German *voll*; *u*, short and open as in English *put*; *e*, short and close as in French *été*; *î*, short and close as in French *fini*; *o*, short and close as in French *chaud*.

*ā*, long as in German *Bahn*; *ē*, long and close as in German *See*; *ī*, long and close as in German *Sie*; *ō*, long and close as in

German *roh*; *ê*, long and open as in French *fête*; *ô*, long and open as in English *saw*, yet with back of tongue not so low.

*ɛ* (Kwakiutl), short obscure vowel like *e* of German *Rose*; *ɪ* (Nootka), short open *i*-vowel of rather unclear quality; *ɨ* (Nootka), occurring as syllabic final after *n* and *m*, barely articulated or murmured (yet not voiceless or whispered) *ɪ*; <sup>a</sup> (Nootka), denotes *a*-timbre of preceding *u* (see below).

*c*, like *sh* in English *ship*: *tc*, corresponding voiceless affricative, *ch* of English *church* (in Nahuatl *ch* is used for *tc*); *dj*, corresponding voiced affricative, *j* of English *joy*; *s* and *ts*, as in English *sit* and *hats* (in Nahuatl *z* and *tz* are respectively used instead); *ś* and *tś*, palatal voiceless sibilant and affricative, acoustically midway between *s-c* and *ts-tc* respectively; *ç* and *tç*, *c* and *tc* pronounced with lower teeth in front of upper; *θ*, interdental voiceless spirant, like *th* in English *thin*.

*q*, voiceless velar stop like Semitic *qāf*; *qw*, labialized form of same; *x*, voiceless spirant of *q*-position; *x̣*, voiceless spirant of *k*-position, not pronounced as far back as German *ch* of *Bach*; *ḳ* and *g̣* (Kwakiutl), anterior palatal stops (palatalized *k*-stops), approximately *ky* and *gy*; *x̣̣* (Kwakiutl), voiceless spirant of *ḳ*-position, *ch* of German *ich*; *ŋ*, voiced nasal of *k*-position, *ng* of English *sing*; *ŋ̣* (Eskimo), voiced nasal of *q*-position.

*ḷ*, voiceless lateral spirant; *L*, corresponding voiceless lateral affricative (written *tl* in Nahuatl); *ḷ̣* (Kwakiutl), corresponding voiced affricative.

<sup>ʹ</sup>, glottal stop; <sup>ː</sup> (Nootka), strangled-sounding laryngeal stop, similar in resonance to Arabic *ʿain*; <sup>h</sup> (Nootka), strangled-sounding laryngeal spirant, Arabic *ḥa*; <sup>ʰ</sup>, aspiration or breath-release of preceding vowel or consonant (*pʰ*, *tʰ*, *kʰ*, and *qʰ* are aspirated voiceless stops); <sup>!</sup> denotes glottalized stops and affricatives (*p!*, *t!*, *k!*, *q!*, *L!*, *ts!*, *tc!*, *tś!*, *tç!*, *ḳ!*), that is, such as are pronounced with simultaneous closure of glottis, but with oral release prior to that of glottal release. All other consonants as in English.

<sup>ˈ</sup>, stress accent; <sup>ˉ</sup>, denotes preceding long consonant (except in Kwakiutl *ḳ*-sounds); <sup>˙</sup>, denotes nasalization of vowel under which it is placed; <sup>+</sup>, denotes excessive length of preceding vowel or consonant.

Type of person.	Mythological being or animal.	Tribe.	Linguistic peculiarity.	Native term for linguistic peculiarity.	Speech defect.
Child; grown-up person to whom little respect is paid			Add diminutive -'is		
Large person			Add augmentative -aq'		
Abnormally small person.		Nitinat	Add meaningless -'aq'		
	Small birds (sparrows, wrens)	<i>Hōpādic'as'atH<sup>a</sup></i>	Add diminutive -'is (for first 2 columns); change <i>s</i> and <i>c</i> sounds to <i>š</i> sounds	<i>šak'a</i>	Confounding <i>s</i> and <i>c</i> sounds in one <i>t</i> -series
Sore-eyed persons (cross-eyed; squinting; having one eye run out)	Deer; Mink		Add diminutive -'i; change <i>s</i> and <i>c</i> sounds to <i>š</i> sounds	<i>L'at'ādic'itn'</i>	
Hunchback			Add diminutive -'i; change <i>s</i> and <i>c</i> sounds to <i>š</i> sounds		
Lame person			Add diminutive -'is; insert <i>lc</i>		
Left-handed person	Bear		Add diminutive -'is; insert <i>lcH<sup>a</sup></i>		
Circumcised person			Insert <i>ct'</i>	'i'ct'k'itn'	
Greedy person	Raven		Insert <i>cz</i>		
	Culture hero <i>Kuditiyāt'</i>		Insert <i>z</i>		
		<i>Hō'āi'atH<sup>a</sup></i>	Insert <i>lc</i>	<i>L'at'ādic'itn'</i>	
	Elk		Nasalize vowels of word	<i>nīnik'itn'</i>	Involuntary nasalizing
			Talk in thin, piping voice		
Coward			Stutter		Stuttering
		<i>Tš'i'q' Lis'atH<sup>a</sup></i>	Talk with velar resonance	<i>L'qL'qitn'</i>	
		<i>Hōic'iq' Lis'atH<sup>a</sup></i>	Talk with drawing cadence	<i>šāHāH<sup>a</sup></i>	
	All Nootka Indians from <i>L'at'ōkuy'atH<sup>a</sup></i> north		Talk very fast		
		<i>Tš'i'c'atH<sup>a</sup></i>	Pronounce <i>L'is</i> , and <i>lc</i> sounds as <i>l</i> sounds; <i>s</i> , <i>c</i> , and <i>t</i> as <i>θ</i>	<i>hahd'itn'</i> , <i>hahd'k'itn'</i>	Cleft palate
			Pronounce <i>s</i> sounds as <i>θ</i> sounds; <i>c</i> and <i>ct'</i> as <i>β</i> and <i>tβ'</i> ; <i>lc</i> as <i>l</i>	<i>kakd''win'</i>	Lisping due to missing teeth

### Editorial Note

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Although the formal patterns of consonantal symbolism, particularly diminutive/augmentative devices, have been much discussed in Americanist work (for an excellent survey see Nichols 1971), the rhetorical and literary uses of these have been noted only sporadically. Some attention has been given recently to the phonetic stereotyping of the Coyote and similar figures in myth (Aoki 1975: 190; Toelken 1969). Hymes's study of the expressive resources of Takelma traditional literature (1979; revised in Hymes 1981: 65-76) is closest to the spirit of Sapir's work.



# Noun Reduplication in Comox, a Salish Language of Vancouver Island

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## INTRODUCTION.

One of the most characteristic grammatical processes of a group of Northwest Pacific Coast languages, embracing the Tsimshian, Kwakiutl-Nootka, Salish, and Chemakum linguistic stocks, is initial reduplication, employed in both noun and verb forms to indicate a variety of grammatical concepts, chiefly those of plurality, distribution, and iteration. The Salish languages in particular are known to make exuberant use of reduplication for grammatical purposes, but the subject, which seems to bristle with irregularities and intricacies of detail, has never been adequately treated for any of the numerous dialects of the stock. Indeed, a thorough grammatical study, at the same time phonetically adequate, of a Salish language, is still one of the desiderata of American linguistics.

During the autumn of 1910, while prosecuting ethnologic and linguistic research for the Geological Survey of Canada among the Nootka Indians now living in two reserves near Alberni, B.C., opportunity was incidentally found to gather some linguistic data on Comox, a Salish language spoken on the east coast of Vancouver island near the present town of Comox. The dialect represented in these notes seems to be

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Comox proper (*Q!ōmox<sup>us</sup>*), with which *L!ōhōs*, spoken on the mainland of British Columbia, was stated to be identical. *Sālōl'*<sup>a</sup> was stated to be a northern dialect of the same language. This term is evidently identical with Boas' Çatlōltq, which he uses to apply to the most northern group of Coast Salish tribes, excluding Bella Coola, inhabiting "Discovery Passage, Valdes Island, Bute and Malaspina Inlets."<sup>1</sup> Boas adds, "The Çatlōltq are called K'omoks by the Lēkwiltok'" (southernmost Kwakiutl tribe.)

The informant was Tommy Bill, an Indian of mixed blood, whose father belongs to the *Ts!icá'atn<sup>a</sup>* tribe of Nootka Indians, while his mother was a Comox, he himself living with and being to all intents and purposes a member of the *Hōpátel'as'atn<sup>a</sup>* tribe of Nootkas. His knowledge of Comox was obtained in his earlier years, when living among his mother's people, whom he visits from time to time; it is only fair to add that he speaks mainly Nootka and English nowadays and does not claim to have a perfect command of Comox. However, the rather elementary character of the data obtained, together with convincing internal evidence derived from their study, leaves no room for doubt as to the essential accuracy of the material here presented. Most of the time spent on Comox was taken up with securing material pertinent to the problem of reduplication in nouns. For most of the nouns obtained, plural, diminutive, and diminutive plural forms were secured, all of which involve various types of reduplication. Our linguistic material thus naturally divides itself into three heads, not to speak of a small number of nouns that are always used in reduplicated form. A few introductory remarks on Comox phonetics and some supplementary data are also added.

## I. PHONETICS.

VOWELS. The short vowels found in the Comox material secured are: *a* (as in German *Mann*); *ä* (as in English *bat*); *e* (short and open as in English *met*); *ε* (short and close as in French *été*); *i* (short and open as in English *bit*); *î* (short and close as in French *fini*); *o* (short and open as in German *dort*);

<sup>1</sup> See F. Boas, *First General Report on the Indians of British Columbia*, Report B. A. A. S., 1889, 5th Report on North-Western Tribes of Canada, p. 10.

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*o* (short and close as in French *beau*); and *u* (short and open as in English *put*). Of these vowels, *e*, *i*, and *ɨ* are etymologically one sound, which is modified by phonetic surroundings; similarly, *o* and *u*. Velar consonants tend to lower preceding or following *i* to *e* (possibly sometimes *e*), while certain consonants (particularly *s* and *l*) tend to palatalize *i* to *ɨ*. *e* and *o*, which latter does not occur often, are doubtless etymologically related to *e* and *o* respectively, but seem in every case to be clearly kept distinct from these. *ā* is not common.

Corresponding to each of the short vowels is a long vowel (long *ā*, however, has not been found). These are indicated as: *ā* (as in German *Bahn*); *ê* (long and open as in French *mère*, or as in English *bear*, but without "r-vanish"); *ē* (long and close as in German *See*); *î* (long and open as in English *beer*, but without "r-vanish"); *ī* (long and close as in English *see*); *ō* (long and close as in English *roll*, or as in German *Sohn*); *ô* (long and open as in English *born*, but without "r-vanish"); *ū* (long and close as in English *rule*); and *û* (long and open as in English *poor*, but without "r-vanish"). Similarly to the corresponding short vowels, and under parallel phonetic circumstances, *ē*, *î*, and *ī* are variants of one sound, etymologically speaking, though *î* is often to be interpreted as lengthened form of inorganic vowels, in which case it does not seem to vary with *ē* and *ī*; *ō*, *û*, and *ū* are likewise representatives of what is etymologically a single sound. *ô* does not often occur; it is probably etymologically related to *ō*. *ê* occurs often and cannot be considered a mere variant of *ē*.

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. Such vowels have been noted by the writer in Takelma, Southern Paiute, and, at least to a moderate extent, in Nootka; Boas has noted them in Tsimshian. While they occur to a considerable extent in Comox, they cannot as in Takelma 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. There are found:  $\bar{a}^a$ ;  $\hat{e}^e$ ;  $\bar{e}^e$ ;  $\bar{e}^i$  (occurs before anterior palatal consonants);  $\hat{i}^i$ ;  $\bar{i}^i$ ;  $\hat{i}^e$  (occurs before velar consonants);  $\bar{o}^o$  and  $\bar{o}^u$ ; and  $\hat{u}^u$ . A number of cases also occur of short vowels followed by weak rearticulating vowels; such are  $e^e$ ,  $o^o$ , and  $i^e$  (here the  $e$  is a glide to the following velar consonant). Some of these may well represent secondarily shortened long vowels. Differing from such long or short vowels with quasi-diphthongal character are vowels that are secondarily diphthongized by a vocalic glide whose timbre depends wholly on the following consonant; such is  $\hat{i}^u$  in  $k\acute{u}p\acute{u}m\hat{i}^u\acute{x}^u$  "hill," in which the second  $u$  is a glide due to the  $u$ -timbre of the final consonant.

Short vowels of somewhat obscure quality are also found, either representing dulled forms of normal short vowels or being of inorganic origin and meant to lighten consonant clusters or serve as glides. Such vowels are:  $A$  (as in English *but*, yet sometimes less clearly marked in quality), which is sometimes inorganic, sometimes dulled from  $a$ ;  $E$  (obscure vowel with  $e$ -quality); and  $I$  (very short rather unclear  $i$ ).

At times short vowels are so weakly articulated as to be barely audible; these are rather "murmured" short vowels of etymological significance than merely glides, timbre-echos of preceding consonants, or voiceless vowels. Examples are:  $^o$  in  $l\acute{o}l^ob\acute{o}m'$  "small clam" ( $-l^ob-$  reduced from  $l\acute{o}'ob-$  in  $l\acute{o}'ob\acute{o}m'$  "clam"; yet in this case  $^o$  can just as well be morphologically dispensed with and phonetically explained as a timbre-echo of  $-l-$ );  $A$  in  $q\acute{e}'w^Ax$  "steel-head salmon" (that  $A$  is organic, despite its dull quality and extreme brevity, and reduced from  $a$ , is indicated by Nootka  $q\acute{e}'wan$  "steel-head salmon," with which Comox  $q\acute{e}'w^Ax$  is evidently identical; borrowing has doubtless taken place);  $A$  and  $a$  in  $h\acute{e}w^Aq\acute{e}n'$  "swan" and its diminutive  $h\acute{e}w^aq\acute{a}d\acute{o}l$ .

Another class of "murmured" vowels (German 'Murmelvokale') is formed by weakly articulated, yet not voiceless, vowels occurring in syllabically final position after glottal stops ( $'$ ). Such vowels are only in part "murmured echoes," i.e., reduced repetitions of immediately preceding fully voiced vowels (such are  $a'^a$ ,  $e'^i$ ,  $\hat{i}'i$ ,  $ai'^i$ ,  $\bar{o}'o$ ,  $\bar{o}'u$ ; vowel breakings of this type occur often in American languages); in some cases we have

also murmured vowels after glottal stops that are of different quality and etymologically distinct from immediately preceding vowels (such are  $a'^i$  and  $\bar{a}'^i$ ).

Some consonants, notably glottalized ("fortis") consonants, are apt to be followed by timbre-echoes dependent in quality on the preceding vowel. This simply means that the oral resonance chamber characteristic of a vowel may, failing to be materially disturbed by the following consonant position, linger on and thus become acoustically noticeable as a voiceless (sometimes aspirated) vocalic echo; if the consonant is a spirant, the vocalic timbre may be audible during its production. Examples of such unaspirated timbre-echoes after glottalized consonants are:  $a$  in  $p!á'alats!^a$  "skunk" and  $o$  in  $k!ô'dô!^o$  "porpoise." In  $l\acute{a}^a q^v \acute{e}t!^a$  "herring" the  $t!$  was heard with definite  $a$ -timbre despite preceding  $\acute{e}$ . After  $u$  ( $o$ )-vowels syllabically final  $k$ -sounds are regularly followed by echoes (aspirations when consonant is not glottalized) with  $u$ -timbre. Hence  $k'^u$ ,  $k!^u$ ,  $x^u$ ,  $q'^u$ ,  $q!^u$ , and  $x^u$  (see below for orthography of  $k$ -sounds). These sounds, however, are also very frequent after unrounded vowels, as in  $l\acute{a}^a dak'^u$  "skin;" in such cases they represent original labialized  $k$ -sounds (see below). Aspiration with definite  $u$ -timbre is also found after  $t$ , as in  $s\acute{a}l!t'^u$  "woman."

Excluding such inorganic diphthongs as are formed by vowels and following glides (e.g.,  $i^u$ ), there have been found as true short diphthongs  $ai$ ,  $au$  (also  $au$ ),  $\bar{a}i$ ,  $ei$ , and long diphthongs  $\bar{a}i$ ,  $\bar{a}u$ . Vowels normally forming diphthongs that do not so unite, each preserving its full value, are separated by  $.$  (thus,  $a.i$  as distinct from true diphthong  $ai$ ). Stress accent is indicated by  $'$  over vowels.

CONSONANTS. The consonant system of Comox is fairly full, including, as it does, eleven distinct series that differ according to place of articulation. As regards manner of articulation, six distinct series are to be recognized (voiceless stops, glottalized or "fortis" stops, voiced stops, voiced nasals, voiceless spirants, and voiced spirants), though by no means all of these are represented for all places of articulation. The voiceless stop and glottalized stop series are complete, the voiceless spirants nearly so, while the others are quite defective. All these consonants may be represented in the form of a table:—

	VOICE- LESS STOPS	GLOT- TALIZED STOPS	VOICED STOPS	NASALS	VOICE- LESS SPIRANTS	VOICED SPIRANTS
LARYNGEAL GLOTTAL).....					<i>h</i>	
VELAR.....	<i>q</i>	<i>q'</i>			<i>x</i>	
LABIALIZED VELAR.....	<i>qw</i>	<i>q'w</i>			<i>xw</i>	
GUTTURAL.....	<i>k</i>	<i>k'</i>			<i>ɣ</i>	
LABIALIZED GUTTURAL.....	<i>kw</i>	<i>k'w</i>			<i>ɣw</i>	
PRE-GUTTURAL (ANTERIOR PALA- TAL).....	<i>kʷ</i>	<i>kʷ'</i>	<i>gʷ</i>		<i>xʷ</i>	<i>ɣ</i>
DORSAL LATERAL.....	<i>l</i>	<i>l'</i>	<i>l</i> (voiced contin- uant) <i>dʒ</i>		<i>l</i>	
PALATAL SIBILANT.....	<i>tc</i>	<i>tc'</i>			<i>c</i>	
ALVEOLAR SIBILANT.....	<i>ts</i>	<i>ts'</i>			<i>s'</i>	
ALVEOLAR.....	<i>t</i>	<i>t'</i>	( <i>d</i> )	<i>n</i>		
LABIAL.....	<i>p</i>	<i>p'</i>	( <i>b</i> )	<i>m</i>		<i>w</i>

*c* is pronounced like *sh* of English *ship*; *xʷ* like *ch* of German *ich*. *tc*, *tc'*, *dʒ* (like *j* of English *jam*), *ts*, and *ts'* are affricatives (stop plus corresponding spirant; no simple stops correspond to *tc*-series). *l* and *l'* are also affricatives, but with lateral (voiceless spirant *l*) release.

*b* and *d* are phonetic variants of *m* and *n*; *b* and *d* were often, though not consistently, heard between vowels, *m* and *n* rather consistently as initials, while *m* and *n* were more often heard as syllabic finals than *b* and *d*. These *b-m* and *d-n* sounds have been at various times analysed by Boas as "semi-nasalized" consonants. "The nasal opening," he writes, "may differ in width, and the stricture of the upper nares may produce semi-nasalized consonants."<sup>2</sup> Again, in speaking more definitely of Coast Salish, ". . . the *b* sound . . . is produced with half-closed nose by the Indians of the Strait of Fuca, in the State of Washington. . . . The characteristic trait of the sound is a semiclosure of the nose, similiar to the effect produced by a cold in the head."<sup>3</sup> These remarks doubtless apply to Comox as

well as to more southern Coast Salish languages, yet it seems likely to the writer that under certain phonetic conditions these semi-nasals become true nasals. No attempt will here be made to normalize orthography on this point, a faithful record of what was heard, or thought to be heard, being presented.

Eliminating *b* and *d* as of secondary origin (*gʷ* and *dj*, it should be carefully noted, are true sonant stops, not "intermediates"), all the other consonants listed in the table are etymologically distinct, that is, none of them are mere variants. (*k*, *k!*, and *x*, however, may prove to be merely secondary forms of *kw*, *k!w*, and *xw*.) This gives us no less than thirty-six (or thirty-three) organically distinct consonants to operate with. A secondary series of aspirated surds (voiceless stops followed by aspiration) arises when voiceless stops occur as syllabic finals (written *p'*, *t'*, *k'*, *kʷ'*, *q'*, *tc'*); *kw* and *qw* become *kʷʰ* and *qʷʰ*, that is, their aspiration-release has *u*-timbre; similarly, *k!w* and *q!w* in this position become *k!ʷʰ* and *q!ʷʰ*. *q*, it may be noted, is often released into a weak spirant glide *x* (written *ʷ*) before the following vowel is attacked (thus, *qʷa* for *qa*). Final vowels and *m* and *n* are also often followed by aspiration (*-a'* and similarly for other vowels, *m'* or less often *b'*, *n'* or less often *d'*), though this was not consistently heard. Final *m* and *n* are etymologically distinct from final glottally affected *m* and *n*, which are written *m'* and *n'* (sometimes breath release is heard after glottal release, when they are written *m''* and *n''*). Long consonants (indicated by *ˑ* after consonant) were noted, but seem to be of no etymological significance (examples are *qˑ*, *dˑ*).

SOUND CHANGES. Lengthening and reduction of vowels are important phonological processes in Comox, also, though to less extent, changes of vowel quality. As these, however, are generally of grammatical significance, they are best taken up in their proper place under types of reduplication. As more strictly phonetic pure and simple in character is to be considered the palatalizing of *a* to *i* in the neighbourhood of *gʷ*, also the change of *ʌ* to *u* and *i* in appropriate phonetic circumstances. These changes also, however, are most clearly brought out in connexion with morphological processes.

Many cases of *gʷ*, perhaps all, are undoubtedly due to original *w*. It seems that *w*, when it came to stand between vowels

(not, it would seem, including cases of preceding vowel plus glottal stop), also initially in many cases, regularly passed into *gʷ*. Thus, as diminutive of *xáucín* 'bone' is found *xéxigʷicín* < \**xéxawicín* (-*agʷ*- becomes -*igʷ*-, as noted above). Similarly, from *qéʷ<sup>A</sup>x* 'steel-head salmon' is formed *qéʷqegʷ<sup>e</sup>x* 'little steel-head salmon' and *qéq<sup>a</sup>uqāʷ<sup>a</sup>gʷé<sup>e</sup>x* 'little steel-head salmon (plur.)'. This phonetic law explains a class of plurals, formed by reduplicating with *ə*- vowel, derived from stems in internal -*gʷ*-. Thus, from *!é<sup>g</sup>em* (< \**!éwem*) 'sun, moon' is formed plur. *!ó<sup>u</sup>!egʷem* (< \**!áw!ewem*); other examples will be given in their proper place. So also is explained suffix -*āgʷil* 'canoe' in such forms as *tcā<sup>d</sup>dā<sup>a</sup>gʷil* 'three canoes,' *séyatsā<sup>a</sup>gʷil* 'five canoes', as compared with -*āul* in *mōsāul* 'four canoes;'' -*āgʷil* is evidently from \**-āwil* (cf. KwántlĒn, of Cowichan group of Coast Salish, -*aqil* 'canoe' in numerals,<sup>1</sup> i.e., -*axwil*; perhaps cf. Comox *néxwil* 'canoe'). An interesting test case is *qéʷ<sup>g</sup>as* 'deer,' doubtless a loanword from Kwakiutl (cf. Kwakiutl *qéwas* 'deer'<sup>2</sup>). Another such test case is afforded by Comox *tigʷi<sup>u</sup>x<sup>u</sup>* 'nine' < \**táwax<sup>u</sup>* or \**táwux<sup>u</sup>* (cf. KwántlĒn *tūq* 'nine,'<sup>3</sup> i.e., *tūx* or *tūx*, contracted from \**tuwux*). Compare also Comox *héʷ<sup>g</sup>os* 'chief' with Pentlate and Siciatl *hēwus*<sup>4</sup>. On the other hand a number of words have been found with *w* between vowels. Such are *ts!ats!áwicin* 'hail,' *xwá'awí't* 'fire,' and *áwāk'w* 'tobacco.' It is not clear how this -*w*- is related to -*w*- > -*gʷ*-.

Just as *gʷ* and *w* are related, so there is reason to believe that *dj* and *y* are related, though there is perhaps not quite as convincing internal evidence at hand. See Type VIII of plural formations for such evidence. Moreover, with Comox *djidis* 'tooth' compare KwántlĒn *yénis* 'tooth;'<sup>5</sup> with Comox *djícín* 'foot' compare Siciatl *yícín*.<sup>6</sup>

<sup>1</sup> See C. Hill-Tout, *Ethnological Studies of the Mainland HalkómĒlĒm, a division of the Salish of British Columbia*, Report of British Association for the Advancement of Science, 1902, Ethnological Survey of Canada, p. 65.

<sup>2</sup> See F. Boas, *Kwakiutl*, Handbook of American Indian Languages, Bulletin 40, Bureau of American Ethnology, 1911, p. 447.

<sup>3</sup> C. Hill-Tout, *ibid.*, p. 64.

<sup>4</sup> F. Boas, *Comparative Vocabulary of Eighteen Languages spoken in British Columbia*, Report of British Association for the Advancement of Science, 1890, 6th Report on the North-western Tribes of Canada, p. 148.

<sup>5</sup> C. Hill-Tout, *Ethnological Studies of the Mainland HalkómĒlĒm, a division of the Salish of British Columbia*, Report of British Association for the Advancement of Science, 1902, Ethnological Survey of Canada, p. 86.

<sup>6</sup> F. Boas, *Comparative Vocabulary of Eighteen Languages spoken in British Columbia*, Report of British Association for the Advancement of Science, 1890, 6th Report on the North-western Tribes of Canada, p. 147.

## II. NOUNS NORMALLY REDUPLICATED.

A considerable number of Comox nouns always appear in reduplicated form, reduplication in these cases being of no grammatical significance, but belonging to the noun as such. Many of them are animal names, and of these some are quite evidently onomatopoeic. Ten fairly distinct types of reduplication seem to be illustrated in the rather limited material available. Very likely others exist.

*Type I. Completely Reduplicating.*

<i>hō'mhō'm</i> blue grouse	<i>xōp'xōp'</i> humming-bird
<i>kʷākʷāc</i> bluejay	<i>ts!i'xʷts!i'xʷ</i> fish-hawk
<i>pók'ʷpók'ʷ</i> liver	<i>gʷi'igʷi'</i> panther
<i>qē'n'qen'</i> duck	<i>qwi'iqwi'</i> sea-gull

"Duck" and "sea-gull" have both syllables with vowels alike in quality but with short vowel in the second.

*Type II. Completely Reduplicating with ê.*

<i>tê!tq!</i> small butter-ball duck	<i>hā'ihē'</i> arrow
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"Arrow" belongs perhaps rather with Type I. Both of these nouns lose a glottal stop in the reduplicating syllable.

*Type III. Reduplicating Syllable: cvc.<sup>1</sup>*

<i>t̄t̄t̄c̄i'</i> owl	<i>kwa'kwā'djə'</i> grey squirrel
<i>t!Aq't!Aqāi</i> dog-wood	

*Type IV. Reduplicating Syllable: cē.*

<i>mī'ēmau</i> cat	<i>kʷ!ē!kʷ!ākʷ!</i> crow
<i>t̄c̄!i'tca.iq'</i> salt-water hunter	

In "salt-water hunter" reduplicating *t̄c̄i-* is broken into *t̄c̄i'i-*.

<sup>1</sup> In these formulæ *c* represents first consonant of stem, *v* first vowel, *c*<sub>2</sub> second consonant of stem, *v*<sub>2</sub> second vowel, and so on. *ʷ* represents any long vowel, *̄* any shortened vowel.

*Type V. Reduplicating Syllable: ci.*

Only one or two certain examples have been found of this type. They differ from the preceding in that the vowel of the reduplicating syllable is short.

*qwi<sup>1</sup>qwā<sup>1</sup>tl!lā<sup>1</sup>k<sup>1</sup>* butterfly      *wé<sup>1</sup>wā<sup>1</sup>lōs* young man  
(form probably diminutive in).

Possibly also:—

*é<sup>1</sup>ādjam<sup>1</sup>* young woman

*Type VI. Reduplicating Syllable: cā or ca.*

*lā<sup>1</sup>lā<sup>1</sup>p<sup>1</sup>x* pocket-knife      *qwā<sup>1</sup>qum<sup>1</sup>i<sup>1</sup>s* marten  
*xā<sup>1</sup>xē<sup>1</sup>i<sup>1</sup>* nit      *mām<sup>1</sup>stcō<sup>1</sup>m* mink

*Type VII. Reduplicating Syllable: cv.*

*ts!ats!ā<sup>1</sup>wic<sup>1</sup>n<sup>1</sup>* hail      *tc!atc!<sup>1</sup>ā<sup>1</sup>tl!ā<sup>1</sup>n<sup>1</sup>* mouse  
*xwā<sup>1</sup>xwad<sup>1</sup>jō<sup>1</sup>'m* fly (word probably diminutive in form).  
*qā<sup>1</sup>q<sup>1</sup>tā<sup>1</sup>amas* game with wooden ball<sup>1</sup>  
*qō<sup>1</sup>qō<sup>1</sup>wi<sup>1</sup>'m* down (of bird)

*Type VIII. Reduplicating Syllable: cṽ<sup>1</sup>.*

*qā<sup>1</sup>'<sup>a</sup>qa<sup>1</sup>* rush mat      *djā<sup>1</sup>'<sup>a</sup>dja<sup>1</sup>* tree

*Type IX. Reduplicating Syllable: cō.*

Only one example has been found of this type:—

*tōt<sup>1</sup>x<sup>1</sup>lāl* necklace

*Type X. Reduplicating Syllable: cēc.*

Of this very peculiar type (doubly reduplicating consonant, otherwise like Type IV) also only one example has been found:—

*q!<sup>1</sup>q!<sup>1</sup>q!<sup>1</sup>ā<sup>1</sup>adjē<sup>1</sup>uk<sup>1</sup>'<sup>u</sup>* butter-ball duck

<sup>1</sup> Formed from *q'tā<sup>1</sup>abas* "wooden ball covered with spruce-roots." There were two sides in the game, with the same number on each. Each side had a goal consisting of a little pit, which was guarded by one man. All but the two guards gathered in the centre. One man threw up the wooden ball and everyone tried to catch it, run with it to the goal of the opponents, and put it into the pit. Those of the other side tried to take the ball away from the one that had it. The side that first made ten goals won the game. After four goals had been made, the game was suspended for a while and a general free-for-all fight took place.

Here may also be given:—

*q!áqtux<sup>u</sup>* big fire (form is augmentative?): cf. *q!óti<sup>u</sup>* fires scattered around.

### III. REDUPLICATED PLURALS OF NOUNS.

By far the larger number of Comox nouns form their plural by reduplication, in a few cases different stems are used for singular and plural, while still other nouns seem to form no plural. The most persistent type of plural reduplication is that in which both first and second consonants of stem are repeated, though less numerously represented types also occur.

#### *Type I. Reduplicating Syllable: cvc<sub>1</sub>*

' <i>Ákəm</i> ' beaver	plural <i>t!Ák<sup>u</sup>t!Akəm</i> '
<i>kúmāqin</i> ' sea-lion	<i>kumkúmāqin</i> '
<i>qwÁdí<sup>i</sup>s</i> humpbacked whale	<i>qwÁd qwÁdí<sup>i</sup>s</i>
<i>qwÁsAm</i> woolly grouse	<i>qwÁsqwÁsAm</i>
<i>xōp' xōp'</i> humming-bird	<i>xōp' xōp' xōp'</i>
<i>ts!oxó<sup>o</sup></i> codfish	<i>ts!óxts!oxó<sup>o</sup></i>
<i>L!Áxwā<sup>i</sup></i> dog salmon	<i>L!AxL!Axwā<sup>i</sup></i>
<i>sá'an</i> ' coho salmon	<i>sá<sup>a</sup>sa'an</i> '
<i>q!wÁt'í<sup>i</sup>tcin</i> ' humpback salmon	<i>q!wÁt' q!wÁt'í<sup>i</sup>tcin</i> '
<i>xá'ā</i> big clam	<i>xá<sup>a</sup>xa'ā</i>
<i>Lí<sup>i</sup>Am</i> ' cockle	<i>Lí<sup>i</sup> Lí<sup>i</sup>Am</i> ' (type VIII?)
<i>xÁpā<sup>i</sup></i> red cedar	<i>xÁp' xÁpā<sup>i</sup></i>
<i>qō<sup>u</sup>a<sup>i</sup></i> hemlock	<i>qō<sup>u</sup>qō<sup>u</sup>a<sup>i</sup></i>
<i>q!áp!xwai</i> oak	<i>q!áp!q!áp!exwai</i> (with lengthening of first stem-vowel; -e- is in- organic)
<i>p!é'ixāi</i> alder	<i>p!ē<sup>i</sup>p!é'ixāi</i> (type VIII?)
<i>t!é'ibāi</i> wild cherry bush	<i>t!ē<sup>i</sup>t!é'ibāi</i> (type VIII?)
' <i>áwāk<sup>u</sup></i> tobacco	' <i>aw'áwāk<sup>u</sup></i> many bun- ches of tobacco
<i>q!wÁ'ix</i> wood	<i>q!wÁiq!wÁ'ix</i>
<i>xá'a.idatc</i> stump	<i>xá<sup>a</sup>xa'a.idatc</i>

<i>mÁqsín'</i> nose	plural <i>mÁqímaqsin'</i>
<i>djícín'</i> foot	<i>djícédjicín'</i>
<i>djídís</i> tooth	<i>djídédjídís</i>
<i>L!íkuínás</i> heart	<i>L!Ék'L!íkuínás</i>
<i>xÁucín'</i> bone	<i>xÁuxaucín'</i>
<i>kʷít!</i> little finger	<i>kʷít!kʷít!</i>
<i>ts!Ámāla'</i> index finger	<i>ts!Ámts!Ámāla'</i>
<i>q!wát'Am</i> river	<i>q!wát'q!wát'Am</i>
<i>páxai'</i> creek	<i>páxpaxai'</i>
<i>L!áqē<sup>e</sup>nac</i> spring	<i>L!áq'L!áqē<sup>e</sup>nac</i>
<i>kúpú<sup>u</sup>mî<sup>u</sup>x<sup>u</sup></i> hill	<i>kup'kúpumî<sup>u</sup>x<sup>u</sup></i> (with shortening of second stem-vowel)
<i>L!áxai'</i> old man	<i>L!áxL!axai'</i>
<i>qÁl'q!</i> warrior	<i>qÁl'qAlq!</i>
<i>L!Áms</i> house	<i>L!ÁmL!Áms</i>
<i>xÁsAm</i> box	<i>xÁsAxAsAm</i>
<i>kwá'am</i> coiled storage basket	<i>kwá'<sup>a</sup>kwá'am</i>
<i>L!pátîl</i> basket bag	<i>L!Ap'L!Ápátîl</i>
<i>q!ák<sup>u</sup></i> board	<i>q!ák<sup>u</sup>q!ák<sup>u</sup></i>
<i>kʷ!ík<sup>u</sup>āyu</i> oar	<i>kʷ!ík<sup>u</sup>kʷ!ík<sup>u</sup>āyu</i>
<i>sÁq'Ák<sup>u</sup></i> war-club	<i>sÁq'sÁq'Ák<sup>u</sup></i>
<i>lÁq<sup>u</sup></i> bow	<i>lÁq<sup>u</sup>lÁq<sup>u</sup></i>
<i>tc!ít'qāmin</i> knife	<i>tc!ít'tc!ít'qāmin'</i>
<i>síp!Amîn'</i> shinny stick	<i>síp!síp!Amî<sup>i</sup>n'</i>
<i>lÁq!As</i> mountain-goat blanket	<i>lÁq!lÁq!As</i>
<i>L!pî'ts!ā<sup>a</sup></i> yellow-cedar	<i>L!Ap'L!Apî'ts!ā<sup>a</sup></i>
<i>q!Ás'Adāi</i> buckskin shirt	<i>q!Asq!Ás'adāi</i>
<i>L!áq!acín<sup>u</sup></i> moccasin	<i>L!Áq!L!Áq!acín<sup>u</sup></i>
<i>páq'āos</i> white-eyed	<i>páq'paq'āos</i>
<i>tcíxāos</i> red-eyed	<i>tcíxtcíxāos</i>

*Type II. Reduplicating Syllable: cac.*

This type differs from the preceding in that, while both first and second stem-consonants are reduplicated, the stem vowel between these consonants is not, but is replaced by an inorganic A-vowel. If the vowel is followed or broken by a glottal stop, or if there are two successive vowels, the second consonant is

repeated just the same, the glottal stop being neglected in the reduplicating syllable. Thus, *tc!e'ād-* and *L!ā'a!*- reduplicate as *tc!in-* and *L!At-* respectively. Several nouns with stem-*A* and reduplicating-*A*, listed under Type I, should perhaps belong here. Three sub-types are to be recognized, according to whether *A* remains as such (sub-type *a*), is palatalized by *s*, *tc*, *tc!*, *kʷ*, *l*, or *y* to *i* (*r*) (sub-type *b*), or is labialized by *ɣw* to *u* (sub-type *c*).

Sub-type II *a*.*mʔ<sup>e</sup>xāl* bear*L!ā'a!ō'm'* wolf*q!ā<sup>a</sup>L!* land otter*q!ā<sup>a</sup>sa'* sea otter*xā<sup>a</sup>'wa* fur seal*āsɣ<sup>u</sup>* hair seal*k!ō<sup>e</sup>dōt!°* porpoise*p!āq!Adātc* goose*q<sup>e</sup>'n'qen'* duck*h<sup>e</sup>w<sup>A</sup>qen'* swan*q<sup>e</sup>'w<sup>A</sup>x* steel-head salmon*tā<sup>a</sup>q!wa'* devil-fish*māt!āi* horse clam*sā<sup>a</sup>'ba'* mussel*mā<sup>a</sup>tc!in'* louse*ōsā'i* huckleberry bush*xwāsAbāi* soapberry bush*t!ē<sup>e</sup>'dē<sup>e</sup>qwai* salmon-berry bush*t!ā'abuxwāi* gooseberry bush*qēɣ<sup>u</sup>* ring finger*L!ā<sup>a</sup>q!wāi* fish-gill*sōpAdatc* tail*ts!ānuql* cloudplural *mAxmi<sup>e</sup>xāl**L!ā!L!ā'āl'ō'm'**q!AL!q!ā<sup>a</sup>L!**q!Asq!ā<sup>a</sup>sa'**xAxwā'wa**'As'āsɣ<sup>u</sup>**k!wAd'k!wō<sup>e</sup>dōt!°* (with shortening of second vowel of stem)*p!Aq!p!āq!Adātc**qAd'qēn'qen'**hAh<sup>e</sup>w<sup>A</sup>qen'**qAuqē'w<sup>A</sup>x**tAq!tā<sup>a</sup>q!wa'**mAt!mā<sup>a</sup>t!āi* (with lengthening of first vowel of stem)*sAmsā<sup>a</sup>'ba'**mAtc!Imā<sup>a</sup>tc!in'**'As'ōsā'i**xwās<sup>a</sup>xwāsAbāi**t!Ant!ē<sup>e</sup>'dē<sup>e</sup>qwai**t!Am!Amuxwāi* (with reduction of *ā'a* of stem to *A*)*qAx<sup>u</sup>qēɣ<sup>u</sup>**L!Aq!<sup>u</sup>L!ā<sup>a</sup>q!wāi**sAp'sō<sup>u</sup>pAdatc**ts!Amits!ānuql*

<i>t!á'q!at'</i> mountain	plural <i>t!Aq!t!á'q!at'</i>
<i>sé'qet'</i> dug hole, well	<i>sÁq'sé'qet'</i>
<i>tō'mic</i> man	<i>tÁmtō'mic</i>
<i>xā'p!</i> baby basket	<i>xAp!xā'p!</i>
<i>t!ó'mt'</i> paddle	<i>t!Am!t!ó'mt'</i>
<i>waxā'ts!i</i> pipe	<i>wÁxwaxā'ts!i</i>
<i>tōt'x<sup>u</sup>lal</i> necklace	<i>tÁt'ōt'x<sup>u</sup>lal</i>
<i>q'tá'abas</i> wooden ball used in game	<i>qÁt'q'tá'abas</i>
<i>mítāli</i> beaver-tooth die	<i>mAt'mítāli</i> (with lengthening of first stem vowel)
<i>qā'qa</i> rush mat	<i>qAQ'qā'qa''</i>
<i>lāq!wāinop</i> cedar-bark mat	<i>lÁq!wāinop'</i>
<i>L!āxε</i> oldest	<i>L!AxL!āxε</i>
<i>L!ālsāmi</i> strong	<i>L!AL!ālsāmi</i>
An irregular example of this sub-type is:—	
<i>sáts!Am</i> tye salmon	<i>sAMsá'ts!Am</i>

Here the first and third, instead of first and second, consonants are reduplicated.

*Sub-type II b.*

<i>tc!é'ādo</i> dog	<i>tc!ntc!é'ādo</i>
<i>k<sup>v</sup>áck<sup>v</sup>ác</i> bluejay	<i>k<sup>v</sup>íck<sup>v</sup>áck<sup>v</sup>ác</i>
<i>ló''<sup>o</sup>bom'</i> small clam	<i>lImló''<sup>o</sup>bom'</i>
<i>ts!ātc!ilbai</i> spruce	<i>ts!itc'ts!ātc!ilbai</i> ( <i>ts!itc-</i> instead of <i>ts!itc-</i> )
<i>sósîn'</i> mouth	<i>síssôsîn'</i> (with shortening of second stem-vowel)
<i>sápāxos</i> horn	<i>sípsápāxos</i>
<i>kō<sup>u</sup>sAd'</i> star	<i>k<sup>w</sup>ískōsAd'</i>
<i>yáxai'<sup>i</sup></i> pack-basket	<i>yíxíyāxai'<sup>i</sup></i>

Irregular examples of this sub-type are:—

<i>tc!atc!ā<sup>o</sup>t!ān''</i> mouse	<i>tc!t!tc!ā<sup>o</sup>t!ān''</i> (for <i>tc!it'</i> instead of <i>tc!it!</i> -see "spruce" above)
<i>!ix<sup>u</sup>sal</i> tongue	<i>tístīx<sup>u</sup>sal</i>

In the first of these the plural is built not on the already reduplicated simplex (as e.g., in "bluejay" above), but on a simpler unreduplicated stem abstracted from it. In the second example the first and third, unstead of the first and second consonants, are reduplicated (cf. "tyee salmon" above).

*Sub-type II c.* Only one example is available:—

*xwātōqō'm* "falls"                      plural *xúł'xwātōqō'm*

*Type III. Reduplicating Syllable: cō or cō.*

Nearly all of these nouns have *g<sup>v</sup>* as their second consonant, representing, as we have already seen, original *w*. These nouns could be considered a sub-type of Type II, were it not that they form their reduplicating syllable not in *-au*, as might perhaps be expected (cf. *xáu.xaucin'* under Type I), but in *-ō-* (*-ū-* after *dj-* and *g<sup>v</sup>-*) or *-ō-* (probably due to contraction of original *-aw-*). Two sub-types can be recognized, according to whether the reduplicating vowel is short (sub-type *a*) or long (sub-type *b*).

*Sub-type III a.*

*tā'ag<sup>v</sup>ax<sup>u</sup>* fern                              *tōtā'ag<sup>v</sup>ax<sup>u</sup>*  
*tā'ag<sup>v</sup>in* salmon spear                      *tōtā'ag<sup>v</sup>in*

*Sub-type III b.*

*lā<sup>a</sup>g<sup>v</sup>ēt!<sup>a</sup>* herring                              *lōlā<sup>a</sup>g<sup>v</sup>ēt!<sup>a</sup>*  
*p!<sup>l</sup>ég<sup>v</sup>āi* halibut                              *p!<sup>l</sup>ō<sup>u</sup>p!<sup>l</sup>ég<sup>v</sup>āi*  
*g<sup>v</sup>ī<sup>i</sup>g<sup>v</sup>ī<sup>i</sup>* panther                              *\*g<sup>v</sup>ūg<sup>v</sup>ī<sup>i</sup>g<sup>v</sup>ī<sup>i</sup>* (not obtained  
as such, but implied  
in diminutive plural  
*g<sup>v</sup>ī<sup>i</sup>g<sup>v</sup>ūg<sup>v</sup>ī<sup>i</sup>g<sup>v</sup>ī<sup>i</sup>* "pan-  
ther cubs")

*l!<sup>l</sup>ég<sup>v</sup>em* sun, moon                              *l!<sup>l</sup>ō<sup>u</sup>l!<sup>l</sup>ég<sup>v</sup>em* sun and moon  
*hēg<sup>v</sup>os* chief                                      *hō<sup>u</sup>hē<sup>i</sup>g<sup>v</sup>os*  
*dj!<sup>l</sup>g<sup>v</sup>in'* song                                      *dj!<sup>l</sup>ūd!<sup>l</sup>g<sup>v</sup>in'*  
*lā<sup>a</sup>dak<sup>u</sup>* skin                                      *lō<sup>u</sup>lā<sup>a</sup>dak<sup>u</sup>*

It is not clear why "skin" should reduplicate with *ō*-vowel.

Type IV. Reduplicating Syllable: *cv*; Syncope of First Stem Vowel.

Only one example has been found of this type. As it begins with *g<sup>v</sup>*-, the stem *-g<sup>v</sup>* of the plural, coming immediately before another consonant, reverts to *w*, uniting with preceding *a* to form *au*.

*g<sup>v</sup>áq'āhas* married woman      plural *g<sup>v</sup>áúq'āhas*

That \**wáq'āhas* is to be presupposed is corroborated by comparison with Kwántlen *s-wä-wékus* "married woman."<sup>11</sup>

Type V. Reduplicating Syllable: *cvc*.

Nouns belonging to this group have long stem-vowels and differ from Type I in that the reduplicated vowel is shortened, though it keeps its quality.

<i>xáug<sup>v</sup>as</i> grizzly bear	<i>xáúxāug<sup>v</sup>as</i>
<i>qā'um'</i> eye	<i>qáúqā'um'</i>
<i>qó<sup>u</sup>'mai'</i> snow on ground	<i>qúmqó<sup>u</sup>'mai'</i>
<i>lókō<sup>m</sup>în</i> bailer	<i>luk'lókō<sup>m</sup>în</i>

Type VI. Reduplicating Syllable: *cac<sub>1</sub>*.

<i>tí'hā<sup>a</sup>dān'</i> chief's wife	<i>táhtíhā<sup>a</sup>dān'</i>
<i>hēq'sā<sup>m</sup>în'</i> pole for poling canoe	<i>háq'hēq'sā<sup>m</sup>în'</i>
<i>ólqai'<sup>i</sup></i> snake	<i>'ál'ólqai'<sup>i</sup></i> (with shortening of first stem-vowel)
<i>aL</i> leggings	<i>'áL'aL</i>

"Leggings" may, of course, just as well belong to Type I.

Type VII. Reduplicating Syllable: *cv*.

<i>q!qá'āda</i> ear	<i>q!q!qá'āda</i>
<i>tí (L!Ams)</i> big (house)	<i>tí<sup>tí</sup> (L!Ams)</i> big (houses)
<i>áx<sup>u</sup></i> snow-flake	<i>á'áx<sup>u</sup></i> falling snow

<sup>11</sup> C. Hill-Tout, *Ethnological Studies of the Mainland Halkóm̄tem, a division of the Salish of British Columbia*, Report of British Association for the Advancement of Science, 1902, Ethnological Survey of Canada, p. 89.

Type VIII. Reduplicating Syllable: *cē*.

According to varying phonetic circumstances we have either *i* or *ē*, the latter occurring after *q*, *q'* and *x*. The examples of this type obtained are:—

<i>q'āik'ʷ</i> eagle	plural <i>q'ēiq'āik'ʷ</i>
<i>kwúdjāk'ʷ</i> trout	<i>kwī'kwúdjāk'ʷ</i>
<i>tī'xʷ</i> yellow cedar	<i>tī'xwai'</i> (may belong also to type VII; note - <i>ai'</i> in plural)
<i>djā'adja'</i> tree	* <i>djīdjā'adja'</i> (not obtained as such, but implied by diminutive plural <i>djēdjīdjā'adja'</i> )
<i>sā'idjA'</i> leaf	<i>sīsā'idjA'</i>
<i>tcāyac</i> hand	<i>tcītcāyac</i>
<i>sayā'ada</i> neck	<i>sīsayā'ada</i>
<i>qā'ya'</i> water	<i>qēqā'ya'</i>
<i>sā'yal</i> lake	<i>sīsā'yal</i>
<i>xā'adjaic</i> stone	<i>xēxā'adjaic</i>
<i>tcū'i</i> child	<i>tcītcū'i</i>
<i>k!óyokōbī'n</i> (or - <i>mī'd</i> ) fisherman	<i>k!wīk!oyokomī'n</i>
<i>sidjāqō'p'</i> basket hat	<i>sīsīdjāqō'p'</i>
<i>lāidatctAN</i> woman's cedar-bark skirt	<i>tīlāidatctAN</i>

Eliminating "yellow cedar," which, as was pointed out, may just as well be reckoned as belonging to Type VII (there is reason, however, to believe that *tī'xʷ* goes back to \**tī'yīxʷ*; see diminutive type I b and diminutive plural type II f), all these plurals may be plausibly explained as cases of Type II, reduplicating -*i*- or -*ē*- being the contracted result of -*ay*-. It will be observed that the stems of these nouns contain either *i*- diphthongs, including broken groups (-*āi*-, -*a'ī*-, -*ū'ī*-), vowel plus *y* (-*āy*-, -*ay*-, -*ā'y*-, -*oy*-), or vowel plus *dj* (-*udj*-, -*ā'adj*-, -*ā'adj*-, -*idj*-); *dj*, as we saw above, is probably a resultant of original *y*.

*Type IX. Reduplicating Syllable: cā (or ca).**Sub-type IX a (with ā).*

<i>tc!ɛl</i> rain	plural <i>tc!ātc!ɛl</i>
<i>qō<sup>u</sup>qwai</i> speaker	<i>qwāqō<sup>u</sup>qwai</i>
<i>yí<sup>i</sup>x<sup>u</sup></i> hole	<i>yāyí<sup>i</sup>x<sup>u</sup></i>

*Sub-type IX b (with a).*

<i>tc'itca.iq'</i> salt-water hunter	<i>tcac't'itca.iq'</i>
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*Type X. First Stem-vowel Changed to ê.*

These nouns are reduplicated to begin with, and substitute for plural reduplication a change of the first stem-vowel to ê (long and open).

The few examples are:—

<i>wé'wāłos</i> young man	<i>wé''wāłos</i>
<i>é'ādjam'</i> young woman	<i>é''ādjam'</i>
<i>k<sup>v</sup>!ê<sup>i</sup>k<sup>v</sup>!āk<sup>v</sup>!</i> crow	<i>k<sup>v</sup>!é'<sup>e</sup>k<sup>v</sup>!āk<sup>v</sup>!</i>

*Type XI. Reduplicating Syllables: cācAc.*

Only two examples have been found of this doubly reduplicating type of plural formation. In the first, the *A*, coming after *g<sup>v</sup>*, is palatalized to *i*; in the second, the reduplicating *-Ay-* becomes *-i-* (see Type VIII).

<i>g<sup>v</sup>ā<sup>a</sup>dī<sup>i</sup>m</i> slave	<i>g<sup>v</sup>āg<sup>v</sup>idg<sup>v</sup>ādī<sup>i</sup>m</i>
<i>tāyac</i> killer-whale	<i>tātītāyac</i>

*Irregular Plurals.*

Several plurals listed above are somewhat irregular, but there has been no difficulty in assigning them to definite types. The two that follow are quite irregular. The second shows not only reduplication but breaking of *-A-* to *ā'a-*.

<i>djā<sup>a</sup>dja'</i> tree	<i>djādjīā'm</i>
<i>mā<sup>l</sup>q<sup>u</sup></i> fawn	<i>mamā'aliq<sup>u</sup></i>

A few nouns change the stem entirely in passing from singular to plural. Such are:—

<i>sãlt<sup>u</sup></i> woman	plural <i>nig<sup>y</sup>áp'tai</i>
<i>sã'asl<sup>u</sup></i> girl (diminutive of <i>sãlt<sup>u</sup></i> )	<i>nínig<sup>y</sup>ap'tai</i> (diminutive of <i>nig<sup>y</sup>áp'tai</i> )

Involving this same change of stem is:—

<i>sãltux<sup>u</sup></i> married man	<i>nig<sup>y</sup>áp'tahai'</i>
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Rather different, presumably, is:—

<i>tãtr'nãtcap'</i> leg	<i>tcúk!u'nãtcap'</i>
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which keeps the same suffix in the plural, while changing the stem.

#### *Nouns without Plurals.*

Quite a number of nouns were secured which form no plural. Some of these are reduplicated to begin with, and there is clearly a feeling, though one by no means consistently applied, against re-reduplication in forming plurals. Others, however, are such as might easily be reduplicated, were it usage to do so. It is possible that reduplicated plurals might have been given for some of these by other informants. Reduplicated nouns that form no plural are:—

<i>g<sup>y</sup>i'g<sup>y</sup>ĩ</i> panther	<i>qwãqumã's</i> marten
<i>títctitcĩ'c</i> owl	<i>mãmstcõ'm</i> mink
<i>ts!i'x<sup>u</sup>ts!i'x<sup>u</sup></i> fish-hawk	<i>qwi'qwi'</i> sea-gull
<i>qwi'qwã<sup>at</sup>!Alã<sup>a</sup>k'</i> butterfly	<i>xwãxwadjõ'm'</i> fly

(probably diminutive; dim. plur.

is found)

<i>pók<sup>u</sup>pók<sup>u</sup></i> liver	<i>xãxẽ'i</i> nit
<i>LãLãpãx<sup>u</sup></i> knife	<i>hãiihei'</i> arrow

Non-reduplicated nouns for which my informant would give no plurals are:—

<i>mãyoş</i> raccoon	<i>pĩ'i!</i> ground-hog
<i>q!ẽ'ẽtc</i> elk	<i>p!ã'alats!<sup>a</sup></i> skunk
<i>p!óxõ'<sup>o</sup></i> } raven	<i>'ãmãx<sup>y</sup>idjõ'<sup>o</sup></i> ant
<i>p!ah</i> }	<i>qẽix</i> salmon-egg
<i>tc!eq<sup>x</sup></i> robin	<i>mó'os</i> head

For "robin," *tc!Áq'tc!eq'*, which might well enough be expected as plural, was explicitly denied. If necessary to express plurality in these nouns, *qax* or *qax* "many" can be juxtaposed before any of them.

## IV. REDUPLICATED DIMINUTIVES OF NOUNS.

Diminutives in Comox, as in other Salish languages, are formed by means of reduplication. Reduplicated diminutive forms, however, differ from reduplicated plurals in that the reduplicating syllable repeats the first consonant of the stem, never also the second. Moreover, the vowel of the reduplicating syllable is formed according to different rules from that of the reduplicating syllable of plural forms. Further complications result from the internal changes to which the stem is often subjected, so that altogether a large number of more or less distinct types of diminutive formations may be recognized. It will be advantageous to list in a purely analytical way the various features that are found in diminutives, so that ready reference may be made to them when discussing the types as such.

Diminutivizing characteristics are:—

- (1.) *Reduplication of initial consonant of stem, followed by*
  - a. *Short e* (*i* or *î*). Two types of *e*-reduplication may be recognized, according to whether *e* is or is not accented. Thus, *mimə'os* from *mə'os* "head"; *qeqə'ya* from *qə'ya* "water."
  - b. *Long ē* (*î* or *î̄*), always accented. Thus *L!lL!Axwā'* from *L!Axwā'* "dog-salmon."
  - c. *ê*, always accented. Thus *q!é'q!ē'L!* from *q!ā'L!* "land-otter."
  - d. *ě*, which may or may not be accented. Thus, *l!łkə'min* from *l!łkō'min* "bailer."
  - e. *ē*, which is regularly accented. Thus, *k!łk!qđōt!* from *k!łōđōt!* "porpoise."
  - f. *Short a*, accented or not. Thus, *L!L!v'ım'* from *L!v'Am'* "coekle."
  - g. *Long ā*. Thus, *djādjā'gvin'* from *djigvin'* "song."
  - h. *Long ā'a*. Thus, *sā'ast'u* from *sāl'u* "woman."
  - i. *Short ə*. Thus, *L!əL!ā'amî's* from *L!Am's* "house."
- (2.) *Glottal stop inserted in stem*. This may occur as
  - a. Breaking of (non-final) vowel or diphthong. Thus, *tc̄itēā'yac* from *tcāyac* "hand."
  - b. Glottalizing of final consonant (generally *m* or *n*); this should probably include breaking of vowel when final. Thus, *l!ł'əbə'm'* from *l!ł'əbəm'* "small clam."

- (3.) *Quantitative vocalic changes* (increments). These include
- Lengthening of (last) stem vowel.* Thus, *tâtig<sup>v</sup>āx<sup>u</sup>* from *tā'ag<sup>v</sup>ax<sup>u</sup>* "fern."
  - Change to wā or wa of u of stem.* Thus, diminutive plural *kwîkumkwā<sup>a</sup>'māqîn'* from plural *kumkūmāqîn'* "sea-lions."
  - Lengthening of inorganic A (or i, e) to î.* Thus, *xéxsim'* from *xásam* "box." Less often, full *a* is changed to *î* (cf. 4b), as in *kwêkwi'îm'* from *kwá'am* "coiled storage basket."
  - Insertion of î.* This is probably but another form of 3c, inorganic *A* and absence of vowel being perhaps considered as phonologically equivalent. Thus, *qéqalî<sup>e</sup>q'* from *qâl'q'* "warrior."
  - Insertion of short vowel (A, i) before syllable with lengthened vowel.* Thus, *xê<sup>e</sup>xig<sup>v</sup>icîn'* (note second *i*) from *xāucîn'* "bone."
  - Lengthening of A or a (non-final) to ā.* Thus, *q'wāq'wā<sup>a</sup>'a-djix* from *q'wā'ix* "wood."
- (4.) *Qualitative vocalic changes.* These include
- Umlaut of a to short e (i).* Thus, *xéxá'adjé'ic* from *xā'adjaic* "stone."
  - Umlaut of a (or ā), rarely o, to long ē (i, î).* Thus, *q'ê<sup>e</sup>q'ê<sup>e</sup>k<sup>u</sup>* from *q'ak<sup>u</sup>* "board."
  - Change of stem vowel to ā'a.* Thus, *totá'amic* from *tō'mic* "man."
- (5.) *Vocalic reduction.* Under this head may be grouped
- Shortening of stem vowel before syllable with lengthened vowel (or inserted î).* This shortening before lengthening is doubtless due to quantitative rhythm. Thus, *qwi<sup>e</sup>-qwi<sup>e</sup>qwi<sup>i</sup>* (note second *i*) from *qwi<sup>i</sup>qwi<sup>i</sup>* "sea-gull. Such shortened syllables regularly lose their glottal stop, if there is one present, as in *qéqawêm'* from *qā'um'* "eye."
  - Syncope of stem vowel after reduplicating syllable with accented vowel.* Long vowels may thus fall out quite as readily as short ones. Thus, *sé<sup>e</sup>'sp'xos* from *sāpāxos* "horn."

These twenty-two diminutivizing features occur in various combinations, so that a large number of possible types of

diminutive formation may result. A considerable number of such types can be constructed from the available material, but this need not exemplify all that actually occur. As to which of the features listed are fundamental to Salish and which merely secondary in Comox or several Coast Salish languages, it is useless to speculate. Adequate comparative data are necessary. A few points of a comparative nature will be brought forward at the end of the paper. The various diminutive types will now be taken up in order, the main stress being laid on the form of the reduplicating syllable.

*Type I. Reduplicating Syllable: eé.*

Various sub-types occur, according to whether the stem vowels remain unmodified or are subjected to comparatively slight changes.

*Sub-type I a.* Diminutive feature la only:—

<i>mó'os</i> head	diminutive <i>mímó'os</i>
<i>q'tá'abas</i> wooden ball	<i>qéq'tá'abas</i>
<i>q!ó'a'āda</i> ear	<i>q!wéq!ó'a'āda</i>
<i>'áwāk'u</i> tobacco	<i>'é'awāk'u</i>
<i>qwAdi's</i> whale	<i>qwéqwAdi's</i>
<i>qō'u'a'i</i> hemlock	<i>qwiqō'u'a'i</i>
<i>sidjāqō'p'</i> basket cap	<i>sísidjāqō'p'</i>
<i>qéix</i> salmon-egg	<i>qéqeyix</i> (-eyi- probably merely variant of -ei-)

*Sub-type I b.* Diminutive features la, 3c (or d):—

<i>mÁqsin'</i> nose	<i>mímÁqsi'n'</i>
<i>djidis</i> tooth	<i>djidjidis</i>
<i>tí'x'u</i> yellow cedar (<*tíyix'u)	<i>títíyix'u</i>
<i>qÁl'q!</i> warrior	<i>qéqÁl'q!</i>

*Sub-type I c.* Diminutive features la, 3a, 5a:—

<i>hčg<sup>v</sup>os</i> chief	<i>hčhčg<sup>v</sup>ō's</i>
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*Type II. Reduplicating Syllable: cɛ́; stem: feature 2a.*

In these diminutives the first vowel of the stem is broken, the broken vowel taking the form *ǔ'ǔ*. If the final vowel is long, it seems to be shortened (*-'ā* becomes *-'a*).

<i>pí'ík!</i> ground-hog	diminutive <i>pí'pí'ík!</i>
<i>q!é'ǔtc</i> elk	<i>q!éq!é'ǔ'ǔtc</i>
<i>xá'ā</i> big clam	<i>xéxá'ā'a</i>

Though the last diminutive seems to correspond exactly in form and rhythm to the second, the final *-ā'a* may perhaps here be better explained as breaking of the last vowel (*-ā*) of the stem (feature 2b).

*Type III. Reduplicating Syllable: cɛ́; stem: features 3a or d, 5a, 2b.*

<i>qá'um'</i> eye	<i>qéqawém''</i> (-ê- doubtless merely variant of -î-)
<i>qwí'qwí'</i> sea-gull	<i>qwí'qwí'qwí''í</i>

*Type IV. Reduplicating Syllable: cɛ́; stem: features 4a, 3c, 2b.*

<i>kwá'am</i> coiled storage basket	<i>kwékwí'ím'</i>
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*Type V. Reduplicating Syllable: cɛ́; stem: feature 5b.*

<i>L!íkuinAS</i> heart	<i>L!íL!kuinAS</i>
<i>xÁpā'í</i> red cedar	<i>xéxpā'í</i>

*Type VI. Reduplicating Syllable: cɛ́; stem: features 5b, 4b.*

<i>qwásam</i> woolly grouse	<i>qwéq<sup>u</sup>sē<sup>m</sup>-ól</i>
<i>páxai'</i> creek	<i>pí'p'xē'í</i>

*Type VII. Reduplicating Syllable: cɛ́; stem: features 5b, 3c, 2a.*

<i>xásam</i> box	<i>xéxsám'</i>
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Type VIII. Reduplicating Syllable: *e*.

In this type the reduplicating *e* is unaccented. According to whether or not the stem is modified in regard to vocalic length or quality, various sub-types may be recognized.

Sub-type VIII a. Diminutive feature 1a only:—

<i>ts!âtc!ilbai</i> spruce	diminutive <i>ts!its!âtc!ilbai</i>
<i>qâ'ya'</i> water	<i>qeqâ'ya'</i>
<i>qô<sup>u</sup>qwai</i> speaker	<i>qwiqô<sup>u</sup>qwai</i>

Here probably also belongs *qwi<sup>e</sup>qwâ<sup>at</sup>!Alâ<sup>a</sup>k'* "butterfly."

Sub-type VIII b. Diminutive features 1a, 5a (accent on third syllable of diminutive):—

<i>sayâ'ada</i> neck	<i>sisiyâ'ada</i> ( <i>sa</i> -shortened to <i>sa-</i> , which, coming before <i>y</i> , has to be palatalized to <i>si-</i> )
<i>xâ'aidatc</i> stump	<i>xexâ'á.idatc</i> ( <i>-a.i-</i> probably equivalent to <i>-âi-</i> )

Sub-type VIII c. Diminutive features 1a, 3a (or c):—

<i>sâ'yal</i> lake	<i>sisâ'yâl</i>
<i>mâ<sup>at</sup>!in'</i> louse	<i>mimâ<sup>at</sup>!in'</i>

Sub-type VIII d. Diminutive features 1a, 4 b:—

<i>pôk'<sup>u</sup>pôk'<sup>u</sup></i> liver	<i>pipúk'<sup>u</sup>pîk'<sup>u</sup></i>
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Type IX. Reduplicating Syllable: *e*; stem: feature 2a.

Here again the reduplicating vowel is an unaccented *e*. The stem, however, is characterized by the breaking of one of its vowels. According to whether or not umlaut also takes place, two sub-types are to be recognized.

Sub-type IX a. Diminutive features 1a, 2a:—

<i>tâ<sup>a</sup>yac</i> hand	<i>tcîtcâ<sup>a</sup>yac</i>
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*Sub-type IX b.* Diminutive features 1a, 2a, 4a:—

*xá'adjaic* stone                      diminutive *xəxá'adjə'ic*

As irregular representative of this type may perhaps be considered:—

*qé'n'qen'* duck                      *qəqA'ád-ōł* (built on  
unreduplicated simplex)

*Type X. Reduplicating Syllable: eč.*

Various sub-types are to be recognized, according to whether or not the stem vowels are quantitatively modified.

*Sub-type X a.* Diminutive feature 1b only:—

<i>tc!čl</i> rain	<i>tc!tčl!čl</i>
<i>p!éq<sup>y</sup>āi</i> halibut	<i>p!i'p!i'q<sup>y</sup>āi</i>
<i>ts!oxō''<sup>o</sup></i> codfish	<i>ts!i'ts!oxō''<sup>o</sup></i>
<i>L!Axwā'<sup>i</sup></i> dog-salmon	<i>L!i!L!Axwā'<sup>i</sup></i>
<i>xā<sup>a</sup>p!</i> baby-basket	<i>xē<sup>e</sup>xā<sup>a</sup>p!</i>
<i>p!óxō'<sup>o</sup></i> raven	<i>p!i'p!oxō'<sup>o</sup></i>
<i>yip'<sup>i</sup>x<sup>u</sup></i> hole	<i>yēyip'<sup>i</sup>x<sup>u</sup></i>
<i>L!pī'ts!ā'<sup>a</sup></i> yellow-cedar bark	<i>L!i'L!pī'ts!ā'<sup>a</sup></i>
blanket	
<i>títitčtčtč'c</i> little owl	<i>títitčtčtč'c</i>
<i>k<sup>y</sup>äck<sup>y</sup>ác</i> bluejay	<i>k<sup>y</sup>i'k<sup>y</sup>ác</i>
<i>qóqowī'<sup>m</sup></i> small breast feathers	<i>qwī'<sup>e</sup>quwī'<sup>m</sup></i>

In the last two examples the diminutive is formed, not from the already reduplicated simplex, but from the unreduplicated form abstracted from it.

*Sub-type X b.* Diminutive features 1b, 3c:—

<i>L!pātīl</i> bag	<i>L!ē<sup>e</sup>L!pātīl</i>
<i>tc!eq<sup>z</sup></i> robin	<i>tc!i'tc!i'eq<sup>z</sup></i>
<i>kúmāqīn'</i> sea-lion	<i>kwī'kumāqīn'</i>
<i>djicīn'</i> foot	<i>dji'djicīn'</i>
<i>lÁq!<sup>u</sup></i> bow	<i>li'li'q!<sup>u</sup></i>

*Sub-type X c.* Diminutive features 1b, 5a, 3c (or 3a):—

<i>q!wÁt'ī'tcīn'</i> humpback salmon	<i>q!wēq!utī'tcīn'</i>
<i>t!á'abuxwāi</i> gooseberry bush	<i>t!il!Amuxwāi</i>
<i>p!á'alats!<sup>a</sup></i> skunk	<i>p!ēp!A'lāts!</i> (mis- heard for -p!Al-?)

*Sub-type X d.* Diminutive features lb, 3e, 3e:—

<i>xáucín'</i> bone	diminutive <i>xé<sup>h</sup>xig<sup>h</sup>icín'</i> (-ig <sup>h</sup> i-< * <sub>-AwA-</sub> )
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It should be noted that this type of diminutive formation, while externally similar to Type VIII of plural formation (cf., e.g., *xé<sup>h</sup>xā<sup>a</sup>p!* "little basket" with *q!<sup>h</sup>é<sup>h</sup>q!<sup>h</sup>āik<sup>u</sup>* "eagles"), is in reality quite distinct in origin, the latter, as we have seen, tracing its reduplicating *-ē-* to *-Ay-* and being limited to nouns with *i*-diphthongs.

*Type XI. Reduplicating Syllable: cē; stem: feature 2b.*

<i>mát!āi</i> horse clam	<i>mē<sup>h</sup>mát!ā<sup>i</sup></i> ( <i>mē<sup>h</sup>-</i> perhaps misheard for <i>mē-</i> )
<i>háiheí</i> ( <i>háiheí'?</i> ) arrow	<i>hēheíheí<sup>i</sup></i>
<i>q!ás'adāi</i> bueskin shirt	<i>q!<sup>h</sup>é<sup>h</sup>q!<sup>h</sup>as'adā<sup>i</sup></i>

*Type XII. Reduplicating Syllable: cē; stem: 4b.*

<i>q!ák<sup>u</sup></i> board	<i>q!<sup>h</sup>é<sup>h</sup>q!<sup>h</sup>ē<sup>h</sup>k<sup>u</sup></i>
<i>aL</i> leggings	<i>é<sup>h</sup>ēL</i>

*Type XIII. Reduplicating Syllable: cē; stem: feature 5b.*

There are two sub-types, according to whether or not the stem vowel is modified.

*Sub-type XIII a.* Diminutive features l b, 5 b:—

<i>q!áp!xwai</i> oak	<i>q!<sup>h</sup>é<sup>h</sup>q!<sup>h</sup>p!xwai</i>
<i>p!<sup>h</sup>é<sup>h</sup>ixāi</i> alder	<i>p!<sup>h</sup>i<sup>h</sup>p!<sup>h</sup>xāi</i>
<i>L!<sup>h</sup>ā<sup>a</sup>q!wāi</i> fish-gill	<i>L!<sup>h</sup>i<sup>h</sup>L!<sup>h</sup>q!wāi</i>
<i>kúp-ū<sup>h</sup>mī<sup>h</sup>x<sup>u</sup></i> hill	<i>k<sup>w</sup>ík<sup>u</sup>p-ī<sup>h</sup>t<sup>h</sup></i>
<i>lāq!wāinōp'</i> cedar-bark mat	<i>l!<sup>h</sup>i<sup>h</sup>q!<sup>h</sup>wāinōp'</i>
<i>t!<sup>h</sup>é<sup>h</sup>ibāi</i> wild-cherry bush	<i>t!<sup>h</sup>i<sup>h</sup>t!<sup>h</sup>bāi</i>
<i>t!<sup>h</sup>Aq!<sup>h</sup>t!<sup>h</sup>Aqāi</i> dog-wood	<i>t!<sup>h</sup>é<sup>h</sup>t!<sup>h</sup>qāi</i>

In the last example the diminutive is built up on the unduplicated stem abstracted from the already reduplicated simplex. The broken stem vowels *-ē<sup>h</sup>i-* of "alder" and "wild-

cherry bush" disappear in the diminutive apparently without trace of ', but this may in part be due to following *q'* and *p'*, which imply '. With these contrast:—

*sa'an'* cohoe salmon                      diminutive *s'is'ad-ōl*

Here the *-a'a-* is treated, not as a broken vowel, but as two vowels with intervening consonant.

*Sub-type XIII b.* Diminutive features 1b, 5b, 3c:—

<i>l!q!As</i> mountain-goat blanket	<i>l!l'q!is</i>
<i>L!Áq!acín'</i> moccasins	<i>L!ē<sup>e</sup>L!q!acén'</i> (mis- heard for <i>-én''?</i> )

*Type XIV.* Reduplicating Syllable: *cē*; stem: features 5a, 3c, 2b.

<i>l!ég<sup>e</sup>em</i> sun, moon	<i>l!i'l!ig<sup>e</sup>im'</i>
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*-i-* is for *-a-*, because of following *g<sup>e</sup>*.

*Type XV.* Reduplicating Syllable: *cē*; stem: features 5b, 4a.

<i>saq'Ák'<sup>u</sup></i> war-club	<i>s'i'sqek'<sup>u</sup></i>
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*Type XVI.* Reduplicating Syllable: *cē'*.

<i>qā'<sup>a</sup>qa'</i> rush mat	<i>qē'<sup>e</sup>qā'<sup>a</sup></i>
<i>tót'<sup>x</sup>lal</i> necklace	<i>tē'<sup>e</sup>t'<sup>x</sup>lal</i>

The diminutive of "necklace," as often happens with nouns reduplicated to begin with, is built up on the implied unreduplicated stem. The same applies to the diminutive of "rush mat," except that here it is the reduplicating syllable of the simplex, which doubtless more nearly represents the simple stem, that is taken as the base of the diminutive form.

*Type XVII.* Reduplicating Syllable: *cē'*; stem: feature 4a or b.

Two sub-types are found, according to whether or not there are at the same time quantitative changes in the stem.

*Sub-type XVII a.* Diminutive features 1c, 4b:—

<i>q!á<sup>a</sup>L!</i> land-otter	diminutive <i>q!é<sup>e</sup>q!ē<sup>e</sup>L!</i>
<i>q!á<sup>a</sup>sa'</i> sea-otter	<i>q!é<sup>e</sup>q!ē<sup>e</sup>s</i> (note loss of -a')

*Sub-type XVII b.* Diminutive features, 1c, 5a, 4a (or b):—

<i>qé'w<sup>A</sup>x</i> steel-head salmon	<i>qé'qeg<sup>v</sup>e<sup>e</sup>x</i>
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-g<sup>v</sup>- is from original -w-. It is not clear whether -qeg<sup>v</sup>e<sup>e</sup>x represents \*-qēwē<sup>e</sup>x or \*-qēwēx.

*Type XVIII. Reduplicating Syllable: cé; stem: features 3c, 2b.*

<i>q!wát'ám</i> river	<i>q!wé<sup>e</sup>q!wat'ím'</i> ( <i>q!wé<sup>e</sup>-</i> not equivalent to <i>q!wé<sup>e</sup>-</i> ; see diminutive plural type iv)
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*Type XIX. Reduplicating Syllable: cé'; stem: feature 5b.*

There are two sub-types, the latter with modified stem vowel.

*Sub-type XIX a.* Diminutive features 1c, 5b:—

<i>sápāxos</i> horn	<i>sé<sup>e</sup>sp'xos</i>
<i>héq'sā<sup>a</sup>min'</i> pole for poling canoe	<i>hē<sup>e</sup>'hq'sā<sup>a</sup>min'</i>

*Sub-type XIX b.* Diminutive features 1c, 5b, 3c:—

<i>t!ákōm'</i> beaver (-kō- doubtless for -kwa-)	<i>t!é<sup>e</sup>t!kwīm'</i>
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*Type XX. Reduplicating Syllable: cč.*

Here again there are two sub-types, the latter with vocalic reduction.

*Sub-type XX a.* Diminutive feature 1d:—

<i>xāug<sup>v</sup>as</i> grizzly bear	<i>xáxāug<sup>v</sup>as</i>
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Here probably belongs also *xwáxadjō'm'* "fly."

*Sub-type XX b.* Diminutive features 1d, 5a, 3c or d:—

<i>lā<sup>a</sup>g<sup>v</sup>ét!<sup>a</sup></i> herring	<i>lātīg<sup>v</sup>ét!<sup>a</sup></i> (-i- < -i-)
<i>lāidatctAn</i> woman's cedar-bark skirt	<i>lālīdatctīn</i> (-i- < -Ai-)
<i>t!ō'mt'</i> paddle	<i>t!ót!abít'</i>

Type XXI. Reduplicating Syllable: *cč*; stem: feature 5b.

There are three sub-types, based on differences in the further treatment of the stem.

Sub-type XXI a. Diminutive features 1d, 5b:—  
*yǎxai'í* pack-basket                      diminutive *yá.íxai'í*

Sub-type XXI b. Diminutive features 1d, 5b, 3a:—  
*waxǎ'ts!i* pipe                                      *wauxǎ'ts!í*

Sub-type XXI c. Diminutive features 1d, 5a, 5b:—  
*lókō'mín* bailer                                      *lólkō'mín*

Type XXII. Reduplicating Syllable *cč*; stem: features 3a or c, and 2b.

There are two sub-types, depending on whether or not the first vowel of the stem is reduced.

Sub-type XXII a. Diminutive features 1d, 3c, 2b:—  
*sǎts!Am* tyee salmon                              *sas'ǎ'ts!í'm'*

Sub-type XXII b. Diminutive features 1d, 5a, 3a, 2b:—  
*sá'ídjA'* leaf                                      *sasí'djǎ'<sup>a</sup>* (-*i*- reduced  
 from -*a'í*-)

Type XXIII. Reduplicating Syllable: *cč*; stem: features 5a, 3a or c.

*k!ó!dót!º* porpoise  
*mǎyºs* raccoon

*tǎ'agºaxº* fern

*tǎ'agºin* salmon-spear  
*gºǎºdí'ím* slave

*k!ó!k!odót!º*  
*mǎmíyºs* (-*i*- palatalized from -*A*-, reduced from -*ǎ*-)  
*tǎtigºǎxº* (-*i*- palatalized from -*A*-, reduced from -*ǎ'*-)  
*tǎt:igºin* (dit.)  
*gºǎºgºídí'ím* (-*i*- palatalized from -*A*-, reduced from -*ǎ'*-)

<i>l̄á<sup>a</sup>dak<sup>u</sup></i> skin	diminutive <i>l̄á<sup>i</sup>l̄id̄á<sup>a</sup>k<sup>u</sup></i> (dit.)
<i>ôc̄x<sup>u</sup></i> hair-seal	<i>'á<sup>i</sup>asîx<sup>u</sup></i>
<i>ts!<sup>u</sup>ômuql</i> cloud	<i>ts!<sup>i</sup>áts!<sup>i</sup>ImAqwîl</i> (-I- palatalized from -A-, reduced from -ā-; -mA- merely vari- ant of -mu-)
<i>ôlqai<sup>i</sup></i> snake	<i>'ô<sup>i</sup>ôlqai<sup>i</sup></i>
<i>'á<sup>i</sup>amax<sup>u</sup>idjō<sup>o</sup></i> ant	<i>'á<sup>i</sup>Amamax<sup>u</sup>idjō<sup>o</sup></i>

In the last two examples the final vowel is considered quantitatively long and hence cannot be further lengthened. Quite irregular is:—

<i>t̄āyac</i> killer-whale	<i>t̄ātīyac</i>
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The long *-ī-* and the short *-ā-* of the stem are the exact reverse of what would be expected (*\*t̄ātīyāc*, cf. *t̄ātīg<sup>u</sup>āx<sup>u</sup>* above).

*Type XXIV. Reduplicating Syllable:* *eč̄*; *stem:* *features 5a, 4b.*

<i>tc!<sup>u</sup>atc!<sup>u</sup>á<sup>i</sup>!ā<sup>n</sup>'</i> mouse	<i>tc!<sup>i</sup>átc!<sup>i</sup>it!<sup>i</sup>in''</i> (-i- pal- atalized form of -A-, reduced from -ā <sup>a</sup> -)
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The diminutive, as often, is based on the unreduplicated stem abstracted from the already reduplicated simplex.

*Type XXV. Reduplicating Syllable:* *eč̄*; *stem:* *features 5a, 2b*

Two sub-types are to be recognized, depending on the treatment of the last vowel of the stem.

*Sub-type XXV a. Diminutive features 1a, 5a, 2b:—*

<i>l̄ô''<sup>o</sup>bô<sup>m</sup>'</i> small clam	<i>l̄ô<sup>i</sup>ô<sup>i</sup>bô<sup>i</sup>'<sup>m</sup></i>
<i>k!<sup>u</sup>ôyôkôbî<sup>i</sup>n</i> fisherman	<i>k!<sup>i</sup>ôk!<sup>i</sup>ôyôkôbî<sup>i</sup>n''</i>

*Sub-type XXV b. Diminutive features 1e, 5a, 3a, 2b:—*

<i>x̄á<sup>a</sup>wa</i> fur seal	<i>x̄á<sup>i</sup>x̄Awā<sup>i</sup>'a</i>
<i>s̄á<sup>a</sup>ba'</i> mussel	<i>s̄á<sup>i</sup>s̄Abā<sup>i</sup>'<sup>a</sup></i>
<i>tc!<sup>u</sup>é'āldô</i> dog	<i>tc!<sup>i</sup>é'āte!<sup>i</sup>idō<sup>o</sup></i> (-i- pala- talized from -A-, re- duced from -e'ā-)

In the last example *-e'ā* is treated as a reduplicating long vowel.

Type XXVI. Reduplicating Syllable:  $c\acute{v}$ ; stem: feature 5b.

Three sub-types are to be recognized, according to whether the stem undergoes no further change or is further modified.

Sub-type XXVI a. Diminutive features 1e, 5b:—

<i>sōsîn'</i> mouth	diminutive <i>sōssîn'</i>
<i>p!āq!Adātc</i> goose	<i>p!āp!q!Adātc</i>
<i>t!hā<sup>a</sup>dān'</i> chief's wife	<i>t!t'hā<sup>a</sup>dān'</i>
<i>sōpAdatc</i> tail	<i>sō<sup>u</sup>spAdatc</i>
<i>xwāsAbāi</i> soapberry bush	<i>xwāx<sup>u</sup>sabāi</i>
<i>t!x<sup>u</sup>sał</i> tongue	<i>t!t!x<sup>u</sup>sał</i>
<i>ōsā'i</i> huckleberry bush	<i>'ō'Asā'i</i> (-'ōs- cannot be further reduced than -'As-)
<i>mí'xāl</i> bear	<i>mí'mExāl</i> (-E- is merely glide)
<i>s!p!Amîn'</i> shinny stick	<i>s!t!sp!Amî'n'</i>
<i>mítāli</i> beaver-tooth die	<i>mí'm(I)tāli</i> (-I- is merely glide)
<i>k<sup>v</sup>!i!k<sup>v</sup>āyu</i> oar	<i>k<sup>v</sup>!i'k<sup>v</sup>!k<sup>v</sup>āyu</i>
<i>s!i<sup>e</sup>qēt'</i> dug hole, well	<i>s!t!isqēt'</i>

“Bear,” “shinny stick,” “beaver-tooth die,” and “oar,” which have short stem-vowels, are perhaps better listed with type X.

Sub-type XXVI b. Diminutive features 1e, 5b, 3c:—

<i>kō<sup>u</sup>sad'</i> star	<i>kók'sid'</i>
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Sub-type XXVI c. Diminutive features 1e, 5b, 5a, 3a:—

<i>t!é<sup>e</sup>dé<sup>e</sup>qwai</i> salmon-berry bush	<i>t!t!d!áqwai</i>
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Type XXVII. Reduplicating Syllable:  $c\acute{v}$ ; stem: features 5 b, 4 b.

<i>t!ā<sup>a</sup>q!at'</i> mountain	<i>t!āt!q!ē't'</i>
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Type XXVIII. Reduplicating Syllable:  $c\acute{v}$ ; stem: features 5b (or a), 3a, 2a.

<i>tā<sup>a</sup>q!wā'</i> devil-fish	<i>tāt'q!wā'<sup>a</sup></i>
<i>djā<sup>a</sup>dja'</i> tree	<i>djādjdjā'<sup>a</sup></i> (-i- palatalized from -A- reduced from -ā' <sup>a</sup> -)



already reduplicated (cf. reduplicated nouns which form no reduplicated plural), yet not all. Of those formed from unre-duplicated nouns, some have diminutive reduplication at the same time, others not. By an interesting phonetic law of rhythmic balance  $-ōl(t^u)$  is suffixed to stems whose last vowel is short,  $-ol(t^u)$  to those whose last vowel is long. The examples obtained of the suffix are:—

1.  $-ōl(t^u)$ 

<i>hēw<sup>A</sup>qen'</i> swan	diminutive <i>hēw<sup>a</sup>qādōl</i>
<i>mī<sup>e</sup>mau</i> cat	<i>mī<sup>e</sup>min'ōl</i>
<i>q!āik<sup>u</sup></i> eagle	{ <i>q!āikōl</i>
	{ <i>q!ēq!auq!āikōl</i>
	little eagles
<i>qé'n'qen'</i> duck	<i>qeqA'ádōl</i>
<i>ts!útsq!é<sup>e</sup>nas</i> chicken hawk	<i>ts!útsq!é<sup>e</sup>nasōl<sup>u</sup></i>
<i>tc!eq<sup>r</sup></i> robin	<i>tc!ītc!eq<sup>r</sup>tc!éqōl<sup>u</sup></i> little robins
<i>sá'an'</i> coho salmon	{ <i>sís'adōl</i>
	{ <i>sísqsq'ádōl</i> plur.
<i>xōp'xōp'</i> humming bird	<i>xōp'xōpōl<sup>u</sup></i>
<i>g<sup>v</sup>ī'g<sup>v</sup>ī<sup>i</sup></i> panther	<i>g<sup>v</sup>ī'g<sup>v</sup>īyūl</i>

The last two seem irregular as regards rhythmic balance; perhaps they were respectively misheard for  $*xōp'xōpōl<sup>u</sup>$  and  $*g<sup>v</sup>ī'g<sup>v</sup>īyūl$ .  $-ōl$  has also been found in *mīm'inr'ōl k<sup>u</sup> māmstcō'm* "little mink."

2.  $-ol(t^u)$ 

<i>hō'mhō'm</i> blue grouse	<i>hō'mhō'mol</i>
<i>qwāqumī's</i> marten	<i>qwāqumī'sol<sup>u</sup></i>
<i>qwāsAm</i> woolly grouse	<i>qwéq<sup>u</sup>sē'mol</i>
<i>ts!ī'x<sup>u</sup>ts!īx<sup>u</sup></i> fish-hawk	<i>ts!ī'x<sup>u</sup>ts!īxwōl</i>
<i>kwa'kwá<sup>a</sup>djō'</i> grey-squirrel	<i>kwa'kwá<sup>a</sup>djōl</i>

V. DOUBLY REDUPLICATED DIMINUTIVE PLURALS  
OF NOUNS.

The plurals of diminutives are, as a rule, doubly reduplicated, the first reduplicating syllable expressing the diminutive idea, the second that of plurality; the first reduplicating syllable is almost invariably of diminutive type, the second of plural type. Hence diminutive plurals are morphologically, and psychologically, diminutivized plurals, not pluralized diminutives. While they may be said, on the whole, to be formed from the plural of the simplex, the diminutive singular has often influence on the form of the diminutive plural, both as regards the inner stem changes and the vowel of the reduplicating syllable. Thus diminutive plurals may be said to combine, roughly speaking, the characteristics of both the plural and diminutive of the simplex. In order better to understand the formation of the diminutive plural and to assist in cross-referencing, the types to which the non-diminutive plural and the diminutive singular belong will be indicated in the following lists.

*Type I. Reduplicating Syllable: eē; followed by plural of simplex.*

The reduplicating syllable is analogous to that of diminutive types X, XI, XII, XIII, XIV, and XV. According to whether or not the remaining part of the word is somewhat modified from the plural of the simplex, sub-types may be recognized.

<i>Sub-type I a. Plural of simplex unchanged:—</i>			
<i>L!ikuin</i> AS heart	plur. I.	dim. v.	dim. plur. <i>L!i' L!Ek'</i> - <i>L!ikuin</i> AS
<i>ts!oxó''o</i> codfish	dit.	x a	<i>ts!i'ts!ox'ts!óxó''o</i>
<i>L!Axwā''i</i> dog-salmon	dit.	dit.	<i>L!i' L!ax L!Axwā''i</i>
<i>L!pî'ts!ā''a</i> yellow cedar			
bark basket	dit.	dit.	<i>L!i' L!Ap' L!Apî'ts!ā''a</i>
<i>tc!éq<sup>x</sup></i> robin	no plur.	x b.	
	(type I implied in dim. plur.)		<i>tc!i'tc!eq<sup>x</sup>tc!éqôlt''u</i>
<i>aL</i> leggings	I. (or VI.)	XII.	<i>ê'aL'aL</i>
<i>kúpû''mî''u<sup>x</sup></i> hill	dit.	XIII a.	<i>kwîkup'kúp-î't'</i> (with <i>-î't'</i> as in diminutive singular)

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<i>kʷ!ikʷāyu</i> oar	plur. dit.	dim. xxvi a.	dim. plur. <i>kʷ!ikʷ!i- kʷ!kʷ!ikʷāyu</i>
<i>síp!Amîn'</i> shinny-stick	dit.	dit.	<i>sîsip!sîp!amî'n'</i>
<i>qwâqumî's</i> marten	no plur.	-otl <sup>u</sup>	<i>qwêqumqwâqumî's</i>
	(type I, based on stem-form of unreduplicated simplex, im- plied in dim. plur.)		
<i>xāp!</i> baby basket	II a.	X a.	<i>xêxáp!xāp!</i>
<i>!â'abuxwāi</i> goose- berry bush	dit.	X c.	<i>!î!Amt!âbuxwāi</i>
<i>lāq!wāinop'</i> cedar- bark mat	dit.	XIII a.	<i>lîlâq!wāinop'</i>
<i>L!âq!wāi</i> fish-gill	dit.	dit.	<i>L!îL!âq!wāi</i>
<i>k!ô°dôt!°</i> porpoise	dit.	XXIII.	<i>k!wîk!wAd°k!ô°dô!°</i>
<i>ts!âmugt</i> cloud	dit.	dit.	<i>ts!îts!Amts!âmugt</i>
<i>mîtāli</i> beaver-tooth die	dit.	XXVI a.	<i>mî'mAt°mî'itāli</i>
<i>mî°xāl</i> bear	II a.	XXVI a.	<i>mî'mAxEmîxāl</i> (-E- is glide)
<i>sê°qet'</i> well	dit.	dit.	<i>sîsAq'sê°qet'</i>
<i>ôsa'i</i> huckleberry bush	dit.	dit.	'ê'As'ôsa'i
<i>sôpadatc</i> tail	dit.	dit.	<i>sîsap'sô°padatc</i>
<i>tô'mic</i> man	dit.	XXXII a.	<i>tîlAmtô'omic</i>
<i>g°âdî'm</i> slave	XI. (aside from <i>g°â-</i> belongs to II b.)	XXIII.	<i>g°êg°idg°âdî'm</i> (based on - <i>g°idg°â°-</i> <i>dî'm</i> of plur.)
<i>yāxai'</i> pack-basket	II b.	XXI a.	<i>yîyîxîyāxai'</i>
<i>tc!atc!â°!ân''</i> mouse	dit.	XXIV.	<i>tc!îtc!î'tc!â°!ân''</i>
<i>kô°sAd'</i> star	dit.	XXVI b.	<i>kwî'kwîskô°sAd'</i>
<i>p!éq°āi</i> halibut	III b.	X a.	<i>p!îp!ô°p!éq°āi</i>
<i>g°î'g°vî</i> panther	no plur. (type III b im- plied in dim. plur.)	-ūl	<i>g°vî'g°vîg°vî'g°vî'</i>
<i>ôlqai'</i> snake	VI.	XXIII.	'ê'Al'ôlqai'

<i>sá'ídjA'</i> leaf	plur. VIII.	dim. XXII b.	dim. plur. <i>sīsīsá'ídjA'</i>
<i>djá'ádjA'</i> tree	irregular	XXVIII.	<i>djedjídjā'ádjA'</i> (built on plur. of type VIII)
<i>yíṗ·î'ṗ<sup>u</sup></i> hole	IX.	X a.	<i>yēyíṗ'yíṗ·î'ṗ<sup>u</sup></i> (built on plur. of type I)

*Sub-type I b.* Plural of simplex modified by diminutive feature 3a, c, or d:—

<i>djidis</i> tooth	I.	I b.	<i>djīdjiddjidi's</i>
<i>L!pātīl</i> bag	dit.	X b.	<i>L!ēL!Ap'L!Apātīl</i>
<i>djīcin'</i> foot	dit.	dit.	<i>djīdjīsdjīcin'</i>
<i>lÁq!As</i> mountain- goat blanket	dit.	XIII b.	<i>līlÁq!lÁq!īs</i>
<i>L!Áq!acin'</i> moccasins	dit.	dit.	<i>L!ēL!Áq!L!Áq!acin'</i> (- <i>in'</i> misheard for - <i>in'</i> ?)
<i>t!Ákōm'</i> beaver	I.	XIX b.	<i>t!ī!Ák'ut!Ákwīm'</i>
<i>t!ō'mt'</i> paddle	II a.	XX b.	<i>t!ī!Amt!ō'bī't'</i>
<i>waxā'ts!i</i> pipe	dit.	XXI b.	<i>wīwÁxwaxā'ts!ī'</i>
<i>tā'q!wa'</i> devil-fish	dit.	XXVIII.	<i>tī!A'q'tā'q!wā'</i> (- <i>q'</i> misheard for - <i>q'</i> ?)
<i>djīg<sup>u</sup>in'</i> song	III b.	XXX b.	<i>djīdjūdjīg<sup>u</sup>in'</i>

*Sub-type I c.* Plural of simplex modified by diminutive feature 5a:—

<i>lókō'mîn</i> bailer	v.	XXI c.	<i>līlúk'lókō'mîn</i>
<i>tī'hā'dān'</i> chief's wife	VI.	XXVI a.	<i>tī!tahtihā'dān'</i>

*Sub-type I d.* Plural of simplex modified by diminutive feature 2b:—

<i>lō''ōbōm'</i> small clam	II b.	XXV a.	<i>līlīm!ō''ōbōm'</i>
<i>k!ōyōkōbī'n</i> fisherman	VIII.	dit.	<i>k!wīk!wīk!ōyōkō- bī'n'</i>

*Sub-type I e.* Plural of simplex modified by diminutive feature 4b:—

*t!á'ag!at'* mountain plur. II a. dim. XXVIII.  
dim. plur. *t!ēt!Aq!t!á'ag!ē'it'*

*Sub-type I f.* Plural of simplex modified by diminutive features 3b, 2a, 3c:—

*kúmāqin'* sea-lion I. x b. *kwíkumkwā'māqin'*

A couple of aberrant diminutive plurals with *cē-* are given under type II f.

*Type II. Reduplicating Syllable:* *cē;* followed by plural of simplex.

The reduplicating syllable is analogous to that of diminutive types I, II, III, IV, V, VI, VII, VIII, IX. Sub-types are to be recognized here as in type I.

*Sub-type II a.* Plural of simplex unchanged:—

<i>qwAdi's</i> hump-backed whale	I.	I a.	<i>qweqwaD'qwAdi's</i>
<i>qō'u'a'i</i> hemlock	dit.	dit.	<i>qwiqōqō'u'a'i</i>
<i>'áwāk'u</i> tobacco	dit.	dit.	<i>'e'Aw'áwāk'u</i>
<i>xÁpā'i</i> red cedar	dit.	v.	<i>xexAp'xÁpā'i</i>
<i>q!áp!xwai</i> oak	dit.	XIII a.	<i>q!eq!Ap!q!áp!xwai</i>
<i>q'tā'abas</i> wooden ball used in game	II a.	I a.	<i>qeqAt'q'tā'abas</i>
<i>qē'n'qen'</i> duck	dit.	IX b.	<i>qeqAd'qēn'</i> (based on unreduplicated simplex)
<i>qā'aqa'</i> rush mat	dit.	XVI.	<i>qeqAq'qā'aqa'</i>
<i>tōt'x<sup>u</sup>lal</i> necklace	dit.	XVI.	<i>t!tAx<sup>u</sup>tōt'x<sup>u</sup>lal</i> (reduplicating syllable for plurality based on unreduplicated form of simplex)

<i>q!ā°L!</i> land-otter plur.	II a. dim.	XVII a. dim.	plur.	<i>q!eq!AL!q!ā°L!</i>
<i>q!ā°sa!</i> sea-otter	dit.	dit.		<i>q!eq!Asq!ā°s</i> (with loss of -a', as in dim. sing.)
<i>xā°wa</i> fur seal	dit.	XXV b.		<i>xexAUXā°wa</i>
<i>sā°ba!</i> mussel	dit.	dit.		<i>sīsAMSā°ba!</i>
<i>xwāsAbāi</i> soapberry bush	dit.	XXVI a.		<i>xwexwAsxwāsAbāi</i>
<i>p!āq!AdātC</i> goose	dit.	dit.		<i>p!ēp!Aq!p!ā°q!AdātC</i>
<i>L!ā!al'ō'm'</i> wolf	dit.	XXXI.		<i>L!ēL!AlL!ā!al'ō'm'</i>
<i>ts!ātC!ilbai</i> spruce	II b.	VIII a.		<i>ts!its!ītC!ts!ātC!ilbai</i>
<i>k°āck°āc</i> bluejay	dit.	X a.		<i>k°āk°īck°āc</i> (based on unreduplicated form of simplex)
<i>sāpāxos</i> horn	dit.	XIX a.		<i>sīsīpsāpāxos</i>
<i>tā°ag°a.x°</i> fern	III a.	XXIII.		<i>tītōtā°ag°a.x°</i>
<i>hēg°os</i> chief	III b.	I c.		<i>hēhō°hē°g°os</i>
<i>xāug°as</i> grizzly bear	v.	XX a.		<i>xexAUXāug°as</i>
<i>hēq'sā°min'</i> pole for poling canoe	VI.	XIX a.		<i>hēhāq'hēq'sā°min'</i>
<i>q!ōa'āda</i> ear	VII.	I a.		<i>q!wēq!ōq!ōa'āda</i>
<i>sidjāqō'p'</i> basket hat	VIII.	I a.		<i>sīsīsīdjāqō'p'</i>
<i>tāyac</i> killer whale	XI	XXIII		<i>tītītā°yac</i>

(plur. of type VIII implied in dim. plur.)

*Sub-type II b.* Plural of simplex modified by diminutive feature 3c or d:—

<i>qAl'q!</i> warrior	I.	I b.	<i>qēqAlqAlī°eq!</i>
<i>lAq!°</i> bow	dit.	X b.	<i>līlAq!°kē°q!°</i>
<i>q!wAl'v'itcin'</i> hump-back salmon	dit.	X c.	<i>q!wēq!wAl'q!wAl't'v'itcin'</i>
<i>xAucin'</i> bone	dit.	X d.	<i>xēxAUXAUCin'</i>
<i>mā°tc!in'</i> louse	II a.	VIII c.	<i>mīmAtC!mā°tc!īn'</i>
<i>āsx°</i> hair seal	dit.	XXIII.	<i>'ē'As'āsīx°</i>
<i>tā°ag°in</i> salmon spear	III a.	dit.	<i>tītōtā°ag°in</i>

*Sub-type II c.* Plural of simplex modified by diminutive features 3a or c, and 2b:—

	plur. I.	dim. VII.	dim. plur.
<i>xásam</i> box			<i>xəxásaxásim'</i>
<i>qwásam</i> woolly grouse	dit.	VI.	<i>qwequsqúsím''</i> (-qus- probably merely variant of -qwas-)
<i>q!ás'adāi</i> buckskin shirt	dit.	XI.	<i>q!əq!Asq!ás'adā'i</i>
<i>lí'am'</i> cockle	dit. (or VIII.)	XXIX a.	<i>lílí'lāi'ím''</i> (with irregular lengthening of -ī' = -ai- to -āi-)
<i>həw<sup>A</sup>qən'</i> swan	II a.	-ōł	<i>həhAu<hsup>ohəw<sup>o</sup>qēn''</hsup></i>
<i>mát!āi</i> horse clam	dit.	XI.	<i>məmAt!mā!<sup>o</sup>!ā'<sup>i</sup></i>
<i>qá'um'</i> eye	v.	III.	<i>qəqəqá'ōm''</i> (-qə- heard for -qau-, or perhaps for -qau- reduced from -qau-—see type III)

*Sub-type II d.* Plural of simplex modified by diminutive feature 4a or b:—

<i>páxai'</i> creek	I.	VI.	<i>pípáxpa<sup>x</sup>ē'<sup>i</sup></i>
<i>q!ák'<sup>u</sup></i> board	dit.	XII.	<i>q!əq!ak'<sup>u</sup>q!ē<sup>o</sup>k'<sup>u</sup></i>
<i>sAQ'Ák'<sup>u</sup></i> war-club	dit.	XV.	<i>sísAQ'sAQek'<sup>u</sup></i>

*Sub-type II e.* Reduplicating syllable of plural of simplex changed to *cau-*:—

<i>xá'ā</i> big clam	I.	II.	<i>xəxau<sup>x</sup>á'<sup>A</sup></i> (note change of <i>xá'ā-</i> to <i>-xā'a</i> , perhaps due to rhythmic analogy of dim. sing. <i>xəxá'<sup>A</sup></i> )
<i>q!áik'<sup>u</sup></i> eagle	VIII.	-ōł	<i>q!əq!Auq!áik-ōł</i>

These strange diminutive plurals can hardly be explained otherwise than as formed by analogy of such diminutive plurals as *xəxauxá'wa* "little fur seals," *xəxauxāugʷas* "little bears," and *xəxauxauçin'* "little bones," where *-xau-* (*-xau-*) is etymologically justified. The parallelism of *xá'ā* "big clam" and *xá'wa* "fur seal" seems particularly plausible.

*Sub-type II f.* Plural of simplex modified by diminutive feature 4c (for convenience of comparison one form with *cē* is included):—

<i>t!é'ibāi</i> wild cherry	plur. I (or VIII).	dim. XIII a.	dim. plur.
bush			<i>t!ét!amt!á'abāi</i> (really belongs to type I; based on reduplicated plural of type II)
<i>qé'w<sup>4</sup>x</i> steel-head	II.	XVII b.	
salmon			<i>qəqauqá'agʷé<sup>c</sup>x</i> ( <i>-gʷé<sup>c</sup>x</i> as in dim. sing.)
<i>tí'ix<sup>u</sup></i> yellow cedar	VIII.	I b.	<i>títótá'ayix<sup>u</sup></i> ( <i>tí'ix<sup>u</sup></i> > * <i>tíyix<sup>u</sup></i> , <i>tí-</i> being modified to <i>tā'a-</i> ; <i>-tə-</i> , cf. type II e, is peculiar and is probably due to analogy of <i>títótá'agʷax<sup>u</sup></i> "little ferns")

Another diminutive plural with erratic *-ə-* vowel (in both reduplicating syllable for plurality and stem) belonging to type I, is:—

<i>sá'an'</i> cohoe salmon	I.	XIII a.	<i>síšəşə'ád-əl</i>
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The material at hand does not permit to see what analogies have operated here.

*Type III. Reduplicating Syllable: ce; reduplicating vowel of plural of simplex shortened.*

A new feature is here introduced, the shortening of the long reduplicating vowel characteristic of the plural. Sub-types are here also to be recognized.

*Sub-type III a. Plural of simplex not otherwise modified:—*

<i>xōp'xōp'</i> hum- ming bird	plur. I.	dim. -ōl'ʷ	dim. plur.	<i>xwexōp'xō'p'</i> (bas- ed on unredupli- cated simplex)
<i>lā'gʷét!ʷ</i> herring	III b.	xx b.	<i>l̥l̥l̥l̥l̥'gʷét!ʷ</i>	
<i>lā'dak'ʷ</i> skin	III b.	xxIII.	<i>l̥l̥l̥l̥l̥'dak'ʷ</i>	
<i>qā'ya'</i> water	VIII.	VIII a.	<i>qeqeqā'ya'</i>	
<i>xá'a. idatc</i> stump	I.	VIII b.	<i>xexexá'aidatc</i>	
	(type VIII im- plied in dim. plur.)			
<i>sá'yál</i> lake	VIII.	VIII c.	<i>s̥s̥s̥s̥á'yál</i>	
<i>láidatctAn</i> woman's cedar-bark skirt	dit.	xx b.	<i>l̥l̥l̥l̥láidatctAn</i>	

*Sub-type III b. Plural of simplex modified by diminutive feature 2a:—*

<i>tcáyac</i> hand	VIII.	IX a.	<i>tc̥tc̥tc̥cā'yac</i>
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*Sub-type III c. Plural of simplex modified by diminutive features 2a, and 3b or f:—*

<i>sayá'ada</i> neck	VIII.	VIII b.	<i>s̥s̥s̥s̥á'yá'ada</i>
<i>kwúdjāk'ʷ</i> trout	dit.	xxIX b.	<i>kw̥kw̥kw̥k̥w̥á'djāk'ʷ</i>

*Sub-type III d. Plural of simplex modified by diminutive features 4a and 2a:—*

<i>xá'adjaic</i> stone	VIII.	IX b.	<i>xexexá'adje'ic</i>
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*Type IV. Reduplicating Syllable: cê; followed by simplex.*

It seems that a reduplicating syllable with ê tends to be considered the morphological equivalent of double reduplication (see plural type X, diminutive type XVI), in this case of combined diminutive and plural reduplication. Various sub-types are to be recognized, according to whether the reduplicating syllable is followed by the unmodified (or modified) simplex, the modified form characteristic of the diminutive, or by a form still further modified.

*Sub-type IV a. Simplex unchanged:—*

<i>p!ê'ixāi</i> alder	plur. I. (or VIII).	dim. XIII a.	dim. plur. <i>p!êp!ê'ixāi</i>
<i>L!Ams</i> house	dit.	XXXII b.	<i>L!ê'eL!Ams</i>
<i>mô'os</i> hand	no plur.	I a.	<i>mê'mô'os</i> (may also be considered as belonging to type iv b)

*Sub-type IV b. Simplex modified by diminutive feature 5a:—*

<i>tc!ê'ādô</i> dog	II b.	xxvb.	<i>tc!ê'tc!in'ām'</i> (ir- regular in that -ô of stem is dropp- ed; with -ām' cf. perhaps -ā'm of <i>djādjiā'm</i> 'trees')
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*Sub-type IV c. Reduplicating vowel of diminutive changed to ê:—*

<i>xwáxwadjô'm'</i> fly (dim. in form)			<i>xwê'xwadjô'm'</i>
<i>qwi'qwā't!Alā'k'</i> butterfly (dim. in form)			<i>qwê'qwā't!Alā'k'</i>
<i>mAsin'</i> nose	I.	I b.	<i>mê'mAsi'n</i>
<i>kwá'am</i> coiled storage basket	dit.	IV.	<i>kwê'ekwi'im'</i>
<i>q!wát'Am</i> river	dit.	XVIII.	<i>q!wê'eq!wat'im'</i>
<i>tîx<sup>u</sup>sal</i> tongue	II b.	XXVI a.	<i>tê'tîx<sup>u</sup>sal</i>

*Sub-type IV d.* Reduplicating vowel of diminutive changed to ê; stem further modified by diminutive features 5a and 3c:—

*q!wá'ix* wood plur. I. dim. xxxa. dim. plur.  
*q!wê'eq!wadjîx*

*Sub-type IV e.* Reduplicating vowel of diminutive changed to ê; stem further modified by diminutive feature 5b:—

*sâts!Am* tyeë sal- II a. XXII a.  
mon *sê'ests!i'm'*

*Type V. Reduplicating Syllable: cê;* followed by plural of simplex modified by diminutive features 5a and 3a:—

*t!ê'e'dê'qwai* salmon- plur. II a. dim. xxvi c. dim. plur.  
berry bush *t!ê't!Ant!AN'qwâi*  
(-ê'e- is lost, cf.  
diminutive feature  
5 b)  
*sôsin'* mouth II b. xxvi a. *sê'sôssî'n'*

## VI. MISCELLANEOUS LINGUISTIC MATERIAL.

### NUMERALS.

1. <i>pá'a</i>	11. <i>ôp'ân haik'û pá'a</i>	
2. <i>sá'a</i>	20. <i>simcyá'a</i>	200. <i>sá'mîtc</i>
3. <i>tcâlas</i>	30. <i>tcanaux<sup>u</sup>cyá'a</i>	300. <i>tcá'adag<sup>u</sup>îtc</i>
4. <i>môs</i>	40. <i>môsalcyá'a</i>	400. <i>môså'ag<sup>u</sup>îtc</i>
5. <i>sîyâtçis</i>	50. <i>séyats!alcyá'a</i>	500. <i>sêatsá'ag<sup>u</sup>îtc</i>
6. <i>t!áxam</i> (or- <i>ab</i> )	60. <i>t!áxamalcyá'a</i>	600. <i>t!axamá'ag<sup>u</sup>îtc</i>
7. <i>ts!ô'<sup>u</sup>tcî's</i>	70. <i>ts!ô'tcî'alcyá'a</i>	700. <i>ts!ô'tcîså'ag<sup>u</sup>îtc</i>
8. <i>tá'atcî's</i>	80. <i>tá'atcî'salcyá'a</i>	800. <i>tá'atcîså'ag<sup>u</sup>îtc</i>
9. <i>tig<sup>u</sup>ix<sup>u</sup></i>	90. <i>tig<sup>u</sup>ixwalcyá'a</i>	900. <i>tig<sup>u</sup>ixwá'ag<sup>u</sup>îtc</i>
10. <i>ôp'ân</i>	100. <i>t'sá'<sup>u</sup>îtc</i>	1000. <i>t'sá'ag<sup>u</sup>îtc</i>

2000 is *sâba t'sá'ag<sup>u</sup>îtc* or *sá'a t'sá'ag<sup>u</sup>îtc*.

Numerals with classifying suffixes, referring to class of objects counted, are:—

	People	Canoes	Fathoms	Houses	Dollars
1.	<i>pá'pá'a</i>	<i>natc!d<sup>o</sup>gvil</i>	<i>natc!d<sup>u</sup>x<sup>u</sup>tál</i>	<i>natc!á<sup>u</sup>xwáut<sup>u</sup>x<sup>u</sup></i>	<i>páq'os</i>
2.	<i>sísá'a</i>	<i>sábagvil</i>	<i>sámtál</i>	<i>sá'abaut<sup>u</sup></i>	<i>sáq'os</i>
3.	<i>tcálay</i>	<i>tcáá<sup>o</sup>gvil</i>	<i>tcáá<sup>u</sup>x<sup>u</sup>tál</i>	<i>tcá<sup>o</sup>daut<sup>u</sup></i>	<i>tcálasos</i>
4.	<i>mósāyi</i>	<i>mósāul</i>	<i>mósáttát</i>	<i>mósaut<sup>u</sup></i>	<i>mósos</i>
5.	<i>séyatsāyi</i>	<i>séyatsā<sup>o</sup>gvil</i>	<i>séyatsáttát</i>	<i>séyatsaut<sup>u</sup></i>	<i>séyatsos</i>
6.	<i>!ázamāyi</i>	<i>!ázamā<sup>o</sup>gvil</i>			
7.	<i>ts!ótcisāyi</i>				
8.	<i>ta'átcisāyi</i>				
9.	<i>tigv!xwāyi</i>				
10.	<i>ópānāyi</i>				

The series for "dollars" refers, properly speaking, to round objects, including such objects as heads and turnips.

BODY-PART SUFFIXES. Examples of body-part "substantivals," as they have been termed by Boas, which occur only in composition (better perhaps derivation), are:—

- head:* *páq·ē<sup>e</sup>q<sup>x</sup>wan'* white-headed  
*tcíx·ē<sup>e</sup>q<sup>x</sup>wan'* red-headed  
 (or *-ad'*)
- hand:* *páq·ō'<sup>u</sup>dja'* white-handed  
*tcíxō'<sup>u</sup>dja'* red-handed
- eye:* *páq·āos* white-eyed  
*páq'paq'āos* white-eyed (plur.; refers to several persons  
 or to two eyes of one person)  
*tcíxāos* red-eyed  
*tcíx<sup>u</sup>tcíxāos* red-eyed (plur.)
- nose:* *ts!áts!ē<sup>e</sup>miq'<sup>u</sup>* red-nosed  
*páq·ē'<sup>e</sup>q'<sup>u</sup>* white-nosed  
*!á!ts!ā'<sup>o</sup>miq'<sup>u</sup>* nose bleeds
- foot:* *páq'cin'* white-footed  
*páq'paq'cin'* white-footed (plur.)

With these contrast independent use of "ear" in *páq'paq'q!qa'āda* "white ears."

POSSESSIVE AND SUBJECTIVE PRONOUNS. Only very fragmentary data were secured on Comox pronouns. I do not consider them as particularly reliable.

*tatsi mǝ'ǝs* my head  
*tAN mǝ'ǝs* your head

*tA mǝ'ǝss* his head (visible)

*ku mǝ'ǝss* his head (invisible)

*tamsi mǝ'ǝs* our heads  
*tA mǝ'ǝsap'* your  
(plur.) heads (vis-  
ible)

*ku mǝ'ǝsap'* your  
(plur.) heads (in-  
visible)

*tA* and *ku* are articles implying visibility and invisibility respectively. Possessive pronouns modifying verb subjects are:—

'ā *tsi mǝ'ǝs* my head is sore ('ā' to be sore)  
'ā' *tAN mǝ'ǝs* your head is sore  
'ā' *tA mǝ'ǝss* his head is sore  
'ā *tA mǝ'ǝss tA sǎlt'ʷ* the woman has headache (literally, sore  
the her-head the woman)

Possessive pronouns modifying verb objects are:—

*tc'k!údA wad tsi mǝ'ǝs* I see my head  
*tc'k!údxwad das mǝ'ǝs* I see your head  
*tc'k!údxwad dA mǝ'ǝss* I see his head  
*tc'k!údxwad das tc'icāyac* I see your hands  
*tc'k!údxwad dA tc'icāyacs* I see his hands

Subjective pronominal suffixes are:—

*t̄tc t̄'mic* I am a big man (*t̄* big)  
*t̄'ic'ʷ t̄'mic* you are a big man  
*t̄'ʷ t̄'mic* he is a big man  
*t̄'ʷdjan sǎlt'ʷ* I am a big woman  
*t̄'ʷdjax'ʷ sǎlt'ʷ* you are a big woman

## VII. COMPARATIVE NOTES ON SALISH NOUN REDUPLICATION.

This is not the place to enter into anything like a systematic comparative treatment of Salish reduplication, the more so as the phonetics of most of the material available for comparison are not such as to allow one to make definitive classifications of plural and diminutive types (this remark applies particularly to vocalic quantity and glottal stops, both of which, as we have seen, are important for our present purpose). Certain facts of a comparative nature, however, come out quite clearly and may be briefly noted here.

PLURAL REDUPLICATION. It is evident that all Salish languages make use, like Comox, of different types of plural reduplication. Both types I and II are plentifully illustrated and are without doubt the fundamental Salish processes. Examples of type I are:—

Bella Coola	<i>s-tn</i> tree	plur. <i>s-tntn</i> <sup>1</sup> ( <i>s-</i> , as often in Salish, is prefix)
Tcil'qéuk (Cowichan group)	<i>s-kwomái</i> dog	<i>s-kwomkwomái</i> <sup>2</sup>
Shuswap	<i>sk'áqa</i> dog	<i>s-k'aqk'áqa</i> <sup>3</sup>
	<i>nóqonuq</i> woman	<i>noqnóqonuq</i> <sup>3</sup>
Okanagan	<i>s-k'elteméq</i> man	<i>s-k'elk'elteméq</i> <sup>4</sup>
Thompson River mountain	<i>s-k'um</i>	<i>s-k'umk'um</i> <sup>5</sup>
	<i>s-núkoa</i> friend	<i>s-nukenúkoa</i> <sup>5</sup>
	<i>s-kōum</i> crumpled	<i>s-kōumkōum</i> <sup>5</sup>

Examples of type II are:—

Nanaimo	<i>s-pál</i> raven	<i>s-pelpá'l</i> <sup>6</sup>
	<i>s-tálo</i> river	<i>s-teltá'lō</i> <sup>6</sup>

<sup>1</sup> F. Boas, *The Salish Languages of British Columbia*, Report of British Association for the Advancement of Science, 1890, 6th Report on the Northwestern Tribes of Canada, p. 127.

<sup>2</sup> C. Hill-Tout, Report of British Association for the Advancement of Science, 1902, Report on the Ethnological Survey of Canada, p. 20.

<sup>3</sup> F. Boas, *ibid.*, p. 131. *k'* is here and in other forms equivalent to our *q*; *q* to our *x*; *tl* to our *l* (and *L*); *ll'* to our *l'*.

<sup>4</sup> *Ibid.*, p. 135.

<sup>5</sup> F. Boas, Report of British Association for the Advancement of Science, 1898, 12th and Final Report on the Northwestern Tribes of Canada, p. 28.

<sup>6</sup> F. Boas, Report B.A.A.S., 6th Report on N.W. Tribes, p. 129.

Shuswap	<i>s-kápk'ən</i> head plur.	<i>s-k'εpkápqən</i> <sup>1</sup> (probably misprint for <i>-kεpkápk'ən</i> )
	<i>k'ēst</i> bad	<i>ky'εskēst</i> <sup>1</sup> (probably misprint for <i>-k'ēst</i> )
Okanagan	<i>s-k'ēlq</i> Indian	<i>s-k'εlk'ēlq</i> <sup>2</sup>
Thompson River	<i>cāENQ</i> stone	<i>cεncāENQ</i> <sup>3</sup>
	<i>s-pam</i> camp fire	<i>s-pεmpám</i> <sup>3</sup>
	<i>s-nikiáp</i> coyote	<i>s-níkknikiáp</i> <sup>3</sup> ( <i>-i-</i> is very open and short, <i>-i-</i> is close and equivalent to our <i>-i-</i> ; hence type II b)
	<i>s-quasít</i> to walk	<i>s-quśquasít</i> <sup>3</sup> (type II c)

An interesting Thompson River example of type II is:—

*cirāp* tree      *cipcirāp*<sup>3</sup>

An example of type III (reduplicating *-aw-* contracted to *-o-* or *-ō-*), but with retained *-w-* (Comox *-g<sup>w-</sup>*) is:—

Okanagan      *tētuwēt* boy      *tōtūt*<sup>4</sup> (based on unre-duplicated form of simplex; final vowel of stem apparently shortened)

This example follows type III b. As illustrating diversity of usage in the treatment of the same stem in different Salish languages, compare with this:—

Lower Lillooet      *tū'ū<sup>w</sup>wut'* boy      *tūtū'ū<sup>w</sup>wut'*<sup>5</sup> (*-u-* is short and close)

This follows type III a, besides which the stem itself seems to differ markedly in regard to vocalic quantity and rhythm from the cognate Okanagan stem. Shuswap agrees better with Okanagan:—

*tūwēt* boy      *tūtūwēt*<sup>6</sup>

<sup>1</sup> *Ibid.*, p. 131.

<sup>2</sup> *Ibid.*, p. 135.

<sup>3</sup> F. Boas, Report B.A.A.S., 12th Report on N.W. Tribes, p. 28.

<sup>4</sup> F. Boas, Report B.A.A.S., 6th Report on N.W. Tribes, p. 135.

<sup>5</sup> Some Lower Lillooet linguistic material was obtained in January, 1912, from I naec Jacob (Indian name *Yisp*).

<sup>6</sup> F. Boas, *ibid.*, p. 131.

It would seem that type VII, which is only sporadically represented in Comox, is more typically developed in Interior Salish. Examples are:—

Shuswap	<i>tsitq</i> house	plur. <i>tsĩtsĩtq</i> <sup>1</sup>
	<i>gĩēia</i> old woman	<i>gigiēia</i> <sup>1</sup>
Thompson River	<i>tcĩlq</i> house	<i>tcĩtĩtq</i> <sup>2</sup>
	<i>s-tsuk</i> picture	<i>s-tsutsúk</i> <sup>2</sup>
	<i>s-k'ák'qa</i> dog	<i>s-k'ak'ák'qa</i> <sup>2</sup>
	<i>s-peúzō</i> bird	<i>s-pepezúzō</i> <sup>2</sup> (this form, however, may really be diminutive plural, <i>s-peúzō</i> being diminutive, with final reduplication, of <i>s-pežō</i> "animal," whose plural is normally formed: <i>s-pežpežō</i> , <sup>2</sup> type I)
	<i>s-kikeláqoa</i> musk-	
	rat	<i>s-kikikeláqoa</i> <sup>2</sup>
Lower Lillooet	<i>tcĩt'ux</i> house	<i>tcĩtĩt'ux</i> <sup>3</sup>
	<i>qō'o</i> water	<i>qōqō'o</i> <sup>3</sup>
Note also:—		
Nanaimo	<i>k'únes</i> whale (i.e. <i>qúnēs</i> )	<i>k'ōkúĩnis</i> <sup>4</sup> (probably misprint for <i>-k'úĩnis</i> )

It is interesting to contrast with this plural (*qōqwĩnis* in our orthography) Comox *qwAd'qwÁdi*'s humpbacked whales (<*qwAnqwÁnis*) of type I. Here again we see the tendency for different Salish languages to form the plural of the same stem according to different types.

Type IX also is illustrated outside of Comox. Examples are:—

Nanaimo	<i>láleM</i> house	<i>laláleM</i> <sup>4</sup>
	<i>wúqas</i> frog	<i>hāuwéqas</i> <sup>4</sup> (-u- presumably glide; <i>hāw-</i> dissimilated from <i>*wāw-</i> ?)
Teil'qéuk	<i>méla</i> son	<i>māmela</i> <sup>5</sup>

<sup>1</sup> *ibid.*, p. 131.

<sup>2</sup> F. Boas, Report B.A.A.S., 12 Report on N.W. Tribes, p. 28.

<sup>3</sup> Obtained from Ignace Jacob.

<sup>4</sup> F. Boas, Report B.A.A.S., 6th Report on N.W. Tribes, p. 129.

<sup>5</sup> C. Hill-Tout, Report B.A.A.S., 1902, Ethnological Survey of Canada, p. 20.

Type X is illustrated in:—

Nanaimo	<i>k'ák'EN</i> post	plur. <i>k'álak'EN</i> <sup>1</sup> ( <i>ā</i> is apparently our <i>ê</i> )
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The last example, with its inserted *-la-*, shows also another method of plural formation, one not found, at least as far as can be judged from available material, in Comox. Other examples of this inserted *-l(a)-* are:—

Nanaimo	<i>há'pet</i> deer	<i>halá'pet</i> <sup>2</sup> (type IX)
	<i>tcitc'iek'an</i> mink	<i>tcilet'c'iek'an</i> <sup>2</sup> (type VII)
	<i>spák'EM</i> flower	<i>spálak'EM</i> <sup>1</sup>
Tcil'q'ëuk	<i>k'āmi</i> maid	<i>k'ālam</i> <sup>3</sup>
	<i>stEkēyū</i> horse	<i>stELkēyū</i> <sup>3</sup>
	<i>yāsuk</i> hat	<i>yālsuk</i> <sup>3</sup>

There seem to be still other types of plural formation in Salish that are not represented in the Comox material given in this paper. One of these is to prefix *-A-* (Boas and Hill-Tout write *-E-*), which may be palatalized to *-i-*, to the stem. Examples of this type are:—

Nanaimo	<i>s-mēyeç</i> deer	<i>s-EMēyeç</i> <sup>4</sup>
Tcil'q'ëuk	<i>s-wēEka</i> man	<i>s-īwēEka</i> <sup>3</sup> ( <i>-A-</i> palatalized to <i>-i-</i> , <i>-ī-</i> by <i>s-</i> ?)

This type is perhaps a reduced form of another one that occurs with some frequency, reduplication with *ca-*. Examples are:—

Tcil'q'ëuk	<i>lāLEM</i> house	<i>leLāLEM</i> <sup>3</sup>
	<i>s-mālt</i> stone	<i>s-mEMālt</i> <sup>3</sup>
Shuswap	<i>la</i> good	<i>leLā</i> <sup>5</sup>

Nanaimo *lalāLEM* "houses," as compared with Tcil'q'ëuk *leLāLEM*, suggests, in turn, that *ca-*reduplication is reduced from *ca-*reduplication (type IX). Tcil'q'ëuk *yEsīām* "chiefs"<sup>3</sup> from *sīām* may be dissimilated from *\*sEsīām* (or does *y-* reduplicate *-ī-* of stem?). Vocalic changes (*ē* to *ō* and *ā*) are illustrated in:—

Tcil'q'ëuk	<i>s-wēEkātł</i> boy	<i>wōEkātł</i> <sup>3</sup>
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<sup>1</sup> F. Boas, Report B.A.A.S., 6th Report on N.W. Tribes, p. 129.

<sup>2</sup> *ibid.*, p. 128.

<sup>3</sup> C. Hill-Tout, Report B.A.A.S., 1902, Ethnological Survey of Canada, p. 20.

<sup>4</sup> F. Boas, Report B.A.A.S., 6th Report on N.W. Tribes, p. 128.

<sup>5</sup> *ibid.*, p. 131.

*s-wéwilus* youth      *s-wáwilus*<sup>1</sup> (this may be considered, however, as formed from unreduplicated simplex according to Type IX)

With the latter example compare Comox *wé'wālos* "young men" from *wé'wālos*.

To sum up, it is clear that there are a number of wide-spread Salish methods of forming the plural, which may, however, at last analysis turn out to be capable of reduction to Type I (of which Type II may be a reduced form). It is conceivable that sub-types, which have developed in particular cases from this by secondary phonetic processes (cf., e.g., Comox Types III and VIII), set the pace for new purely analogical, not etymologically justifiable, forms, so that now any one Salish language exhibits great irregularity. Certain of these secondary types seem to be favoured in one language, others in another, so that, as we have seen, the same stem is sometimes differently treated in different languages. To unravel the history of reduplicated (and other) plurals in Salish, however, requires a far more abundant body of material, for purposes of comparison, than has as yet been made accessible.

**DIMINUTIVE REDUPLICATION.** The last remark applies even more forcibly to the study of Salish diminutive formations, for here there is a still greater variety of types represented. Available comparative data are quite scanty, so that only a few points can here be referred to. The most consistently carried out difference between plural and diminutive reduplication in Salish is that in the former the first two consonants of the stem (though not infrequently only the first) are reduplicated, while in the latter only the first is reduplicated, never also the second. At the same time there is a marked tendency, as in so many Comox examples, for vocalic reduction of the stem. Reduplication with *ē*-vowel seems also characteristic of many forms; also breaking of stem vowel and umlaut of *a* to *ε* or *ē* seem to be found.

Some of the types represented, outside of Comox, are:—

<sup>1</sup> C. Hill-Tout, Report B.A.A.S., 1902, Ethnological Survey of Canada, p. 20

## Type X.

Nanaimo	<i>lálɛm</i> house	diminutive <i>lélɛm</i> <sup>1</sup> (based on unreduplicated simplex)
Okanagan		<i>hélwōtɛm</i> little girl <sup>2</sup> ( <i>h</i> = our <i>x</i> <sup>v</sup> )

## Type XII.

Nanaimo	<i>wúqas</i> frog	<i>wéwēqas</i> <sup>3</sup>
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## Type XIX a.

Nanaimo	<i>k'ák'ɛn</i> post	<i>k'ák'k'ɛn</i> <sup>3</sup>
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## Type XXI a.

Shuswap	<i>pasítlkua</i> lake	<i>papsítlkua</i> <sup>4</sup>
Thompson River	<i>s-núkoa</i> friend	<i>núnkoa</i> <sup>7</sup>

## Type XXIII.

Tcil'qéuk	<i>s-tálō</i> river	<i>s-tátɛlō</i> <sup>5</sup>
Nanaimo	<i>s-tá'lo</i> river	<i>s-tátɛlō</i> <sup>6</sup>

## Type XXVI a.

Nanaimo	<i>s-púk'ɛm</i> flower	<i>s-pâpk'ɛm</i> <sup>6</sup>
Comparable perhaps to Comox Type XXX a is:—		
Thompson River	<i>s-pêê'tc</i> black bear ( <i>ê</i> = our <i>e</i> )	<i>s-pâpaats</i> <sup>7</sup> (- <i>aa</i> = - <i>a'a</i> ?)

Other diminutive types than those listed for Comox undoubtedly exist in Salish. Among these is reduplication with *ca-* (cf. plural types above), as examples of which may be given:—

Thompson River	<i>c-méits</i> deer	<i>c-méméits</i> <sup>8</sup>
Tcil'qéuk	<i>lúɛm</i> house	<i>lélúm</i> <sup>9</sup> (based on unreduplicated form of simplex; change of - <i>E-</i> to - <i>á-</i> is perhaps parallel to that of Comox - <i>A-</i> to - <i>í-</i> )

<sup>1</sup> F. Boas, Report B.A.A.S., 6th Report on N.W. Tribes, p. 129.

<sup>2</sup> C. Hill-Tout, Report on the Ethnology of the Okanák'eu of British Columbia, Journal of the Royal Anthropological Institute of Great Britain and Ireland, vol. xli, 1911, p. 143.

<sup>3</sup> F. Boas, *ibid.*

<sup>4</sup> Boas, *ibid.*, p. 131.

<sup>5</sup> C. Hill-Tout, Report B.A.A.S., 1902 Ethnological Survey of Canada, p. 20.

<sup>6</sup> Boas, *ibid.*, p. 129.

<sup>7</sup> Boas, Report B.A.A.S., 12th Report on N.W. Tribes, p. 29.

<sup>8</sup> Boas, *ibid.*

<sup>9</sup> Hill-Tout, *ibid.*



This difference of treatment again indicates that in many respects each dialectic division of Salish has gone its own way in the use of morphologic features common to Salish generally.

### Editorial Note

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Pluralizing and diminutive reduplication is nearly universal in Salishan (Kuipers 1978: 612). Haeberlin's survey of Salishan reduplication (1918), compiled shortly after the appearance of Sapir's paper and undoubtedly stimulated by it, summarizes the Comox data (169-170) and cites similar patterns from a number of other languages, but does not go much beyond Sapir's own comparative remarks. Paul Kroeber (1988) has recently published a study of inceptive reduplication in Comox. The reduplicative morphology of several other Salishan languages has been described in detail; see in particular Hess's study of "chameleons" in the Snohomish dialect of Lushootseed (1966).



THE RIVAL WHALERS, A NITINAT STORY

(Nootka Text with Translation and Grammatical Analysis).

The following text was dictated to me in November, 1913, by Tom (*Sa'ya't'capis* "Stands up high on the beach"), one of the oldest and best informed men of the *T'suca'ath* tribe of Nootka. The grammatical analysis should give a serviceable idea of Nootka structure, pending the appearance of a full grammar of the language. The phonetic system used in this paper is explained in "Phonetic Transcription of Indian Languages, Report of Committee of American Anthropological Association" (Smithsonian Miscellaneous Collections, vol. 66, no. 6, 1916, particularly pp. 7-15); my *u*, however, is always open, as in English *full*, and varies freely with close *o*. The tale is Nitinat (Nootka dialects south of Cape Beale, including Makah of Cape Flattery, Washington), but its linguistic form is Nootka proper (*T'suca'ath* dialect), except for the names of the rivals, which are unmodified Nitinat.

TEXT AND INTERLINEAR TRANSLATION

'o'sumit'catt <sup>1</sup>	ma''ak' <sup>2</sup>	
Now trained secretly for success in so and so	California whale	
't'ha'to'p' <sup>3</sup>	k'walisits. <sup>4</sup>	wε'tcu''atł <sup>5</sup>
humpbacked whale	K'walisits.	Now went to sleep,
hawt''atł <sup>6</sup>	'o'sumitc. <sup>7</sup>	t'st'k'p'atł <sup>8</sup>
now finished	train secretly for success in so and so.	Now lay down in the house on (his) back

'i'n'k''i'. <sup>9</sup>	w'k'attuk' <sup>10</sup>	t'st'k'p'atł <sup>11</sup>	
the fire.	Now of (him) was not	lie down in the house on (her) back	
to'ts'mx' <sup>12</sup>	t't'qwd'atł. <sup>13</sup>	'na'ts'a'itł <sup>14</sup>	
woman,	now sat in the house	Now was looking at	
t'aci''ak''i' <sup>15</sup>	'a'the'. <sup>16</sup>	ya'it <sup>17</sup>	
the door of (them)	be night.	There	
ka'tth'atł <sup>18</sup>	t'aci''i' <sup>19</sup>	t'ō'h'at'sit'. <sup>20</sup>	
appeared	the door	head.	
qwa' <sup>21</sup>	qwε''t'q' <sup>22</sup>	k'a'yu'mm'. <sup>23</sup>	
Was in quality	as is in quality	panther.	
ya'it	h't'at' <sup>24</sup>	s't'a' <sup>25</sup>	t'ō'h'at'sitat''i' <sup>26</sup>
There	of (him) was at	tail	the head of (him),
qwa' <sup>27</sup>	'ah'a'. <sup>28</sup>	wk' <sup>29</sup>	
was in quality	this.	Was not	
t'ha''ya'x. <sup>30</sup>	ya'it	histsa'q't'so' <sup>31</sup>	
move quickly.	There	was provided at each end with	
t'ō'h'at'sit'.	su'kwitł <sup>32</sup>	tca'kopokw'i' <sup>33</sup>	
head	Took hold of	the husband of (her)	
to'ts'mε''i'. <sup>34</sup>	tci'tcittł <sup>35</sup>	tlup'k'sa'p'atł. <sup>36</sup>	
the woman.	Pulled,	now caused to wake up.	
tlup'k'citł <sup>37</sup>	k'walisits.	ya'it	
Woke up	K'walisits.	There was	
t'ō't'ō'h'atsaq't'so' <sup>38</sup>	su'kwitł	ts'kumni-	
Head-at-each-end.	Took hold of	the iron	

'ak'v'39 k'wal'is:ts t'ci'tc:tt40 'ah'a41  
of (him) K'walisits, cut this,  
hε's'a:p'42 'ah'ako'43 'a'ap'ts:t'atcxt'v'.44  
caused to bleed this the thigh of (him).  
tuxtspa'45 k'wal'is:ts. t'ci'tc:ttla46  
Jumped over K'walisits. Cut also  
kw:sa's'at'v'.47 tli'cth.ni.48 hε's:c:tt.49  
the other side of (him) foot. Bled.  
kw:'spano'lc:ztl'50 hε's:im'ya w'ztl'51  
Now began successively now became blood-  
(to jump) from side to side, covered  
t'o't'ɔh'atsaq't'so'v'.52 qah'ac'i'εt'53 t'o't'ɔh'a-  
the Head-at-each-end. Now died the Head-  
tsaq't'so'v'. ɔ'u'y:tc:lc:ztl'54 qw:'sh'a'tf'55  
at-each-end. Now began to Now was acting  
make medicine. thus that  
'a'yum'k'c:ztl'56 ma''ak'.  
now began to obtain many California whale.  
in hunting  
'napxta''atlqo'wε'ni'57 t'saxci'εt'qo'.58  
Now would die imme- whenever now speared.  
diately, it is said,  
'ah'a'a''atlwε'ni'59 t'ha'o''atl'ta'60  
Now was thus, it is said, now another was also  
t'so''tch'c:tt'61 wε''it'cah's'at'62  
winter take place. Now was sleeping in (his)  
canoe  
k'wal'is:ts h'f 'anah'a'is'63 t'ca'pats'64  
K'walisits, was at little canoe  
'athe''16 'oyo'al'at'65 kw'istsatcitt'ca'66  
be night. Now perceived the, as they say, "go  
so and so off elsewhere"  
ɔ'h'a'tf'67 tca'ats'v'b'68 'ukla'69  
now the one was Cha'atssib' was named so  
and so  
'ε'm'ina:k'70 t'ha'o' 'o'o'tah'.71  
have as name, was another hunt such and such  
sea-mammals.

t'h''wɪn'ap'at'72 k'wal'is:ts 'ani'73  
Was caused to be laughable K'walisits that  
qa'y'a:panatcqa'74 wε''utcqa' w'k'al'at'at'76  
being drifting being sleeping, being now not  
aimlessly aware of  
kw'istsatcitt'77 'na's'.78 hac'i'v'c:tt'79  
being ' going off else- day. Heard about  
whither "  
k'wal'is:ts 'ani'73 t'h''wɪn'ap'at'qa'.80  
K'walisits that being caused to be laughable.  
ya:k'c'i'εt'81 h''maqst'.82 w'k'  
Of (him) became sore heart, was not  
citt'εt's'83 h'v'sasa'84 tlo''ow'is'.85  
move inland, stayed right on Tlo'owis.  
the beach  
citt'εt's'at'86 ni'ti'na'ath'87 'utsatc'i'εt'88  
Now moved Nitinat now went off to so  
inland people, and so  
t'sa'akokw'v'.89 w'v'napat'90 k'wal'is:ts  
the stream of Now remained K'walisits  
(them).  
tlo''ow'is h'f'at' w'k'v't'c:tt'91  
Tlo'owis now was at. Became non-existent  
qo''as'92. 'o's:mi'tc'v'ztl'93  
person. Now began to train secretly for  
success in so and so  
k'wal'is:ts ma''ak'. h'v'nis'o'-  
K'walisits California whale. Began to  
'uk'c:tt'94. wa'lak'95  
move up and down (like a Was bound for  
blowing whale).  
sayε'v'96 mo'v'ci'97 h'v'nis'o'uk'98  
the far- was for four move up and down  
distant; days whale-fashion  
mo'99 'na's mo' 'a'thai'100. h'na's:ut'101  
four daylight four be night. Arrived at  
kaxi'kis 102 'uk'ε'v'e'103 nis'ma'104.  
Kabikis the so-and-so-named land.

t'i'q'satł<sup>105</sup> k'wa'lisits. ya't  
Now sat down on the beach K'walisits. There  
h'i'tah'atıs<sup>106</sup> t'ca'pok'u<sup>107</sup> t'sa''ak'i'.<sup>108</sup>  
came down-stream canoeman the river.

tław'tc'i'εt'<sup>109</sup> h'i's't'q'<sup>110</sup>  
Now was approached where (he) was on the  
beach

k'wa'lisits nawa'yis<sup>111</sup>  
K'walisits be seated on the beach looking  
around.

h'nu'ta<sup>112</sup> h'i'tyin'i'<sup>113</sup> t'ca'pokw'i'.  
Went out of the the one at the canoeman.  
canoe the bow

s'ma'tsyn<sup>114</sup> m'is'y'i'<sup>115</sup>.  
(They) had sticking up in the bow spear.

t'i'q'st'csa'at'<sup>116</sup> k'wa'lisits 'o'h'at'<sup>117</sup>  
Was sat alongside of K'walisits was soed by  
on beach

t'ca'pokw'i'. qatcc'i'εt'<sup>118</sup>. 'o'quni'hεm'a<sup>119</sup>  
the canoeman. Now was "It is fine  
nudged with weather,  
(his) elbow.

takħa<sup>120</sup> 'ah'a' na's'i'<sup>121</sup> wa''at'<sup>122</sup>.  
is it not? this the day," was said to (him).

'moqw'i''yu'tł<sup>123</sup> k'wa'lisits hε's'hi'tc'i'a'h'<sup>124</sup>  
Became speechless K'walisits, became unable  
in (his) throat in any way

ts'q'c'itł<sup>125</sup> qah'kwatc'i'xt'<sup>126</sup> qa''yap't'xt'i'.<sup>127</sup>  
speak, of (him) the limbs of  
completely died (him).

tłx'k'ic'itł<sup>128</sup> qo''as'i' ya't'sc'itł<sup>129</sup>  
Stood up the person, walked off

ho'a'tsatc'itł<sup>130</sup> t'ca'patsukw'i'<sup>131</sup>. huta'qs'itł<sup>132</sup>  
go off back the canoe of (him). Went into  
(his) canoe

t'ca'patsukw'i'. tłε'h'c'itł<sup>133</sup> yε +<sup>134</sup>  
the canoe of (him). Paddled off yonder,

ta'kh'at'atc'itł<sup>135</sup>. 'o'h'atł<sup>67</sup>  
became far out at sea. Now was the one

t'c'i'ni''ath'a't'ca'<sup>136</sup>. 'oya'atł ti'tcatc'i'εtł<sup>138</sup>  
the, as they say, Now was at now come  
Ch'ini-person. such and such a to life  
time

tłε'h'c'i'εtł'i'q'<sup>139</sup> t'ca'pokw'i' t'c'i'ni''ath'a'e'<sup>140</sup>.  
when now the canoeman the Ch'ini-  
paddled off person.

su'kw'itł<sup>142</sup> 'i'nax'max''i'.<sup>141</sup> t'umt's'ap'<sup>142</sup>.  
Took hold of the regalia of rubbed about  
(him), on the beach.

h'i's'<sup>143</sup> 'ah'a'<sup>144</sup> mo'tci'yis<sup>145</sup>.  
Was there on the that be for four  
beach days on the beach.

h'i'tats'oh'at'itł<sup>146</sup> qwa'yεt's'i'k'<sup>147</sup>  
Now came out of the woods also wolf.

tław'tc'i'εt'itł<sup>148</sup> k'wa'lisits. tsusk'c'i'εt'uk'u<sup>149</sup>  
Was approached K'walisits. Of (him) was  
again urinated on

mu'tsm'ohaq'<sup>150</sup> k'wa'lisits. qwa''ak'<sup>151</sup>  
bearskin K'walisits. Of (him) was in  
quality

qwε''it'q'<sup>152</sup> kats'o'm'ni'<sup>153</sup>. 'ah'a''atł  
as is in quality hail. Now was thus

haw'i''atł ho''atsatc'itł k'wa'lisits  
was now finished, went off back K'walisits

walc'i'εtł<sup>154</sup> maht'i''ak''i'<sup>155</sup> ha'wi'tł<sup>156</sup>  
Now returned the house of Was finished  
home (him).

t'so''itč'a'. t'cukwe''atł<sup>157</sup> ma''ak'.  
winter. Now began to run California whale.

t'sa'xc'itł tca'ats'v'b'. qa'h'sa'p'<sup>158</sup> ma''ak''i'  
Speared Cha'atssib'. Caused to die the Californ-  
nia whale

ya'a'nit'it'q'<sup>159</sup> t'h'i''wini'ap'at' k'wa'lisits.  
the one by whom caused to be K'walisits.  
had been — ed laughable

t'sa'xc'itł 'yo'qwa'<sup>160</sup> k'wa'lisits. t'sa'xc'itłitł<sup>161</sup>  
Speared likewise K'walisits. Speared again

tca'ats:r'b' h:m:r'p'tla' 162. t'sa'xc:tl' 'yo'qwa'  
Cha'atssib', again obtained. Speared likewise

k'wal's:ts h:m:r'p' 'yo'qwa' mo''y:p' 163  
K'walisits, obtained likewise. Obtained four

tca'ats:r'b' ma''ak' 'ana 164  
Cha'atssib' California whale, was only

kwa'l's:ts su't'c:p' 165 ma''ak'.  
K'walisits obtain five California whale.

t'lu'p':tch'c:tl' 166 'o'o'ε:h'c:tl' 167 'i'h'a'to'p'.  
Became summer, began to be in whale.  
pursuit of so and so

t'sa'xc:tl'tla tca'ats:r'b' 'i'h'a'to'p'.  
Speared again Cha'atssib' whale.

'o'w'a'p'ap' 168 t'sa'xc:tl' tca'ats:r'b'.  
Repeatedly caused so and spear Cha'atssib'.  
so to be first

t'saxc'ε:tl'tla 'yo'qwa' k'wa'l's:ts 'i'h'a'to'p' 'i'.  
Now speared likewise K'walisits the whale.  
again

mo''y:p'at'tla 162 'i'h'a'to'p' tca'ats:r'b'.  
Now obtained four again whale Cha'atssib',

wk'l'm:tc'ztl' 170 h:m:r'p' tca'ats:r'b'.  
now became unable obtain Cha'atssib'.

su't'c:''y:p'at'tla' 171 k'wa'l's:ts 'i'h'a'to'p'.  
Now obtained five again K'walisits whale.

su't'c:'y:p'tla ma''ak'. hayo''y:p'c:tl' 172  
Obtained five also California Had obtained ten  
whale.

k'wa'l's:ts 'a'takwah:p' 173 tca'ats:r'b'.  
K'walisits, obtained eight Cha'atssib'

'oyo'ah't' 174 'b'h' 175 kw'ε:stsac:tl'.  
the one who had be the one "go off else-  
perceived so and so wither".

'a'takwah:p' 'b'h' 'ana k'wa'l's:ts  
Obtained eight was the one, was only K'walisits  
hayu''y:p' 176. ha'okwi'ε:tl' 177 k'wa'l's:ts  
obtain ten. Now took revenge K'walisits

ya'a'ni't'it'q' 159 t'lu''wun'ap'at'.  
the one by whom had been caused to be laugh-  
— ed able.

sa'tckok't'cac 178 'o'u'y' 179 tca'ats:r'b'.  
"Of (him) is sharp medicine Cha'atssib'.  
evidently

'a'q'εniqha 180 'a'takwah:p' tca'ats:r'b'.  
For what reason is obtain eight Cha'atssib'.  
he that

'a'n'aqa 181 'o'u'yiwztl' 172 hayo''y:p'at's: 183  
being alone have medicine fall Now I obtained  
to (his) lot? ten

si''ya' 184 yaqe's 185 w'k' 'o'u'yiwztl'  
I I who am not have medicine fall  
to (my) lot,"

wa''at' 186 k'wa'l's:ts ha'okwi'ε:tl'.  
now said K'walisits now take revenge.

## TRANSLATION

K'walisits was training in secret for success in hunting California whales and humpbacked whales. And he went to sleep, having completed his ritual training. He lay down on his back near the fire, but his wife did not lie down on her back but sat up. She was looking at their door at night. There at the door appeared a head, looking just like a panther's. There was his head with a tail attached to it, that was what it was like. He did not move briskly. There he was with a head at each end.

The woman took quick hold of her husband, and pulled at him, endeavouring to wake him. K'walisits woke up. There was the supernatural being known as Head-at-each-end. K'walisits seized his iron knife and cut here, making bleed this thigh of his own. K'walisits jumped over him. He made a cut in his other leg. It bled. And so he continued, jumping from one side to the other, until the Head-at-each-end became all covered with blood and

died<sup>1</sup>. K'walisits proceeded to make medicine of him. And this is how he began to capture many California whales when he went out to sea. Whenever he speared, they say, they would die at once.

And then there came another winter. K'walisits was sleeping in his canoe, was in a little canoe through the night. Now there was one bearing the name of Cha'atssib', another whaler, who saw the thing they call "going off to another place"<sup>2</sup>.

K'walisits was laughed at because he was drifting about aimlessly, asleep, and because he was not aware that it was the season of "going off to another place". K'walisits heard about how he was being laughed at. His heart grew sore and he did not move inland with his people for the drying of salmon but stayed right at Tlo'owis. The Nitinats moved inland, they went off to their river, but K'walisits remained behind there at Tlo'owis. All the people had gone.

And then K'walisits began to train secretly for success in hunting California whales. He began to imitate the movements, up and down, of a blowing whale, while on his way to a far-distant place; four days he made motions as of a whale, four spans of daylight and four of

night. He came to the land which is called Kahikis.

K'walisits sat down upon the beach. Yonder on the river was a canoe-party coming downstream. They came near to where K'walisits was, seated on the beach and looking around. The one of the canoe-party that was at the bow came out of the canoe. They had a spear sticking up in the bow. Someone sat down alongside of K'walisits — it was the canoeman, who nudged him with his elbow. "It is fine weather today, what do you think?" he said to him, but K'walisits' voice stuck in his throat. He became unable to speak and his limbs became lifeless. The person stood up and walked back to his canoe. He went into his canoe, paddled off way yonder, until he was far out at sea. Now this one was he whom they call Ch'ini-person.

It was when the canoeman, the Ch'ini-person, set off that K'walisits came to life. He took his bearskin robe and rubbed it about on the beach<sup>1</sup>. For four days he stayed at that place. And then also a wolf came out of the woods. He came near to K'walisits and urinated upon his bearskin, and his urine was like hail. And then K'walisits was done and started back; he returned to his home.

When winter was over, the California whales began to run<sup>2</sup>. Cha'atssib' threw his harpoon and killed the California whale, he who had laughed at K'walisits. K'walisits too speared a whale. Again Cha'atssib' threw his harpoon and again he got his quarry. K'walis-

1. The only way to kill this being is to sprinkle human blood over him.

2. The Nootka Indians believe that twice during the year, at unknown dates, a big lukewarm tide comes in at night and shifts everything about in the village, houses and all. After a short time everything is restored to its proper place. If one happens to be awake at such a time, he can train (*'o:s:m'ite*) for anything he pleases, such as wealth or success in whaling, and be sure of attaining his desire. Should he step into the water, however, he becomes paralyzed for life. He must step into a canoe or move back to higher ground. Signs of the approach of the mysterious "shift" are the birds starting in to sing and the mice running through the house. The people become very drowsy just before the "shift", so that few are fortunate enough to be awake during the spell and make "medicine" of it. K'walisits too was caught napping, great whaler though he was. His rival was more fortunate.

1. Wherever the Ch'ini-person had been in direct contact with the ground was medicine. In most Nootka tales, legendary or modern, of the acquirement of power, the seeker carries away with him an object granted by the supernatural being, some part or effluvium of his body, or some tangible evidence of direct contact with his body.

2. They migrate north with the coming of warm weather and touch at various points on the west coast of Vancouver Island at fairly regularly recurring dates.

its too speared a whale, he too got his quarry. Cha'atssib' secured four California whales, but it was K'walisits alone who got five of them.

The summer came and they started to hunt humpbacked whales. Once more Cha'atssib' threw his harpoon at a humpbacked whale. K'walisits too speared a whale. Each time he allowed Cha'atssib' to be the first to throw his harpoon. And then, once more, K'walisits too speared his whale. This time too Cha'atssib' secured four whales, but then he proved unable to get another. And K'walisits, once more, obtained five humpbacked whales. And he had obtained five California whales.

K'walisits had ten; Cha'atssib', the one who had seen the "going off to another place", had eight. He was the one who got eight whales, but it was K'walisits alone who obtained ten of them. Now K'walisits had his revenge on him by whom he had been laughed at. "I have found out that his medicine is sharp. Why has Cha'atssib' obtained but eight whales, seeing that he alone has had real medicine fall to his lot? And I have obtained ten, I who have had no medicine come to me", said K'walisits. He had his revenge.

## GRAMMATICAL ANALYSIS

1. *'o'-smi'tc-att* consists of radical element *'o-*, derivative stem-suffix *-smi'tc-*, and word-suffix *-att*, *'o-*, lengthened from *'o-* because of following *-smi'tc-*, is exceedingly common in Nootka in both noun and verb forms; it appears as *'o-*, *'o-*, and as reduplicated *'o'o-*, *'o'o-*, *'o'o-*, and *'o'o-*, each of these forms being determined by the following element. It cannot be used as an independent element but needs always to be followed by a stem-suffix to specify its meaning. Its function is relational; it indicates the person, object, or activity required to limit the following element and frequently, as

here, anticipates a word of specific content (here *ma'ak'* and *'i'h<sup>o</sup>to'p'*). The nature of the relation between *'o-* and the suffixed element is implicit in the latter; thus, it may be construed objectively, as here, subjectively, genitively, causally, and in other ways. A form in *'o-* always implies that the psychological interest centers in the person or object or idea with which the logically significant concept is connected, not in this concept itself. It may be translated A CERTAIN (PERSON, THING), SUCH AND SUCH A (PERSON, THING), SO AND SO. Verbs in *'o-* should be conceived of as answering questions of the type "Who is it that...?" or "What did he...?" in contrast to questions of the type "What did he do?" Thus, *'o'smi'tc ma'ak'* means not so much TO TRAIN SECRETLY FOR SUCCESS IN HUNTING CALIFORNIA WHALES AS WHAT ONE TRAINS SECRETLY FOR IS CALIFORNIA WHALES, RATHER THAN SOMETHING ELSE. CALIFORNIA WHALES, NOT SECRET TRAINING, is the psychological predicate and is anticipated by a place-filling *'o-*; one can also say, more synthetically, *ma'ak'smi'tc* and *'i'h<sup>o</sup>to'p'smi'tc*. There are practically as many verbs and nouns in *'o-* as there are derivative suffixes and combinations of derivative suffixes to append to it, in other words, many hundreds. If the significant content of an *'o-* word, that is, the idea expressed by the derivative suffix, is the true center of interest, *'o-* is replaced by *bu(a)-*, *bu(a)-*, or an entirely different word is used. A few examples of *'o-* words, with parallel and contrastive forms, will make these remarks clearer: *'o-'i's* TO EAT SO AND SO, like *i'si's<sup>2</sup>-<sup>a</sup>is* TO EAT MEAT, contrast *ha'w-* TO EAT (as such); *'o'o'-tut* (reduplicated) TO DREAM OF SO AND SO, WHAT ONE DREAMS OF IS..., like *tutul'c-itut* TO DREAM OF A WOMAN, contrast *po'wits-* TO DREAM (as such); *'o-ha'* TO BUY A CERTAIN THING, like *tutc-ha'* TO BUY A WOMAN, TO MARRY, contrast *makw-* TO BUY; *'o-so'tt* THE ONE WHO DIES IS..., like *wik'-so'tt* NOBODY DIES,

contrast *qah-* TO DIE ; 'o-yu'ha' THE CAUSE OF ONE'S DYING IS... , like *l'sax-yu'ha'* TO DIE FROM BEING SPEARED ; 'o-yu' TO GIVE A CERTAIN THING, like *mo-yu'* TO GIVE FOUR THINGS, contrast *hn-v'* TO GIVE (as such) ; 'o-mv't' SO AND SO'S SON, as verb THE ONE OF WHOM (HE) IS SON... , contrast *l'a'na'* CHILD.

-*sm'ic*, derivative verbifying suffix following stem form, TO UNDERGO SECRET RITUAL TRAINING IN ORDER TO GAIN SUCCESS IN... ; it lengthens stem vowel if short. (Derivative suffixes leave the stem vowel unaffected, lengthen it if short, shorten it if long, or reduplicate the stem according to varying quantitative patterns). Cf. further *ti'ic-sm'ic* TO TRAIN FOR LONG LIFE (*ti'ic* TO BE ALIVE) ; *ha'wut-sm'ic* TO TRAIN FOR WEALTH (*ha'wut* CHIEF, *ha'wut-mis* WEALTH) ; *to'k'-sm'ic* TO TRAIN FOR SUCCESS IN HUNTING SEA-LIONS (*tok-o'k'u* SEA-LION) ; *hi'ic-sm'ic* TO TRAIN FOR SUCCESS IN FISHING BY TORCHLIGHT (*bite-ma'* TORCH). There are probably several hundred such verbifying suffixed elements in Nootka, many of them very specific in content, which differ from primary verb-stems not only in their position but in that they are always construed, according to an implicit syntactic relation, with a preceding denominative term (which may be a " noun " or a " verb " stem). Composition of primary stems is as good as unknown. 'o-*sm'ic* is durative in aspect (all verbs have durative and momentaneous, or inceptive, aspects, most have also at least one iterative aspect, and many have still other aspects).

-*atl*, word-suffix (i. e., attached to complete word, not stem) of colorless content. It may be translated NOW, THEN, AND THEN, SO ; it seems to indicate state or activity at a given moment of time and implies that the verb form is finite. Its use is not obligatory, however. The 'of-*atl* combines with preceding stop (*p*, *t*, *k*, *kw*, *q*, *qw*, *ts*, *tc*, *tl*) into glottalized stop (*p'*, *t'*, *k'*, *k'w*, *q'*, *q'*, *t's*, *t'c*, *t't* respectively ; origi-

nal *q'* and *q'w* have become *q'*, a peculiar glottal stop of strangulated articulation and velar resonance) ; other consonants remain unaffected.

'o-*sm'icatl* is absolute (of undetermined tense-mode) in form. Absolutes, with or without -*atl*, are freely used in narrative ; without -*atl* they are frequently used as complementary infinitives (see note 7). Absolutes with 3d personal subject have no personal suffix (contrast 3d person indicative forms : present 'o-*sm'icatl-ma'* ; preterital 'o-*sm'icatl-t-a'* ; future 'o-*sm'ic-a'q'lt-ma'*). The personal endings of absolute (or narrative) forms differ from those of indicative forms :

	ABSOLUTE	PRESENT INDICATIVE
Sing. 1.	'o- <i>sm'icatl-s'</i>	'o- <i>sm'icatl-ab</i>
2.	'o- <i>sm'icatl-suk'</i>	'o- <i>sm'icatl-ε'ts</i>
3.	'o- <i>sm'icatl</i>	'o- <i>sm'icatl-ma'</i>
Plur. 1.	'o- <i>sm'icatl-n'</i>	'o- <i>sm'icatl-ni</i>
2.	'o- <i>sm'icatl-so'</i>	'o- <i>sm'icatl-ε'tso'</i>
3.	'o- <i>sm'icatl(-'atl)</i>	'o- <i>sm'icatl-ma(-'atl)</i>

A third set of personal endings, used in various modal and subordinate forms and in possessives of nouns, is clearly related to the absolute series :

	INTERROGATIVE	POSSESSIVE
Sing. 1.	'o- <i>sm'icatl-ha-s</i>	<i>l'a'na'k'-qa-s</i> MY CHILD
2.	'o- <i>sm'icatl-ha-k'</i>	<i>l'a'na'k'-t'qa-k'</i>
3.	'o- <i>sm'icatl-ha'</i>	<i>l'a'na'k'(-'i)</i>
Plur. 1.	'o- <i>sm'icatl-hε-ni</i>	<i>l'a'na'k'-q-ni</i>
2.	'o- <i>sm'icatl-ha-so'</i>	<i>l'a'na'k'-t'-q'-so'</i>
3.	'o- <i>sm'icatl-ha(-'atl)</i>	<i>l'a'na'k'(-'v'-atl)</i>

2. Noun of uncertain analysis. -*ak'* is probably durative intransitive (cf. *qah-ak'* TO BE DEAD ; *mo-'ak'* TO BURN [intr.]) or, what at last

analysis amounts to the same thing, absolutive noun suffix (cf. *l'sa-'ak'* TO FLOW, hence STREAM; *l'ca-'ak'* WATER; *tca-'ak'* ISLAND), but is now petrified. *ma'-*, which does not occur alone, may be an old verb-stem (cf. Kwakiutl *ma-* TO CRAWL, TO SWIM ?) that has become obsolete; *ma-'ak'* originally TO SWIM ABOUT, SLOWLY SWIMMING ANIMAL ?

3. *'i'h<sup>a</sup>-to'p'*, literally BIG THING, BIG VARIETY (OF ANIMAL). *'i'h<sup>a</sup>*, durative intransitive BIG, TO BE BIG; inceptive *'iw-a-tcitt* TO GET BIG, GROW UP (Nootka *h*: *w* < Wakashan *xw*: *w*; <sup>a</sup> of *h<sup>a</sup>* indicates voiceless *a*-timbre of *h*, which colors and lowers following high vowels, e. g. *h<sub>2</sub>ɛs* < *h<sup>a</sup>ɛs-*, *h<sub>2</sub>s-* < *h<sup>a</sup>us-*). *-to'p'* (after consonants), *-cto'p'* (after vowels), shortened to *-(c)tup'* under appropriate rhythmic circumstances, noun forming suffix added to verb stems, THING, KIND, CLASS (e. g. *'ah<sup>a</sup>-to'p'* DIVING KIND, SEA-MAMMAL, *kw<sub>2</sub>s-to'p'* DIFFERENT KIND, SUPERNATURAL, ONE WHOSE NATURE IS ABNORMAL, *sa-cto'p'* CRAWL-KIND, ANIMAL WALKING ON ALL FOURS, *'o-cto'p'* SUCH AND SUCH A KIND, *kw<sub>2</sub>kw<sub>2</sub>s-tup'-sa'p'* [red.] TO CAUSE VARIOUS THINGS TO BE OF A DIFFERENT SORT, TRANSFORMER. *-to'p'* < *-to'm-*, cf. *kw<sub>2</sub>sto'm-ah* I AM A DIFFERENT KIND OF BEING, AM SUPERNATURAL.

*ma-'ak'* *'i'h<sup>a</sup>-to'p'* are object of *'o'sim'icatt*, which they follow, as regularly; or, perhaps more accurately, they may be looked upon as merely appositional to *'o-*. Like all nouns not specifically distributive or plural in form, they are indeterminate in number. "And" is generally omitted in Nootka; *'ic*, a conjunctive particle, may be placed between the two nouns.

4. A Nitinat name. *l* does not occur in Nootka except in songs for *n*. *K'wal'sis* is the subject of *'o'sim'icatt*; verb, object, subject — this is the most common Nootka order.

5. From *wɛ'tc-utt*, momentaneous form corresponding to durative *wɛ'tc* TO SLEEP, + *'att*. Momentaneous *-utt* is uncommon for primary

verbs (cf. also durative *-ap<sup>i</sup>'* STANDING, UP IN THE AIR : momentaneous *-aputt*; dur. *-tcict'* ON THE SURFACE OF THE WATER : mom. *-tcictutt*; dur. *'aq'tt* INSIDE : MOM. *'aq'sutt*). Nearly all momentaneous or inceptive forms end in *-tt*. This *-tt* disappears before *-att*, passive (or possessive) *'at'*, imperative *'i'*, finalis *'a-*, irrealis *'a'h<sup>a</sup>* (see note 124), future *'ik'*; e. g. *-sa-'att* (mom.) ON THE BEACH < *-satt* + *'att*, *-o-'at'* (mom. passive) ON THE FACE < *-oit* (cf. dur. *-oit*) + *'at'*, *'i'* (mom. imperative) ON THE GROUND < *'ut* (cf. dur. *'as*) + *'i'*, *-ci-'a'-h<sup>a</sup>* IN ORDER THAT I MAY... < *-cut-* (see note 18), *-ci-'ik-ah* I SHALL... < *-cut-*. *'att* (see note 1). *wɛ'tc'u'att* is narrative absolute, 3d personal subject, as in note 1; this is true of all verb forms commented on in this text, unless otherwise explained.

6. From *haw<sup>i</sup>-tt*, momentaneous form, TO CEASE. *-tt*, momentaneous suffix, drops before *'att* (see note 5); comparatively few primary verbs add simple *-tt* in their momentaneous form (cf. also *'a'k'o'-tt* TO BORROW; *na'o'-tt* TO HAVE FOR EATING). Certain verbs, like *haw<sup>i</sup>-tt*, are basically momentaneous because of their radical significance; they can form only a secondary quasi-durative by making an inceptive, more properly graduative, out of the momentaneous by lengthening its stem vowel, e. g. *hu'w<sup>i</sup>-tt* TO BEGIN TO CEASE, TO BE FINISHING (cf. momentaneous *wat-citt* TO BE GONE HOME, TO RETURN HOME : graduative *wa't-citt* TO BE GOING HOME, TO BE ON THE POINT OF RETURN HOME; mom. *ttaw<sup>i</sup>tt* TO APPROACH : graduative *ttaw<sup>i</sup>tt* TO BE APPROACHING, cf. static durative *ttawa'* TO BE NEAR). *'att*, see note 1.

7. See note 1. Depends as complementary infinitive upon preceding *haw<sup>i</sup>'att*. This use of an absolute verb form to complete the meaning of a preceding finite form is exceedingly common in Nootka. Note that *'o-* does not need to be specified by a following noun.

8. From *t'su'tk'-pitt*, momentaneous form, +*-att*; *-it* lost as in note 5. *t'su'tk-*, verb-stem TO LIE (IN BED) ON ONE'S BACK (aspirated stops are of purely secondary origin in Nootka, being developed from unaspirated surds when they stand at the end of a syllable or immediately before another consonant at the end of a syllable; to the two Kwakiutl series *d* [intermediate]: *t* [aspirated surd] corresponds a single Nootka series *t*, *t'*). *-pitt*, momentaneous form of *-it*, locative suffix IN THE HOUSE. Examples of dur. *-it*: *mom.* *-pitt* are *wɛ'tc-it* TO SLEEP IN BED; *wɛ'tc-pitt* TO GO TO BED; *t'iqw-it* TO BE SEATED ON THE FLOOR; *t'iq'-pitt* TO SIT DOWN ON THE FLOOR; *'nacc-it* TO BE LOOKING (WHEN INSIDE THE HOUSE); *'nacc-pitt* TO LOOK DOWN (WHEN INSIDE). Every local and body-part suffix has a durative and a momentaneous form in *-it*, further an iterative with lengthened stem-vowel, lengthened suffix vowel, and change of momentaneous *-it* to *-t*, e. g. *t'iq'-pit* TO SIT DOWN ON THE FLOOR SEVERAL TIMES. *-att*, see note 1.

9. *'wik'*, noun or durative intransitive, FIRE, TO BE BURNING (said of fire, not burning object). From original *\*an-ak'*; *-ak'*, durative intransitive suffix, see note 2. The common Nootka groups *wi'* and *mi'*, in which the *i* represents a murmured *ɪ*-vowel, go back to fuller forms of type *a* (or *ɪ*, *u*) + *n* or *m* + *a* (or *ɪ*, *u*), in which the second vowel is unaccented (e. g. *-att* MOMENTANEOUS SOUND: *-ɛn'* CONTINUOUS SOUND < *-ɛn'* < *\*-a'na*, in Wakashan terms *\*-q'a-it*: *\*-q'a-la*; *'and'b'-ɔ* SMALL: reduplicated *'ɛ't'n'b'-ɔ* SEVERALLY SMALL < *\*a'd'nab-*). *-i'* (*-i*) is merely a breath-release after all final vowels; it is not heard if the word is pronounced in close contact with the following word), suffixed definite article, often used as nominalizing element. Properly speaking, all "nouns" are indeterminately such, being formally identical with durative intransitives (e. g. *qo'as* A PERSON, TO BE A PERSON) until nominalized by

*-i'* or an equivalent element. Syntactically, *'wik''i'* is objectively related to the preceding verb; the difference between a direct object and an indirect object or local phrase (AT THE FIRE) does not exist for Nootka, because the indirect or local relation is generally expressed by a suffixed element in the verb or is otherwise absorbed in the verb; THE FIRE here amplifies the more general local idea of IN THE HOUSE conveyed by *-pi(-tt)*, no specific rendering of our AT OR NEAR being therefore necessary.

10. *wik-*, durative intransitive, TO BE NOT; *wik'* NOT, NO! is really verbal in form. *wik'* consists of archaic stem *wi-* and durative intransitive *-k'*, cf. *-ak'*, *-ak'* (notes 2, 9); most Nootka derivatives of TO BE NOT are based on *wik-* (e. g. *wik'ni'* TO BE NOT-STOCKED, TO HAVE NO FISH RUNNING UP IT; *wik'-taq'yu'* TO HAVE HAD NO VISITATION, TO BE UNINITIATED), but there are also a number of more archaic formations based on *wi-* (e. g. *wi-'mak'it* TO BE UNABLE; *wi-'aq'it* A MAN IS ANGRY). *-att*, see note 1. *-uk'* (after consonants), *-ak'* (after vowels; often contracts with preceding vowel to *-a'k'*, *-ak'*), possessive word-suffix indicating that the subject of the verb is the owner of the following alienable noun (here WOMAN): *iiis* (WIFE) DID NOT, HE HAD (A WIFE) WHODIDNOT, *wik'attukwah* NOWMINEISNOT, NOW I HAVE WHAT IS NOT; cf. notes 15, 24, 26.

11. See note 8. Complementary infinitive dependent on preceding verb. Negated statements are always expressed by treating the negative as the main verb and having the verb proper follow as an infinitive, e. g. *wikta hwni'* HE-WAS-NOT COME, HE DID NOT COME; *wik't tsiq'citt* DO NOT (imperative) TO-SPEAK! DO NOT SPEAK!

12. Absolute form of noun, assimilated from *to'tc-sma'*. *to'tc-*, lengthened from stem *tut-* WOMAN; examples of derivatives are *tut'-ɔ'h'* TO WANT, BE AFTER A WOMAN, *tut'-na'k'-citt* TO BEGIN TO HAVE A WOMAN, MARRY A WOMAN, *tut-*

*tcí'* TO LIVE AT ONE'S WIFE'S HOME, *to'tc-aw:q̄c* TO CALL FOR A WOMAN, *lututc-atab̄* (red.) TO GO AND SLEEP WITH A WOMAN IN ANOTHER HOUSE-*-sma'*, *-s'ima'*, absolutive stem-suffix lengthening stem vowel; not freely used as derivative element, probably compounded of absolutive elements *-s-*, *-s'í-* (cf. absolutive suffixes *-s-yi'*, *-s-yup'*, *-s-yini'*, *-s'í-mumi'*) and *-ma'* (cf. *ti'tc'ima'* REDHEADED WOODPECKER), presumably reduced from older *\*-sa-* as indicated by irregular plural *to'ts-sa'm:ḥ<sup>o</sup>* WOMEN. Object of *wk'attuk'*, though logically subject of *wk'att* *t'st'k'p'at̄*.

13. *t'iqw-*, verb stem TO SIT; cannot be used without following local suffix, e. g. *t'e'as* (< *\*t'iqw-as*) TO SIT ON THE GROUND, *t'iqw-as* TO BE SEATED ON, *t'e'-εh'ta'* TO SIT AT THE END, *t'iq'-s'ato'-as* TO SIT ON THE GROUND AT THE DOOR. *-t̄*, durative local suffix ON THE FLOOR, IN THE HOUSE; for corresponding momentaneous form see note 1.

14. Assimilated from *'na'tc-sa'tt* (cf. note 12). *'na'tc-*, lengthened from *'nate-*, verb-stem TO LOOK; other derivatives are *'nate-t'so'* TO LOOK INTO (A BARREL), *'nate-i'itt* TO LOOK INTO THE HOUSE, *'nate-a'yit* TO BE LOOKING UP IN THE AIR, *'nate-mat-ap'* TO LOOK ALL AROUND, *'nat'c-aq'tt-a'a'* TO BE LOOKING INTO THE FIRE, *'na'tc-uk'* TO LOOK FOR, *'nate-u'at* TO SEE, *'na'na'tc-a't* (red.) TO WATCH. *'na'ts-sa'* TO LOOK AT, WATCH, SEE is durative; as momentaneous is used *'nate-u'at* (*-u'at*, *-yu'at* TO GET SIGHT OF, PERCEIVE). *-sa'*, durative suffix lengthening stem-vowel, not freely used, cf. durative *-a'*; perhaps identical with stem-lengthening *-sa'* VERY, JUST, -MOST, TOO. *-sa'tt* is contracted from *-sa'-att* (*-att* contracts with certain preceding vowels to *-att*, *-att*, according to rhythmic circumstances; e. g. *-ap'* STANDING + *-att* > *-apat̄*, *-ato'* INTO THE WATER + *-att* > *-atatt*, durative *-a'* + *-att* > *-a'tt*, *-att*). *-att*, see note 1.

15. *t'aci'*, NOUN TRAIL, DOORWAY; absolutive

in *-i'*, stem *t'ac-* (e. g. *t'ac-awin'* WITH A TRAIL IN THE CENTER). *-ak'* (after vowels; often contracts with preceding vowel to *-a'k'*, *-ak'*), *-uk'* (after consonants), possessive word-suffix for alienable nouns; for inalienable possession see note 26; for possessive paradigm, see note 1. THEIR is ordinarily not distinguished from HIS, HER, ITS. *-i'*, nominalizing element, see note 9; *t'aci''ak'* alone would mean TO BE ONE'S DOOR. *t'aci''ak'i* is object of *'na'ts-a'tt*.

16. *'ath<sup>o</sup>-*, verb-stem TO BE NIGHT, *'ath<sup>o</sup>-citt* NIGHT COMES. *'ath-e'* is durative in aspect; verb stems ending in *h* take *-e'*, *-e'* as durative suffix instead of normal *-a'*, *-a'*. Like other absolute durative forms, *'athe'* can be used adverbially; properly speaking, it is a complementary infinitive following *'na'ts-a'tt*.

17. Demonstrative pronoun and adverb, THAT, THERE; properly a verb TO BE THERE. It is based on simpler demonstrative *ya'*, *ya* THAT; for *-t̄*, probably an old local suffix no longer freely employed, cf. *hit* (note 24).

18. *kath<sup>o</sup>-*, verb-stem TO APPEAR, COME INTO VIEW. *-citt*, momentaneous (or inceptive) suffix. Most verbs form their momentaneous aspect by adding *-ci-tt* to the stem if it ends in a consonant, *-ci-tt* if it ends in a vowel, often *-kw-tt* (see note 32) if it ends in *u*, *o'*. Complementary infinitive depending on *ya't*: THERE-WAS TO-APPEAR; *ya'tsi kath<sup>o</sup>citt* THERE I APPEARED, not *ya't kath<sup>o</sup>cittsi*.

19. See note 15. Object of *ya't kath<sup>o</sup>citt*, *t'aci'i'* amplifying the local idea in *ya't*; cf. note 9.

20. Absolutive. Noun-stem *t'oh<sup>o</sup>-* HEAD (e. g. *t'oh<sup>o</sup>-m'* COD-HEAD THAT DRIFTS TO SHORE, *t'o'w-i's* TO EAT A FISH-HEAD). *-t'su'*, absolutive suffix, not otherwise found. Subject of *ya't kath<sup>o</sup>citt*.

21. Properly *qwa'*, verb-stem and durative absolute to BE IN QUALITY, TO BE LIKE.

22. Umlauted from *\*qwa'-i'q'*; *a* and *a'* immediately followed by *i* or *i'* are umlauted to open *ε* and *ε'* (these vowels are felt as dis-

tinct from secondary *e*, *ɛ* and *e'*, *ɛ'* that are merely lowered from *i*, *i'* because of preceding or following velar consonant). *qwa-*, see note 21. *-i'q'* third person relative or subordinate, indicating various subordinating relations, such as comparison, time, place, relative clause (cf. notes 110, 139, 159); the precise nature of the subordination depends on the verb. *-i'q'* may be considered as a nominalized form, parallel to *-i'* (see note 9), of the subordinate *-qa-* series (see notes 1, 74).

23. Absolutive form of noun. Stem *k'ayu-m-*, *k'ayup-* (intervocalic *-m-*, *-n-* become stopped to *-p'*, *-t'* at the end of a syllable), e. g. *k'ayup-q-i'nak* TO IMITATE A PANTHER IN A DANCE. *-ni'*, absolutive noun suffix; other examples are *hɛlc-ni'* SMALL CLAM, *ho'p-ni'* SALMON TROUT, *nɛxt-ni'* SALMON-EGG, *'aw-ni'* GRISTLE, *tca'skw-ni'* BACKBONE, *hit-t'sa't-ni'* SEA. Subject of subordinate clause *qwɛ-i'q'*.

24. *hit*, verb-stem and durative absolute TO BE HERE, TO BE THERE, TO BE AT; probably consists of old demonstrative stem *hi-* (cf. *hm-*, *hit-*, notes 1, 101; *his-* TO BE AT SUCH AND SUCH A PLACE) + *-t-*, petrified local element (see note 17). *-at'* (often contracts with preceding vowel to *-a't'*, *-at'*; affects preceding consonants like *-atł*, cf. note 1), possessive word-suffix referring to possession of inalienable noun, nearly always body-part (cf. note 10 for corresponding alienable possessive suffix). *hit'at'* is complementary infinitive depending on *ya't*: THERE (HE) WAS WITH HIS (TAIL) AT, THERE HE (WAS) HAVING HIS AT.

25. Absolutive noun, TAIL (OF MAMMAL). Stem probably *sit'*; *-a'* absolutive noun suffix, identical with durative intransitive *-a'* (other nouns in *-a'* are *i'ciha'* GHOST, *qama'* TRAP, *pa'ttpha'tta'* SUBSTANCE FOR FACE PAINT, *nat'ca'* TAIL [OF FISH], *kap'i'a'* POINTED STICK). Object of *hit'at'*, though logically subject of *hit*; cf. note 12.

26. Contracted from *i'ɔh'i'sit* HEAD (see

note 20) + *-at'-i'*. *-at'*, identical with verb-suffix *-at'* (see note 24), inalienable possessive suffix appended to nouns, chiefly body-part nouns; for corresponding verbal and nominal alienable possessive suffix, see notes 10, 15. With pronominal elements *-at'* combines exactly as does *-uk'*, *-ak'* (see note 1):

Sing. 1. <i>i'ɔh'i'sitat'</i>	MY HEAD	Plur. 1. <i>i'ɔh'i'sitat'</i>	
	<i>-qa-s</i>		<i>-qɛ-ni'</i>
2. <i>i'ɔh'i'sitat'</i>	<i>-i'q'-qa-k'</i>	2. <i>i'ɔh'i'sitat'</i>	<i>-i'q'-q'-so'</i>
3. <i>i'ɔh'i'sitat'</i>	<i>(-i')</i>	3. <i>i'ɔh'i'sitat'</i>	<i>(-i'-at)</i>

*i'ɔh'i'sitat'i'* is local object of *hit* (syntax as in notes 9, 19), while *sit'a'* is direct object of *-at'* in *hit'at'* TO HAVE... BEING AT...

27. See note 21.

28. Demonstrative pronoun (THIS), adverb (THUS), or verb (TO BE THUS), used as general demonstrative (*'ah'ko'* is more specifically THIS, *ya'* THAT); syntactically a complementary infinitive defining the preceding verb, which gives the nature of the relation, such as time, place, or manner, as here. *'ah'a'* is compounded of demonstrative stem *'ah'* THIS, THAT, which may occur alone, and *-a'*, probably petrified demonstrative or local element.

29. See note 10.

30. Durative form of verb. No etymological analysis suggests itself.

31. Assimilated from *hic-tsaq'i'so'*; cf. notes 12, 14. *hic-*, verb-stem TO BE ALL, TO BE BOTH; other derivatives are *hic-mi't* TO BE ASSEMBLED, *hic-sa'tso'* TO BE EVERYWHERE. *-tsaq'i'so'*, local suffix AT THE END (see also note 38). Many verbs with local or body-part suffixes are to be interpreted as "bahuvrihi" compounds, i. e. the radical element expresses a concept which is possessed by the subject; e. g. *no'k'u-t'so'* TO BE SOUND-INSIDED, TO HAVE MUSIC INSIDE, PHONOGRAPH, *'ayaqs* TO HAVE MUCH (GAME) IN THE CANOE. The object of the verb is HEAD.

32. *su-*, verb-stem TO HOLD, GET HOLD OF ; its aspects are durative *so'* TO HOLD (other monosyllabic duratives with lengthened stem-vowel are *tei'* TO PULL, DRAG, *l'to'* TO REMEMBER, *qwa'* TO BE IN QUALITY), momentaneous *su-kwitt* TO GET HOLD OF, graduative *so'-kwitt* TO BEGIN TO GET HOLD OF, TO BE GETTING HOLD OF, durative-iterative *so'ttso'ya'* TO HOLD TIME AND AGAIN, *suttso'k'* TO GET HOLD OF TIME AND AGAIN. *-kwitt*, momentaneous suffix (cf. note 18), etymologically identical with postvocalic *-cutt* (cf. *-tei'* AT : 'o-*kw'* TO BE AT SUCH AND SUCH A PLACE); Nootka *tc*: *kw* (after *u*) goes back to Wakashan *k:kw* (cf. Kwakiutl change of *og-* to *ogw-*).

33. *tcakop'* MALE, HUSBAND, irregular absolute to which corresponds as stem *tcapxw-* (e.g. *tcapx-na'k'-cutt* TO MARRY A MAN). *-okw-* (final form *-ok'*, *-ok''*; *k*-sounds are labialized after *o*), alienable possessive suffix after consonants (cf. notes 10, 15); *-i*, see notes 9, 15. Object of *sukwitt*. Note that *-okw-i* refers to possession by the subject; if HER HUSBAND had referred to another woman than the subject, *sukwitttcap' tcakop'i* TOOK-HOLD-OF-ANOTHER'S THE-HUSBAND would have had to be used.

34. Umlauted from *\*to'ts-ma'-i'*, cf. note 22. See notes 12, 9. Subject of *sukwitt*.

35. *tei-*, verb-stem TO PULL ; durative *tei'*, momentaneous *tei'-cutt*. *-cutt*, post-vocalic form of *-cutt*, momentaneous suffix, see note 18.

36. *tlup'k-* or *tlum'k-*, verb-stem TO BE AWAKE; see note 37. *-sap'* (alternates for rhythmical reasons with *-sap''*), causative of momentaneous *-cutt*, while causative *-yap'* corresponds to *-cutt* (other examples of *-sap'*, *-sap''* are *qah'-sap'* TO KILL : *qah'-cutt* TO DIE ; *'utcq'-sap'* TO CAUSE TO BE A FOG ; *kwh'-sap'* TO MAKE A HOLE ; *hamat'-sap'* TO CAUSE TO BE KNOWN, TO FIND OUT); alternates with *-sam-*, *-sam-* (e.g. *tlup'k'-sam-ah* I CAUSE TO WAKE UP). Every intransitive aspect has its corresponding causative in

*-p'*, *-m-*; momentaneous *-tt* always drops in causative forms (e. g. *-putt* IN THE HOUSE, mom. : caus. *-putap'*; *-asutt* ON, mom. : caus. *-asup'*). *-attt*, see note 1. HIM is understood as object; third personal subjective and objective pronominal ideas are not specifically expressed in Nootka.

37. Momentaneous intransitive, see notes 36, 18. Aspects recorded of *tlup'k-*: dur. *tlup'k-a'* or *tlum'k-a'* TO BE AWAKE, mom. *tlup'k'-cutt* TO WAKE UP, graduative *tlp'p'k'-cutt* or *tlum'k'-cutt* TO BE WAKING UP, durative-iterative *tlp'p'k'-ci't* TO BE WAKING UP TIME AND AGAIN, momentaneous-iterative *tlup'k'tlup'k-c* or *tlum'k'tlum'k-c* TO KEEP WAKING UP BY FITS AND STARTS.

38. *l'ot'wh-*, reduplicated from *l'wh-* HEAD, see note 20; reduplication expresses distribution, HEAD HERE AND THERE. *-tsaq'l'so'*, see note 31. This word is a "bahuvrihi": HAVING A HEAD AT EACH END, cf. note 31.

39. *tsikumni'*, noun IRON; borrowed from Chinook Jargon. *-ak'-i'*, see note 15.

40. *l'ci-*, verb-stem TO CUT (e.g. *l'ci-mah'* TO CUT A BODY, *l'ci-h'ta'k'* TO BE CUT APART, *l'ci-ma'* MUSSEL-SHELL KNIFE); dur. *l'ci'ya'* TO BE CUTTING, mom. *l'ci'-cutt*, cf. note 35.

41. General demonstrative, object of *l'ci'cutt*; see note 28.

42. = *hes-sap'*. *hes-*, verb-stem TO BLEED and noun-stem BLOOD (e.g. *hes-mis* BLOOD, *hes-s-sut* [red.] TO BE BLOODY-EYED, *he'y-i's* TO DRINK ONE'S BLOOD). *-sap'*, see note 36; *hes-cutt* TO BLEED, mom.

43. Demonstrative pronoun, object of *hes-sap'*. Compounded of *'ah'* (see notes 41, 28) and *-ko'*, not otherwise found.

44. Contracted from *'a'ap'-tsu'atcv-'at'-i'*, cf. note 26. *'a'ap'-*, reduplicated from *'ap'-*, *'am-*, noun-stem of general locality PART, BODY-PART (e.g. *'ap'-qe'* SUMMIT, *'ap-pq'tt-it* ON A MAT NEAR THE FIRE TOWARDS THE DOOR, *'am-ashaul* CHEST, *'ap'-woni'* WAIST, *'a'm-ak'th'* BUTT END); suffixes indicating body-parts occurring in pairs

generally reduplicate preceding stem even if only one of two is actually referred to (e. g. 'a'ap'-p'qa' KNEE, 'a'ap-su'wmi't ARM-PIT, 'a'am-as CHEEK, 'a'a'm-a'nul SHIN ; from other stems, e. g. yaya'k'-'nuk'u TO BE SORE-HANDED, yaya'k'w-umit TO BE SORE-EARED, totop'k'-'atsobu TO BE BLACK ON THE SOLES, 'nuts'no'q'u-sul TO HAVE A BOIL ON THE EYE). -ts:l'atci', body-part suffix THIGH ; compounded of -tsit- SIDE, apparently not found uncompounded (other examples are 'nɔq'u-tsu'umi TO HAVE A BOIL ON THE SIDE [OF THE HEAD], hopal-tsu'ak'tlu TO BE MOON-SIDE-REARED, TO HAVE A CRESCENT PAINTED ON THE UPPER THIGH AND RUMP), and -'a'tci', -'atci' PRIVATE PARTS, VULVA (e. g. l't'a'tci' TO SHOOT AT THE PRIVATE PARTS ; compounded, e. g., in 'nɔq'u-l'sa'atci' TO HAVE A BOIL BELOW THE NAVEL, yaya'k'-sl'o'w-atci' TO BE SORE ON THE INNER PART OF THE THIGH), hence properly ON THE SIDE OF THE PRIVATE PARTS. -'at'-'i' see note 26.

45. *tuxw-*, verb-stem TO JUMP (cf., further, *tuxw-i'tcutt* TO JUMP ON ONE OUTSIDE THE HOUSE, *tuxw-it* FALLS, *tu'w-ik'* TO BE FOND OF JUMPING) ; mom. *tuxu-cutt*, iterative *to'xu'to'xw-a'* TO JUMP UP AND DOWN. -*tspa'*, -*tspa'*, local suffix OVER, PAST, durative aspect (other examples are *l'sax-tspa'* A SPEAR GOES OVER, *huta-tspa'* TO GO OVER, TO PASS, *kamut'q'-tspa'* TO RUN PAST) ; corresponding momentaneous aspect, -*tspu'it*.

46. See note 40. -*tla*, word-suffix (or enclitic particle) ALSO, TOO, AGAIN.

47. *kws-*, stem THE OTHER, DIFFERENT (e. g. *kws-i'y-as* TO BE AT THE FAR END OF THE VILLAGE, *kws-aq'l'so'* [A HOUSE] STANDS OPPOSITE, *kws-t-i'ya'* TO BE AT ANOTHER TIME, *kws-to'p'* TO BE OF A DIFFERENT CLASS, ABNORMAL). -*a's*, -*as*, -*s* (after vowels), local suffix of durative aspect ON, AT (e. g. *hnu-a's* TO BE ON, *l'qwu-a's* TO BE SITTING ON [A BOX], *k'wa't-as* BRANCHES ARE ON [THE LOGS]), mom. -*a'sut*, -(*a*)*sut* ; *kws-a's* TO BE DIFFERENT, THE OTHER ON, *kwsa's'al'i' tlicitni* THE LEG OF HIM WHICH IS OTHERWISE, ELSEWHERE ON, ATTACHED TO [HIM], i. e. HIS OTHER LEG.

-'at'-'i'. see notes 26, 44 ; -'i' relates *kwsa's'al'* to *tlicitni*.

48. Absolutive form of noun, probably an irregular reduplication. Object of *t'cutt*.

49. Momentaneous intransitive. See note 42.

50. *kws-*, see note 47 ; lengthened form of stem because of iterative aspect. -*pano't*, iterative form of -*pa'* SIDE END (*kws-pa'-* TO BE ON THE OTHER SIDE, AT THE OTHER END, often with -*s-* ON : *kws-pa'-s-*) ; to durative -*pa'* corresponds momentaneous -*pu'it* from \*-*panult*, whence iterative -*pano't* by change of -*lt* to -*t* and lengthening of *u* to *o'* (momentaneous forms in -*u'it* correspond to iteratives in -*ano't* or -*u'it* ; another example is dur. -*msa'* MOVING UP, mom. -*msu'it*, iter. -*msano't*). -*cu'att*, from -*cutt* + -'att, see notes 18, 1 ; for loss of -*tt* in inceptive suffixes, see note 5. *kws:spano'tcutt* is iterative-inceptive in aspect : TO BEGIN TO (MOVE) FROM SIDE TO SIDE ; other examples of this aspect are *tsu'ttsu'tscutt* TO START SCRATCHING, *sultso'k'cutt* TO BEGIN TO TAKE TIME AND AGAIN (see note 32).

51. *hes-*, see notes 42, 49. -*um'yawv-*, longer form of -*um'yo'-it*, -*um'yu-it*, momentaneous form of dur. -*um'it* (after vowels, -*q-um'it*), used partly as classifying suffix (ROUND OBJECT ; MOON), partly as local suffix ALL OVER, COVERING A ROUNDED OR BULKY SURFACE (e. g. *l'hw-um'it* TO BE WHITE ON THE OUTSIDE ; *ya'k-um'it* TO BE SORE-HEADED, *'eni'm-qum'it* TO HAVE SNAILS ALL OVER IT ; *huc-um'it* TO BE ASSEMBLED, mom. *huc-um'yo'tt* TO ASSEMBLE, COME TOGETHER). When momentaneous -*tt* drops, as before -'att (see note 5), modifications often appear in the preceding derivative suffix (e. g. -*msu'it* UP, mom., but -*msano'att* ; -*o'tt* ON THE FACE, mom., but -*awv'-att*, causative -*awvup'* ; -*so'tt* SO AND SO DIES, but -*sa'w'att*, -*sawv'att*, causative -*sawvup'* ; such cases of -*o'*-(*o-*) : -*awv-*, -*awv-* suggest that Nootka *o'* is sometimes contracted from older *aw*, *au* (cf. *qo't* SLAVE : *qaqo't* SLAVES, reduplicated, from \**qaqaut*). -'att see note 1.

52. See notes 38, 9. *-l'so-* with long vowel, *-l'so'* with short; properly long vowels are frequently heard shortened in final position.

53. *qah<sup>n</sup>-*, verb-stem TO BE DEAD, TO DIE; dur. *qah-ak'* TO BE DEAD, mom. *qah<sup>n</sup>-cutl* TO DIE. *-ci-<sup>n</sup>εtt*, see note 50;  $\varepsilon$  phonetic variant of *a*,  $\alpha$ , because of preceeding *i*.

54. *'nu'yi'* (*o'yi'*; *o'* and *i'* are of ten broken to *nu*, *au*, and *εi*, *ai* after *h* and  $\cdot$ ), noun MEDICINE; probably derivative in *-yi'* (cf. *mts*-SPEAR, absolutive *mts-yi'*; further, derivatives in *-s'yi'*, e. g. *'mukw-* STONES LIE: *'muk-s'yi'* STONE, *'nik'* FIRE, TO BURN: *'nik-s'yi'* WOOD, STICK). *-ci't* (after *a* and *i*), *-kwi't* (after *o*-vowels), *-i't* (after consonants), derivative suffix attached to noun stems, TO MAKE (other examples are *'o-kwi't*, TO MAKE SO AND SO, *t<sup>h</sup>at-i't* TO MAKE A CEDAR-BARK MAT). *-ci-<sup>n</sup>εtt*, see note 53; *-cutl* is here inceptive.

55. *qwis*, durative verb TO DO THUS. TO ACT AS DESCRIBED; perhaps related to *qwa'* (see note 21) and to *qwi-*, stem used in relative verb forms to make indirect questions (e. g. *qwi'y<sup>h</sup>taqak-i'tc* WHAT, AS THEY SAY, IT IS MADE OF, *qwe-sa' h<sup>n</sup>i-wos-i'* WHY HE WOULD BE..., *qwe-yi-n'<sup>n</sup>yi's* AT WHAT TIME I COME); *-s-*, possibly identical with local *-s* ON, see note 47. *-h<sup>n</sup>* (after all consonants but *h*), *-qh<sup>n</sup>* (after vowels and *h*), word-suffix attached to absolute verb form (comes before all other word-suffixes) and indicating that the activity or state predicated by its verb is accompanied by or in some way conditions the activity or state predicated by the following verb or an understood verb (e. g. *h<sup>n</sup>-i't-h<sup>n</sup> h<sup>o</sup>'ya't* I-AM-IN-THE-HOUSE-WHILE DANCING, *wa-qh'<sup>n</sup>att-n'* NOW WE SAY IT WHILE [THUS OCCUPIED]); here it implies that the following verb (TO OBTAIN MANY IN HUNTING) results from the activity (TO DO THUS, i.e. TO MAKE MEDICINE) of its own verb. *-<sup>n</sup>att*, see note 1.

56. *'a:y:mik'*, from *\*'a'ya-mik'*, see note 9. *'a'ya-*, lengthened from *'aya-*, verb-stem TO BE

MUCH, MANY (durative absolute *'aya'*) (e. g. *'aya-qs* TO HAVE MUCH [GAME] IN ONE'S CANOE, *'a'y-<sup>n</sup>p* TO SECURE MUCH, *'ayu-<sup>n</sup>p't'* TO BE MANY TIMES). *-mk'*, *-mi'k'*, derivative verb suffix lengthening preceding stem-vowel, TO SUCCEED IN HUNTING... (e. g. *'o-mi'k'* TO GET SO AND SO IN HUNTING, TO BE A SUCCESSFUL HUNTER). *-ci-<sup>n</sup>all*, see note 50.

57. *'napxta'*, durative intransitive TO DIE IMMEDIATELY (AFTER BEING STRUCK). *-<sup>n</sup>att*, see note 1. *-qo-*, conditional suffix, see note 58, frequently used in main clause as past usitative (e. g. *mala-<sup>n</sup>att-qo-k'* WHENEVER, IF YOU FLY ABOUT OF YOU WOULD, USED TO FLY ABOUT); *-wε'<sup>n</sup>* shows that *-qo-* cannot be here understood as subordinating, as *-tc* is quotative in subordinate clauses (e. g. *'napxta-<sup>n</sup>att-qo-tc* IF, AS IS SAID, HE DIES IMMEDIATELY). *-wε'<sup>n</sup>*, quotative word-suffix IT IS SAID IN MAIN CLAUSES; replaces third personal indicative *-ma'*, e. g. *qahak'-wε'<sup>n</sup>* HE IS DEAD, THEY SAY: *qahak'-ma'* HE IS DEAD (1st pers. sing. *-wε'<sup>n</sup>-si'*, 2nd per. sing. *-wε'<sup>n</sup>-tsuk'*); < *\*-wa-<sup>n</sup>*, probably petrified nominal derivative from *wa-* (*wa-*) TO SAY.

58. *'saxw-*, *'sax-* (labializations regularly disappear in syllabically final position), verb-stem TO SPEAR (e. g. *'saxw-i'<sup>n</sup>nak'* TO IMITATE A SPEARER IN A DANCE, *'sax-tspa'* SPEAR GOES OVER, *'sax-yak'* SPEARING-INSTRUMENT, SPEAR); mom. *'sax-cutl*, iter. *'sa'xt'sa'xw-a'*. *-ci-<sup>n</sup>εtt*, see note 50, 53. *-qo'*, conditional suffix; its paradigm is:

Sing. 1. <i>-qo'-s</i>	Plur. 1. <i>-qu-n'</i>
2. <i>-qo'-k'</i>	2. <i>-qo'-so'</i>
3. <i>-qo'</i>	3. <i>qo'(-'at)</i>

With quotative *-tc* (cf. note 57) it forms:

Sing. 1. <i>-qo'-ts-s</i>	Plur. 1. <i>-qo'-l'cu-n'</i>
2. <i>-qo'-tc-k'</i>	2. <i>-qo'-ts-so'</i>
3. <i>-qo'-tc</i>	3. <i>-qo'-tc(-'at)</i>

59. *'ah<sup>a</sup>a'*, see note 28. *-'att*, see note 1. *-wε'ni*, quotative, see note 57.

60. *lta'o'* ANOTHER, as durative verb and verb-stem *lta'o'* - TO BE ANOTHER (e. g. *lta'o'-l'sq'* ANOTHER LONG OBJECT, CANOE, *lta'o'-yiy-a'* TO BE ANOTHER TIME, NEXT TIME, *lta'o'-tcut'* TO BECOME ANOTHER). *-'att*, see note 1. *-lta'*, see note 46.

61. *l'so'-utch<sup>a</sup>* TO BE WINTER; MOM. *l'so'-utch<sup>a</sup>citt*. *l'so'-utch<sup>a</sup>* is explained by the Nootka as WASHED-SEASON, i. e. season when everything is washed clean by rain and snow, cf. *l'so-*, verb-stem TO WASH. *-'uch<sup>a</sup>*, *-'i'tch<sup>a</sup>*, stem suffix SEASON (e. g. *'mud't-i'tch<sup>a</sup>* RAINY SEASON, *'a'y-i'tch<sup>a</sup>* ROTTING SEASON, FALL; cf. also *-q'-'uch<sup>a</sup>* YEAR, e. g. *mo'-q'-'uch<sup>a</sup>* FOUR YEARS). *-citt*, momentaneous suffix, see note 18.

62. *wε'tc*, see note 5. *-'ah<sup>a</sup>s*, dur. local suffix IN A RECEPTACLE, IN THE VULVA, IN A CANOE, MOM. *-'ah<sup>a</sup>sitt*, CAUS. *-'ah<sup>a</sup>sip'* (cf. further *'mat'-ah<sup>a</sup>s* COLD IN A RECEPTACLE, i. e. COLD WATER, *hayu.-ah<sup>a</sup>s* TO HAVE 200 (SALMON) BROUGHT HOME IN A CANOE); *-'ah<sup>a</sup>s* is one of those suffixes that "harden" preceding final consonants of stems, i. e. preceding *p*, *t*, *k*, *kw*, *q*, *qw*, *ts*, *tc*, *tt* become glottalized to *p'*, *t'*, *k'*, *k'w*, *q'*, *ts'*, *tc'*, *tt'* respectively (cf. note 1), *s*, *c*, *t* to *'y* (*-t'* above is irregular), *x*, *xw* to *'w*, *n* to *'n*, *m* to *'m*, *h* to *'h'* (sometimes *'w*); see *-'uch<sup>a</sup>*, note 61, for another "hardening" suffix. *-'att*, see note 1.

63. *'anah-*, probably identical with *'anah* TO BE (SO AND SO) IN SIZE; *-'is*, diminutive suffix. *'anah-* is doubtless based on *'ana-* (dur. absolute *'ana'*) ONLY, see note 164; cf. further *'ana-* (with interrogative *-ha'*) HOW MANY? *'ana-* TO LAST, TO BE IN EXTENT, *'anu-ts-* AS LONG AS, *'ana-...-is* TO BE NEAR. Diminutive *-'is* is freely used as word-suffix, less frequently stem-suffix, in both noun and verb forms, e. g. *tu'nε-'is* CHILD, *ha'kwa'tt-'is* LITTLE GIRL, *l'a'na-q'tl-'nukw-'is* TO BE CHILD-IN-HANDED-LITTLE, TO HOLD A CHILD IN THE HAND. In *'anah-'is*

LITTLE, *-'is* may be separated from *'anah-*, e. g. *'a'nah-(a)ik'-'is* TO BE LITTLE-HEADED. Here used as adjective qualifying CANOE.

64. Absolutive noun *l'capats* CANOE (irregular plur. *tca'ya'pats*), local object of *hit*. *l'cap-* (sometimes *l'cam-*), noun-stem CANOE (e. g. *l'ca'p-ok'u* CANOEMAN, see note 107, *l'cam-e.'att* TO RETURN IN A CANOE AFTER GOING IN SOME OTHER WAY); in most derivatives *l'capats* is treated as stem (e. g. *l'capats-nak'* TO HAVE A CANOE, *l'capats-o'wa'* CANOE-PLACE ON THE ROCKS). *-ats*, derivative noun-forming suffix RECEPTACLE (e. g. *'agw-ats* URINE-RECEPTACLE, BLADDER); cf. also *-sats* RECEPTACLE (e. g. *k'o't-sats* VESSEL FOR EATING A RELISH OUT OF).

65. *'o-*, see note 1; refers to following noun. *-yo'at* (after vowels), *-o'at* (after consonants), derivative suffix TO GET SIGHT OF, PERCEIVE (e. g. *wawa-yu'at* TO HEAR WHAT ONE SAYS, *qo'ats-u'at* TO SEE A PERSON). *-'att*, see note 1.

66. *kw'statscitt*, momentaneous verb form TO GO OFF ELSEWHITHER, nominalized by *-l'ca'*. *kw's-*, see notes 47, 50. *-tsa-tcitt*, MOM. suffix TO GO OFF TO, cf. note 35 (e. g. *'u-tsa-tcitt* TO GO TO SO AND SO, *ho'a-tsa-tcitt* TO TURN BACK); corresponding CAUS. is *-tsa'ap'*, e. g. *'u-tsa'ap'* TO TAKE SO AND SO UP TO); as corresponding DUR. INTR. is used *-tsu'uk'*, *-tsc'uk'* (e. g. *wa's-tsu'uk'-ha-k'* WHERE ARE YOU GOING?). *-l'ca'*, suffixed article or nominalizing particle with quotative color, THE..., AS THEY SAY (for related forms in *-tc-* see note 58); syntactically equivalent to non-quotative *-'i'* (see note 9).

67. *'ah<sup>a</sup>*, durative verb TO BE THE ONE, THE ONE WHO... IS SO AND SO, indicates that the noun following or understood is the one referred to in a preceding verb; here: THE ONE WHO (PERCEIVED THE SHIFT) WAS (CIA'ATSSIB'). This verb probably consists of *'o-*, see note 1, and petrified suffix *-h<sup>a</sup>*, possibly TO BE (cf. perhaps *-h<sup>a</sup>* in *'ah<sup>a</sup>*, note 28, and *'ana-h<sup>a</sup>*, note 63).

68. Nitinat name; *b* and final glottal stop show at one that it cannot be Nootka proper.

69. 'u-, variant of 'o-, see note 1. -*kta*(·)' (after *u-* vowels), -*tcta*(·)' (after other vowels), -*ta*(·)' (after consonants), dur. verbifying suffix TO BE NAMED... (e. g. 'aq<sub>u</sub>-*tcta*-*ha*' HOW IS HE NAMED ? *ko'oq*-*lε*-*'* THE OBSCENELY NAMED ONE).

70. 'ε*m*'*tu*-, noun-stem NAME, absolutive 'ε*m*'*tu*·'; cf. verb-stem 'ε*m*'*tu*- TO SING THE SIGNIFICANT SYLLABLES OF A SONG. -*na*'*k*·, -*na*'*k*·, verbifying suffix TO HAVE... (e. g. 'u-*na*'*k*· TO HAVE SO AND SO, *l'a*'*na*-*na*'*k*· TO HAVE A CHILD, *mo*'-*lci*'*t*-*na*'*k*· TO HAVE FOR FOUR DAYS). 'ε*m*'*tu*-*na*'*k*·, complementary infinitive depending on 'uk*ta*'·; literally, (CHA'ATSSIB) IS WHAT HE WAS CALLED TO HAVE A NAME (OF IN HAVING A NAME). The idea conveyed by a derivative suffix is frequently supplemented by a following primary element conveying the same notion, e. g. 'o'*i*'*s* *ha*'*ok*'*u* TO CONSUME-SO-AND-SO TO-EAT, 'utshε*n*'*itt* *tutena*'*k*·*cutt* TO-MARRY-SO-AND-SO TO-BEGIN-TO-HAVE-AS-WIFE.

71. 'o'*o*'-, reduplicated form of 'o-', see note 1. -*lab*<sup>a</sup>, derivative suffix reduplicating stem and lengthening stem-vowel TO HUNT (SUCH AND SUCH) SEA-MAMMALS, TO BE A WHALER.

72. *l'**ti*'*wm*'*i*, LAUGHING-STOCK, TO BE A CAUSE OF LAUGHTER, derivative of verb-stem *l'**ti*'*xw*- TO LAUGH (e. g. mom. *l'**ti*'*x*-*cutt* TO LAUGH ONCE, dur. *l'**ti*'*xw*-*a*' TO BE LAUGHING, *l'**ti*'*x*-*p*'*itch*<sup>a</sup> TO LAUGH WHILE ENGAGED IN SOMETHING ELSE); -*w*- is "hardened" from -*xw*-. -*in*'*i*, "hardening" derivative suffix, apparently makes passive or resultative nouns out of verb-stems (e. g. *l'**coc*- TO SUSPECT: *l'**coc*'*ni* ONE WHO SUSPECTED, *haca*'- TO HEAR ABOUT: *hac*'*y*-*ni* FAMOUS). -*ap*'*i*, -*am*-, causative suffix (cf. note 36); *l'**ti*'*wm*'*ap*' TO CAUSE TO TO BE LAUGHABLE, TO TREAT AS A LAUGHING-STOCK, i. e. TO LAUGH AT. -*at*'*i*, passive suffix, see note 1; identical with inalienable possessive -*at*'*i*, see note 24.

73. Relative particle introducing statement

of cause or other attendant circumstance in following subordinate verb. Probably petrified relative in -*i*, as shown by its pronominal forms, which are those of relative forms in -*i*-, -*i*'*i*-, -*y*'*i*- :

Sing. 1. 'am- <i>s</i>	Plur. 1. 'am- <i>ni</i> '
2. 'am- <i>k</i> '	2. 'am- <i>so</i> '
3. 'am'	3. 'am'

Cf. relative paradigm in note 185.

74. *qa*'*ya*'- TO DRIFT (IN A CANOE); may contain -*a*'- OUT AT SEA IN A CANOE (e. g. *hin*-*a*'-*tc**tt* mom. TO GO OUT TO SEA IN A CANOE, *wik*-*a*'-*na*'*k*· TO HAVE NONE IN A CANOE). -*panatc*, derivative suffix generally lengthening stem vowel, TO WANDER ABOUT AIMLESSLY (e. g. 'o'*tcq*'-*panatc* TO GET LOST IN A FOG, *ya*'*ts*-*panatc* TO BE OUT FOR A WALK, *hita*'-*q*'*t*-*as*-*panatc* TO SPEND ONE'S TIME IN THE BUSH). -*qa*, subordinating suffix indicating cause or other attendant circumstance, often, but not always, introduced by 'am; it is etymologically identical with -*qa*- of possessive paradigm (see notes 1, 26). Its pronominal forms are :

Sing. 1. - <i>qa</i> - <i>s</i>	Plur. 1. - <i>qu</i> - <i>ni</i> '
2. - <i>u</i> ' <i>qa</i> - <i>k</i> '	2. - <i>u</i> ' <i>q</i> ' <i>so</i> '
3. - <i>qa</i> '	3. - <i>qa</i> -( <i>at</i> )

'am *qa*'*ya*'*panatcqa* indicates cause of *l'**ti*'*wm*'*ap*'*at*'·; more explicit causal statements are rendered by 'o-*no*'*tt* 'am... -*qa*' TO-BE-FOR-SUCH-AND-SUCH-A-REASON, THAT...

75. See notes 5, 74. Here -*qa*' denotes attendant circumstance, WHILE ASLEEP; *wε*'*tlcqa*' follows closely on *qa*'*ya*'*panatc* and needs no formal 'am to introduce it.

76. *wik*'-*at* NOT TO BE AWARE OF, dur., consists of *wik*' (see note 10) and derivative suffix -*at* (certain suffixed elements beginning with glottal stop do not glottally affect preceding consonants) TO BE AWARE OF, HAVE NEWS OF (e. g. 'o'-*at* TO HAVE NEWS OF SO AND SO), inceptive -*v*'-*tc**tt* TO BECOME AWARE OF (contracted from

older \**'ai-*, « softened » form of *-at*). *-att*, see note 1. *-qa*, see note 74. *wk''a'atqa* follows *'aw* (note 73) and is parallel to *qa'ya'panatqa*; AND is not necessary (cf. note 3).

77. See notes 66, 74. Here *-qa* marks a subordinate clause that is objectively related to *wk''a'at*.

78. Absolutive and stem-form: DAYLIGHT, DAY, also PERIOD, SEASON, WEATHER; as dur. verb, TO BE DAY, MOM. *'na's-cutt* DAY COMES. Possibly *'na's* is composed of simple *'na-* (cf. Kwakiutl *'na-la* DAY) and petrified *-s* (ON ?), cf. *qwis*, note 55; this seems to be confirmed by Nootka *'na'-p'naq-* THE PROPER TIME COMES. *'na's* is subject of *kwistsatcittqa*: THAT DAY WAS GOING OFF ELSEWHITHER, THAT IT WAS THE SEASON OF GOING OFF ELSEWHITHER.

79. Umlauted from *haca'-tcutt*. *haca'-*, dur. stem TO HEAR ABOUT; dur. *-a'* (but not short *-a*) is umlauted to *-i'* before momentaneous *-tcutt* (cf. *'muti'-tcutt* TO BEGIN TO RAIN from *'mita'* TO BE RAINING; but *'i'wa-tcutt* TO GET BIG). *-tcutt*, see note 35. *haci'-tcutt* is momentaneous; most forms in *-i'-tcutt* are definitely inceptive.

80. See notes 72, 74. Here, as frequently, *'aw*... *-qa'* mark an objective clause of indirect discourse.

81. *ya'kw-*, *ya'k'-* TO BE SORE, used either with body-part suffixes (e. g. *ya'k-o't* TO BE SORE-FACED, *ya'k'w-un't* TO BE SORE-NECKED, *yaya'k'-<sup>3</sup>nuk''* TO BE SORE-HANDED) or with inalienable possessive *-at'* (see note 24) and following body-part noun (e. g. *ya'k'-at-ah qasv'* MINE-IS-SORE EYE, I HAVE A SORE ON THE EYE; cf. *yaya'k-sut* TO BE SORE-EYED); dur. *ya'k'-at'*, inceptive *ya'k'-cv'-at'*. *-cv'- $\epsilon$ t'*, see notes 18, 5, 24, 53; *-at'* is treated analogously to *-att* (see note 1), and they combine into *-at'tat'*.

82. Absolutive noun « HEART, » SEAT OF INTELLIGENCE AND FEELING; HEART in its anatomical sense is *ti'tc-ma'* (from *ti'tc* TO BE ALIVE). *k'maqst'* consists of radical *hm-*, of

unknown meaning, and “hardening” nominalizing suffix *-'aqst'* WHAT IS INSIDE (ONE'S BODY) (cf. dur. *-'aqtt* INSIDE, MOM. *-'aqstutt*).

83. *cilt-*, verb-stem TO MOVE FROM ONE PLACE TO ANOTHER (e. g. *ci'tt-uk''* TO BE MOVING, *ci'ya'tt-aqa'* SEVERAL MOVE IN A CANOE, *ci'tt-uk'* TO BE ALWAYS ON THE MOVE). *-st's*, local suffix INTO THE INTERIOR, UP WHERE SALMON RUN (cf. *hit-st's* TO BE IN THE INTERIOR), after *a-* and *i-*vowels *-lsst's*, after *u-*vowels *-kst's* (e. g. *'o-kst's* SO AND SO IS UP COUNTRY); *-st's* is correlative to *-wv'is* (e. g. *hit-wv'is* TO BE ALONG THE SHORE, *'o-wv'is* SO AND SO IS DOWN AT THE SEA).

84. = *hv's-sasa*. *hv's*, dur. verb TO BE AT THE BEACH, contracted from *\*hy-is*, “softened” from *hit* (see note 24) + *-is*, dur. local suffix AT THE BEACH, ON A LEVEL AND OPEN STRETCH (e. g. *'yaq-is* LONG LEVEL STETCH OF COUNTRY, *to'ht-maq-is* SPRUCE TREES ARE SCATTERED ON THE BEACH, *'ya'yak-is* HEADS SHOW OF PEOPLE SEATED ON THE BEACH), MOM. *-satt*; *hv's* like *hi't* TO BE IN THE HOUSE, contracted from *\*hy-it* (see note 13) (“softening,” as contrasted with “hardening”, is no longer a live process in Nootka, but survivals occur of *t*, *s*, and *c* softening to *y* or *w* [after *u*], of *h* and *xw* to *w*, and of *s* to *ts* < original *d $\zeta$* ; cf. *k'wa'y-is* TO HAVE BRANCHES ON THE SHORE, from *k'wa't* BRANCH). *-sasa'*, word suffix lengthening stem vowel, emphasizes verbal idea, RIGHT ALONG, JUST SO, IN VERY TRUTH (e. g. *'o'ht-sasa'* TO BE THE VERY ONE WHO..., TO BE THE ONE WHO... RIGHT ALONG); reduplicated (uniquely so for a suffixed element) from *-sa'*, emphatic word suffix lengthening stem vowel, VERY, TOO, JUST, MOST (e. g. *'o'-<sup>2</sup>ak'th-sa'* TO BE THE VERY LAST, *'a'n-u'at-sa'* TO SEE MERELY..., *'a'ya-kwat-cutt-sa'* TO BECOME TOO MUCH-MISSING, TO SPEND TOO MUCH).

85. Place name, local object of *hv'ssasa'*. Radical element *tho-*, of unknown meaning. *-owis* (after vowels), *-owis* (after consonants)

nominalizing suffix PLACE ON THE BEACH (cf. *thukwal'q-owis* PLACE ON THE BEACH FOR HOLDING A WOLF RITUAL, *'as-owis* PLACE ON THE BEACH WHERE CARPENTER WORK IS DONE); "softened" (cf. note 84) from *-ut* PLACE (cf. *ho'a-q-ut* PLACE WHERE CORMORANTS CONGREGATE, *wε'ut-ut* PLACE TO SLEEP) + *-is* ON THE BEACH (see note 84) (parallel forms in *-w-* and *'w-* from *-t* are *-uw-ut* PLACE IN THE HOUSE, *-u'w-a'* PLACE ON THE ROCKS, *-u'w-as* PLACE ON THE GROUND; *-a'now-is* ALONG ON THE BEACH < *-a'nut* ALONG + *-is*).

86. See notes 84, 1.

87. Contracted from *ni'ti'na'a* + *'ath<sup>a</sup>*. *ni'ti'na'a'*, village name containing, in contracted form, "hardening" *'a'a'* ON THE ROCKS; exact form of stem and its meaning are undetermined. *'ath<sup>a</sup>*, nominalizing suffix PEOPLE OF... (e. g. *l'sica'-'ath<sup>a</sup>* PEOPLE OF TS'ISHA, *pr'stmi'-'ath<sup>a</sup>* BOSTON PEOPLE, AMERICANS), commonly used as ending in tribal names (whence our *Aht* as general term for all Nootka tribes); also used as verb suffix, "hardening," TO DWELL, TO LIVE TOGETHER, TO BE PEOPLED BY (e. g. *h<sup>2</sup>y-ath<sup>a</sup>* TO DWELL [probably from *hic*-ALL, see note 31], *tuk'w-ath<sup>a</sup>* SEA-LIONS STAY, TO BE INHABITED BY SEA-LIONS, *yaq'-tci-'ath<sup>a</sup>-'it'q'* WITH WHOM HE LIVES, HIS NEIGHBORS).

88. *'u-*, *'o-*, see note 1. *-tsa-tci-'εtt*, from *-tsa-tcutt* (see note 66) + *'att* (see notes 1, 5).

89. *l'sa-*, verb-stem TO FLOW (e. g. *l'sa-ts'wi'* A CURRENT GOES THROUGH, *l'sa-h<sup>2</sup>a'a'* A CREEK RUNS DOWN A ROCKY BED). *'ak'*, durative suffix and absolutive noun suffix (see note 2); *l'sa'ak'* TO BE FLOWING as verb, CREEK as noun. *'okw-* (labialized because of *o* preceding *k*), *'ok'*, see note 33. *-i'*, see notes 9, 15, 33.

90. Contracted from *\*w:napi'-'att*. *w:napi'*, durative TO STAY, REMAIN; *w:n-*, with lengthened stem vowel because of following suffix, verb-stem not apparently found without following *-ap'*; *-api'* (after consonants), *-p'* (after

vowels), dur. local suffix, lengthens stem vowel, ERECT, STANDING, PLACED UP (e. g. *hi't-apt'* TO BE IN THE SKY, RAISED UP, *'o-pi'* SO AND SO STANDS OUT, IS AHEAD, *'no'p'-t'siq-apis* [= *-apt' + -is*] ONE-LONG-OBJECT-STANDING-ON-THE-BEACH, BEACH WITH A LONE TREE), mom. *-(a)putt*. *'att*, see notes 1, 14.

91. Inceptive form in *-cutt* (see notes 18, 54) of *wk'it'* TO BE NON-EXISTENT, THERE IS NOT. *wk-*, see note 10. *'it'*, "hardening" stem-suffix used only with *wk-*, meaning probably THERE IS IN EXISTENCE; *'it'* from *'in-*, cf. preterit *wk'-in-ita'* THERE WAS NONE.

92. Absolutive form; distributive *qoqwa's* PERSONS, but here *qo'as* PERSON is taken collectively, hence PEOPLE BECAME NON EXISTENT, THERE CEASED TO BE ANYONE THERE. Stem form is *qo'ats-* (e. g. *qo'ats-ma'* SOUL, PERSONAL DOUBLE, *qo'at's-ut* TO GO FOR A PERSON, *qoqwa'ts-h<sup>2</sup>ta'* TO BE PERSON-FOOTED, TO HAVE A PERSON ON THE FOOT).

93. = *'osim'itc-ci-'att*, inceptive aspect. See notes 1, 50.

94. *h:n-*, lengthened form of *h:n-*, "empty" stem TO BE, DO (as described by suffixed element), possibly demonstrative in origin (see note 1; cf. *hi'n-a'nut* TO BE UP RIVER, *h:n-usa'* TO COME UP OUT OF THE WATER, *h:n-ustcis* TO GO AWAY FROM THE BEACH, *h:n-u'k'wat* TO GO AWAY EXPECTING TO RETURN, *h:n-ut'* TO COME, *h:n-i'as* TO GO OUTSIDE, *h:n-a'sut* TO GO UP ON; also in body-part nouns, e. g. *h:n-o't* FACE, *h:n-aksut* LIPS, *hi'n-i't'taksut* CHIN; varies, for phonetic reasons, with *h<sup>2</sup>t-*). *-is-*, *-i's*, verbal suffix TO TAKE ALONG, CARRY (e. g. *h:n-i's* TO TAKE ALONG, *h:n-i's-i'ut* TO TAKE INSIDE THE HOUSE, *hop'q-'s-ago'x'* TO ROUND A POINT OF LAND CARRYING A ROUND OBJECT, ROCK; *h:n-is-* is lengthened from *h:n-i's-*, *-i's-* shortening to *-is-* as rhythmic counterpart of stem lengthening); cf. also related *-i'tss* (after consonants), *-tss* (with lengthening of immediately preceding vowel) TO CARRY (e. g. *'uxw-i'tss* TO CARRY

A PADDLE, *hayu'-lss* TO CARRY TEN OBJECTS IN THE HAND, *'o'-tss-'aq'it'-ut* TO TAKE SO AND SO UP TO THE WOODS), mom. *-i'sutt* (e. g. *'u'ltc-i'sutt* TO TAKE A DOG ALONG, *'u'ltc-i lss* TO HAVE A DOG ALONG). *-o'uk'*, dur. suffix, lengthening stem, TO BE ON ONE'S WAY (see note 66); *bu'nu-so'uk'* means literally TO TAKE ALONG WHILE ON ONE'S WAY and refers possibly to the canoe dragged along by the lunging whale, though the verb is used simply for the movements of a blowing and diving whale and for ceremonial imitations of these movements. *-cutt*, inceptive, see note 50.

95. *wa'tak'*, lengthened form of *wata'k'*, dur. verb TO GO TO, BE BOUND FOR A PLACE, probably contracted from *\*wala-'ak'* (cf. analogous forms like *'sawa'k'* TO BE ONE < *\*'sawa-'ak'* and note 14); *wala-* probably related to *wat-*, verb-stem TO RETURN HOME (mom. *wat-cutt* TO BE GONE HOME, graduative *wa't-cutt* TO BE GOING HOME); *'ak'*, dur. intransitive, see notes 2, 10, 89.

96. Umlauted from *\*saya-'i'*; see notes 22, 34. *saya'*, dur. verb TO BE FAR AWAY, DISTANT (other aspects are inceptive *saye'i'* TO GET DISTANT, graduative *sa'ye'i'* TO BE GETTING DISTANT, durative/iterative *sa'ye'i'a't*, momentaneous iterative *sasi'i'*); *saya-* is also used as verb stem (e. g. *saya-t'ca'* TO BE HIGH UP, *sa'yat'ch<sup>a</sup>sa'a'* TO BE A LONG ROCKY SHORE). *'i'*, see note 9; THE FAR-DISTANT (PLACE) is local object of *wa'tak'*.

97. *mo'*, dur. verb TO BE FOUR, also verb-stem *mo'* (e. g. *mo'-p'al* TO HAVE FOUR OBJECTS ON ONE'S BACK, *mo'-tcw'ik'* FOUR ARE ON THE WAY, *mo'-sa'tso'* TO BE IN FOUR PLACES). *-tcit'* *-tcit'*, numeral classifier for DAY(S) (e. g. *'nup'-tcit'* ONE DAY, *'att-'v'q'-tcit'* TWO-TWENTY-DAYS, FORTY DAYS); *-tcit'* does not become *-kwi't* after *u-* vowels (cf. note 32).

98. Durative form; see note 94.

99. Durative form of numeral; see note 97. *mo' 'na's* is specifically FOUR PERIODS OF DAYLIGHT, while *mo'tci't* means FOUR DAYS, SPANS

OF DAY AND NIGHT. Syntactically, *mo' 'na's* (and *mo' 'athai'*) is best considered an absolute + complementary infinitive: IT WAS FOUR IN BEING DAYLIGHT (and IT WAS FOUR IN BEING NIGHT).

100. Phonetic variant of *'athe'*, see note 16; both are properly *'ath<sup>a</sup>'*.

101. *bu'n-*, see note 94. *-asutt*, mom. local suffix (ARRIVING) AT; not to be confused with *-(a)sutt*, *-a'sutt*, mom. form of *-(a)s*, *-a's* ON (e. g. *'iqw-a'sutt* TO SIT DOWN ON, *bu'n-a'sutt* TO GET UP ON [A PLATFORM]).

102. Place name, probably Nitinat, of unknown etymology. *-is* is doublets ON THE BEACH, cf. note 84.

103. Umlauted from *\*ukta-'i'*, cf. note 96. *'ukta-*, see note 59. *'i'*, see note 9. *'ukte'i'* is in apposition to *kaxi'k'is*.

104. Absolutive noun; there is no evident analysis. Syntactically, *nu's'ma'* amplifies *'u-* of preceding nominalized verb.

105. *'uq'*, syllabically final form of *'uqw-*, see note 13. *-satt*, mom. form of *-is* ON THE BEACH (e. g. *bita-satt* TO LAND ON THE BEACH, *ta'-satt* TO DRIFT ON TO THE BEACH).

106. *bit-*, *bita-*, phonetic variant of *bu'n-*, see note 98, found particularly, but by no means exclusively, before "hardening" suffixes (e. g. *bita-t'so'* TO BE IN THE BAY, *bit-i't* TO BE INSIDE, *bit-h<sup>a</sup>ta'* TO BE AT THE TIP, END *bit-aq'it'-nuk'* TO HOLD IN THE HANDS, *bita-qsutt* TO GO INTO A CANOE, *bita-lss<sup>a</sup>h<sup>a</sup>ta'* TO APPEAR COMING OUT OF THE WOODS; also in body-part nouns, e. g. *bit-a'k'th'* RUMP). *-(a)h<sup>a</sup>ts*, local suffix DOWNSTREAM; probably compounded of *(a)h<sup>a</sup>t-* and *-is* ON THE BEACH, ON A LEVEL SPOT. Evidently *-(a)h<sup>a</sup>ts* is correlative to *-h<sup>a</sup>-a'a'* DOWNSTREAM ON THE ROCKS (e. g. *'isa-h<sup>a</sup>-a'a'* A CREEK RUNS DOWN A ROCKY BED) and *-ah<sup>a</sup>-as* OUT OF THE WOODS (e. g. caus. *bita-h<sup>a</sup>as-'ap'* TO CAUSE TO COME OUT OF THE WOODS); hence *-(a)h<sup>a</sup>ts* probably means, more accurately, MOVING INTO THE OPEN TO A BEACH-LIKE PLACE, leaving *-(a)h<sup>a</sup>t-* to mean OUT INTO THE OPEN, SEAWARD. Not to be confus-

ed with  $-(a)h^{\alpha}ts$  is  $-ats$  DOWNSTREAM (e. g.  $h^{\alpha}t-ats$  TO BE DOWN THE RIVER,  $t^{\alpha}s-ats$  TO SLIDE DOWNSTREAM,  $'aq^{\alpha}maq-ats$  GRASS MOVES DOWNSTREAM).

107.  $t^{\alpha}ca^{\alpha}p-$  lengthened from  $t^{\alpha}cap-$ , see note 64.  $-ok^{\alpha}$ , intransitive suffix, lengthening stem-vowel, TO MOVE ALONG (e. g.  $ya^{\alpha}ts-uk^{\alpha}$  TO WALK <  $yats-$  TO STEP,  $sa^{\alpha}-ok^{\alpha}$  TO CRAWL ON ALL FOURS,  $'na^{\alpha}tc-uk^{\alpha}$  TO LOOK FOR,  $ci^{\alpha}tt-uk^{\alpha}$  TO MOVE FROM ONE PLACE TO ANOTHER).  $t^{\alpha}ca^{\alpha}pok^{\alpha}$  thus literally means TO MOVE ALONG IN A CANOE; nominalized, CANOE-PARTY, CANOEMAN.

108. See note 89. Local object of  $h^{\alpha}tah^{\alpha}ts$ .

109. Umlauted from  $*tlawa-tci^{\alpha}at^{\alpha}$ , cf. note 79.  $tlawa^{\alpha}$ , dur. verb TO BE NEAR (other aspects, some of which are parallel to those of  $saya^{\alpha}$ ; see note 96, are: mom.  $tlaw^{\alpha}n^{\alpha}tt$  or  $tlaw^{\alpha}i^{\alpha}$  TO GET NEAR, inceptive  $tlaw^{\alpha}-tc^{\alpha}tt$  TO BEGIN TO BE NEAR, TO APPROACH, gradulative  $tlaw^{\alpha}n^{\alpha}tt$  or  $tlaw^{\alpha}i^{\alpha}$  TO BE GETTING NEAR, iterative  $tlaw^{\alpha}no^{\alpha}t$  or  $tlaw^{\alpha}n^{\alpha}tt$ ).  $-tci^{\alpha}$ , for  $-tc^{\alpha}tt$ , inceptive suffix after vowels, see notes 35, 50, 54; for loss of  $-tt$  before  $-at^{\alpha}$ , see note 5.  $-i^{\alpha}t^{\alpha}$ , palatalized phonetic variant of  $-at^{\alpha}$  (cf. note 53), passive suffix, see note 72.

110.  $h^{\alpha}s$ , see note 84.  $-u^{\alpha}q^{\alpha}$ , marks subordinate clause of locality, cf. note 22.

111.  $nawa^{\alpha}y-$ , probably "softened" from some stem no longer ascertainable ( $*nawa^{\alpha}t-$ ,  $*nawa^{\alpha}s-$ , or  $*nawa^{\alpha}c-$ ), TO SIT LOOKING AROUND, TO SIT AROUND WITHOUT PARTICULAR PURPOSE (cf.  $nawa^{\alpha}y-as$  TO SIT OUTSIDE OF THE HOUSE LOOKING AROUND, used particularly of old men sitting on the platform in front of the house in the morning and gossiping as they look around).  $is$ , local suffix ON THE BEACH, cf. note 84.

112.  $h^{\alpha}n-$ , see note 94.  $-ulta^{\alpha}$  (after consonants),  $-w^{\alpha}lta^{\alpha}$  (after vowels), local suffix OUT OF THE CANOE.

113.  $h^{\alpha}t-$ , see note 24.  $-yini^{\alpha}$ , local suffix AT THE BOW OF A CANOE, also  $-a^{\alpha}tsyini^{\alpha}$ ,  $-atsyini^{\alpha}$  (e. g.  $hop-a^{\alpha}tsyini^{\alpha}$  TO HAVE A ROUND OBJECT IN THE

BOW,  $tlakic-atsyini^{\alpha}$  TO STAND IN THE BOW, see note 114).  $-i^{\alpha}$ , see notes 9, 103.

114.  $sim-$ , verb stem A POLE-LIKE OBJECT HAS POSITION (cf.  $sp^{\alpha}-to^{\alpha}p^{\alpha}$  STICK).  $-atsyini^{\alpha}$ , local suffix IN THE BOW, see note 113.  $sim^{\alpha}tsyini^{\alpha}$  is to be understood as a "bahuvrihi": TO BE POLE-BOWED, TO HAVE A POLE-LIKE OBJECT IN THE BOW.

115. Absolutive form of noun, object of preceding "bahuvrihi" verb.  $m^{\alpha}ts-$ , noun stem SPEAR (e. g.  $m^{\alpha}ts^{\alpha}-na^{\alpha}k^{\alpha}$  TO HAVE A SPEAR,  $mi^{\alpha}ts-ut^{\alpha}$  TO GO FOR A SPEAR,  $mi^{\alpha}ts-i^{\alpha}t$  TO MAKE A SPEAR).  $-y^{\alpha}$ , absolutive noun suffix, see note 54.

116.  $t^{\alpha}q^{\alpha}$ , see note 105.  $-stci^{\alpha}sa^{\alpha}at^{\alpha}$  from  $-stci^{\alpha}sat^{\alpha} + -at^{\alpha}$ , cf. note 109.  $-stci^{\alpha}sat^{\alpha}$ , mom. form (cf. note 105) of dur.  $-stci^{\alpha}s$  NEXT TO ON THE BEACH, contracted from  $-stci-$  (which does not occur uncompounded) and  $-is$  ON THE BEACH (after  $u-$  vowel  $-k^{\alpha}tci^{\alpha}s$ , e. g.  $'u-k^{\alpha}tci^{\alpha}s$  SO AND SO IS NEXT TO ONE ON THE BEACH), cf.  $-tci^{\alpha}ath^{\alpha}$ ,  $-k^{\alpha}tci^{\alpha}ath^{\alpha}$  TO BE NEXT-PEOPLED, NEIGHBORING (e. g.  $'o-k^{\alpha}tci^{\alpha}ath^{\alpha}-st^{\alpha}at^{\alpha}$  TO BE NEIGHBORS TO ONE ANOTHER); this  $-stci^{\alpha}s$ ,  $-k^{\alpha}tci^{\alpha}s$  is not to be confused with stem-lengthening  $-stci^{\alpha}s$  FURTHER UP ON THE BEACH (e. g.  $'o--stci^{\alpha}s$  TO BE THE ONE THAT IS FURTHER UP ON THE BEACH; cf.  $'o--stca^{\alpha}s$  TO BE THE FURTHER ONE UP OUTSIDE OF THE HOUSE).  $-at^{\alpha}$ , passive suffix, see note 72.

117.  $'\alpha h^{\alpha}$ , see note 67.  $-at^{\alpha}$ , passive suffix, see note 72.  $'\alpha h^{\alpha}at^{\alpha}$  may be interpreted as IT WAS (THE CANOEMAN) BY WHOM (K'WALISITS) WAS (NEIGHBOR)ED.  $'\alpha h^{\alpha}at^{\alpha} +$  noun corresponds to our English agentive phrase (BY...) after passive verbs. It should be understood that every Nootka verb, transitive or intransitive, can be made passive in form.

118. Momentaneous form.  $qatc-$ , verb stem TO NUDGE WITH THE ELBOW.  $-ci^{\alpha}-i^{\alpha}t^{\alpha}$ , see notes 18, 109.

119.  $'oqw-$ , stem GOOD WEATHER (e. g.  $'oqw-ats$  FINE WEATHER COMES DOWN ON THE BEACH,  $'oqw-i^{\alpha}nak^{\alpha}$  TO IMITATE FAIR WEATHER IN A

DANCE). *-umih* (perhaps properly *-umih-*; labialized *k*-sound + *-umi*, *-u<sup>i</sup>*, often develops to *k*-sound + *-umi*, *-u<sup>i</sup>*), stem-lengthening verbal suffix of unknown meaning (I have found it only with *'oqw-*). *-ε-*, for *-i-* (*h<sup>u</sup>i* > *hε*), durative suffix after *h* (see note 16; *-i'*, sometimes shortened to *-e'*, is absolute durative, but before indicative *-m-* this element is always shortened). *-ma*, third person present indicative (see paradigm in note 1; *-m-* also occurs in other persons if preceded by a vowel, e. g. *ha'okw-ah* I EAT but *so'-m-ah* I AM HOLDING).

120. Interrogative adverb of modality, IS IT NOT? DO YOU THINK? *tak-*, possibly identical with stem of *taka'* NEVERTHELESS, STILL, YET. *-ha*, interrogative word-suffix, third personal subject (see note 1 for paradigm of interrogative forms).

121. See note 78 *-i'*, see note 9; THIS THE DAY is equivalent to TODAY. *'ah<sup>u</sup> 'na's'i'* is probably better taken as subject of *'oqumihem'a* (THIS DAY IS FINE-WEATHERED) than as independent adverb (IT IS FINE WEATHER TODAY).

122. *wa'*, verb TO SAY (also used as verb-stem *wa'-*); *wa'* does not seem to be used as durative (like certain other monosyllabic long-voweled duratives, see note 32), but as momentaneous: TO SAY (A SINGLE THING); its corresponding durative is *wawa'* TO BE SAYING (not necessarily several times, despite its iterative form), inceptive *waw'-cutt* TO BEGIN TO BE SAYING. *-at'*, passive suffix, see note 72; passives of *wa'-* refer to the person addressed, not the thing spoken of (e. g. *wa'-at-ah* I AM TOLD).

123. *'moqw-*, verb stem whose precise meaning is not yet clear; presumably TO BE DUMB OR, less specifically, TO BE BARRED, HEMMED, RIGID or something of that sort. *-i'yutl*, *-i'yutl*, mom. form of dur. *-i'yut*, *-i'yut*, local suffix IN THE THROAT, distributive form *-i'yoh<sup>u</sup>*, *-i'yoh<sup>u</sup>* (*l* of suffixes frequently changes to *h<sup>u</sup>* in distributive forms, cf. further *-ot* FACED: distr. *-o'h<sup>u</sup>*) (cf.

dur. *'aq'maq-e'yut* TO HAVE GRASS IN THE THROAT; distr. *'l'lt'lh-ai'yoh<sup>u</sup>* RED HERE AND THERE AT THE THROAT, MARTEN; mom. *'atl-taq-e'yutl* TO BE DOUBLE IN THE THROAT, BIRD SINGS DOUBLE NOTES).

124. *hε-* (from *h<sup>u</sup>i-*), stem TO BE UNABLE IN ANY WAY followed by irrealis *-a'h<sup>a</sup>* (e. g. *hε-tsa-'ap'-a'h-si'* I COULD NOT TAKE IT TO ANY PLACE). *-s'iti-*, i. e. *-ssiti-*, unlauded from *-ssita-* (see notes 79, 109) and lengthened, as generally in short-voweled durative-inceptive forms, from *-ssita-*; *-ssita'* (after vowels), *-sita'* (after consonants), dur. verbal suffix TO ACT IN SUCH AND SUCH A WAY (e. g. *p'ic-sita'* TO DO SOMETHING BAD); *-ssita'* assimilated from *\*-csita'* (cf. perhaps Kwakiutl *-γsi'la* TO TAKE CARE OF; this original *-c-* < *-γ-* explains *'ani-sita'* TO ONLY DO SO < *\*'anaisita'* < *\*'ana-γsita'*, cf. *qawi'*: *qawac-* SALMONBERRY < *\*qawayl*). *-te-*, from *-teut*, inceptive suffix, see notes 35, 109, 5. *-a'h<sup>a</sup>*, modal word-suffix indicating uncertainty or unreality, particularly in negative clauses, act phonetically like *-atl*, see note 1 (e. g. *wik'um<sup>i</sup> ko'wlt'a'h* DO-NOT STEAL-AT-ANY-TIME! *hayimihatts<sup>i</sup> hsi'k'a'he's* NOW-I-DO-NOT-KNOW WHICH-WAY-I-SHOULD-GO).

125. *tsiq-*, verb stem TO SPEAK (e. g. dur.-iterative *tsi'q'tsi'q-a'* TO BE TALKING, *tsi'-<sup>u</sup>ik'* TO BE FOND OF TALKING, *tsi'q'-p'itoh<sup>u</sup>* TO TALK WHILE DOING SOMETHING ELSE). *-cutt*, momentaneous suffix, see note 18.

126. *qah<sup>u</sup>-*, see note 53. *-kwa-te-*, for *-kwa-teut*, see note 5; *-kwa-teut*, momentaneous suffix *-teut* preceded by element *-kwa-* denoting COMPLETENESS, TOTALITY (e. g. *qa'h<sup>u</sup>-kwa-teut* PEOPLE DIE OFF, *xwak'-kwa-teut* TO BECOME ALL SWOLLEN UP), causative *-kwa-'ap'* (e. g. *xits-kwa-'ap'* TO CRUSH TO PIECES, *'sax-kwa-'ap'* TO SPEAR AT SEVERAL PEOPLE). *-xt'*, for *-at'*, passive suffix, see notes 72, 109, 118.

127. Contracted from *\*qa'yap'l'a-at'-i'*, see notes 14, 26. *qa'yap'l'a'*, absolute noun LEG; no analysis suggests itself. *-at'-i'*, see note 26.

128. = *tlakic-cutl*, momentaneous aspect, see note 18, from verb stem *tlakic-* TO STAND. There is no simple durative corresponding to *tlakic-cutl*, as *tlakic-* ("softened" to *tlaki-*) as durative is regularly followed by some local suffix (e. g. *tlaki-s* TO STAND ON, used as nearest equivalent for TO STAND; *tlaki-qs* TO STAND IN A CANOE, WAGON, BOX; *tlakic-s'ato'* TO STAND AT THE DOOR). *tlakic-* is based on simpler *tla-* STICK-LIKE OBJECT STANDS (e. g. *tla-yu'* STAKE FOR A WEIR, *tla-a'a'* A STICK STANDS UP ON THE ROCKS).

129. Gradulative in *-cutl*, with lengthened stem-vowel, from verb-stem *yats-* TO STEP, TO WALK (*yats-cutl* TO TAKE A STEP), see note 6; practically, *ya'ts-cutl* may be looked upon as inceptive to *ya'ts-uk'u* TO WALK, see note 107. Other derivatives of *yats-* are *yats-haut* TO WALK ON THE SIDE (OF A HILL), *ya'ts-a'q't'itl* TO WALK INTO THE BUSH, *yats-i'tss* TO TRACK, *yats-tspa'* TO GET PAST, *ya'l's-ly'* TO TRY TO REACH BY FOLLOWING IN ONE'S FOOTSTEPS.

130. *ho'a-*, stem BACK, RETURNING (e. g. *ho'i-ni* TO COME BACK, *ho'a-l'sat'o'* TO REPEAT A WOLF RITUAL A YEAR LATER IN ABBREVIATED FORM). *-tsa-tcutl*, see note 66; as momentaneous-iterative of mom. *he'atsatcutl*, is found *hottha'tsate* TO TURN BACK SEVERAL TIMES.

131. See notes 64, 33. Local object of preceding verb, completing *-tsa-*.

132. *hita-*, see note 106. *-qsutl*, mom. form of *-qs* IN A CANOE (e. g. dur. *teo-qs* TO KNEEL IN A CANOE WITH BENT BACK, *mo'-qs* TO BE FOUR-IN-CANOED, TO HAVE FOUR [SALMON] IN ONE'S CANOE; iterative *hi'ta'qsi't* TO GO INTO A CANOE SEVERAL TIMES); *-qs(utl)* is used only after vowels, *-'ah's(utl)* after consonants, see note 62.

133. Momentaneous form of *thly'*, verb stem TO PADDLE, TRAVEL IN A CANOE (dur. *thly-ak'* TO PADDLE, mom. *thly'-cutl* TO SET OFF IN A CANOE, gradulative *thly'-cutl* TO BE PADDLING OFF). *-cutl*, see note 18.

134. Rhetorical lengthening of demonstrative stem *ya'* THAT YONDER (cf. note 17).

135. *tak-*, from verb stem *takw-* TO DO NOTHING BUT, EXCLUSIVELY, dur. *tak-ok'* TO DO SO AT ONCE. *-h'ta-tcutl*, inceptive local suffix TO BECOME OUT AT SEA; *-h'ta-* probably identical with *-h't-* of note 106, in which case *-h'ta-* is best analyzed as *-h't-* + dur. *-a-*, *tak-h'ta-tcutl* being properly TO BEGIN TO BE ALTOGETHER OUT ON THE SEA.

136. *l'cu:nu'-'athy'* name of a gnome-like being of the woods; *l'cu:nu-*, stem of unknown meaning; *-'athy'* PERSON, PEOPLE, see note 87. *-l'ca'*, quotative article, see note 66.

137. *'o-*, see note 1; anticipates following temporal clause *thly'ci'εtt'utq' l'ca'pokw'i' l'cu:nu'athy'e'*. *-ya'tt*, contracted from *-yi'att*, cf. notes 14, 26; *-yi'* derivative verbal suffix AT THE TIME OF (e. g. *'o-yi'*, AT SUCH AND SUCH A TIME, WHEN, IF, *qwe-yi-ni-m-ut-i'-s*. AT WHAT TIME I CAME, WHEN I CAME), also *-yiya'*, *-yi'ya'* after vowels (e. g. *'ah'ko'-yi'ya'* TO BE AT THIS TIME, *tla'o'-yi'ya'* TO BE NEXT TIME, *'ah'a'-yi'yatt* < *-yi'ya + 'att* NOW AT THAT TIME, passive *qoxwa-yiyat* < *\*-yiya-'at* TO BE SO DONE TO WHEN FREEZING), *-iya'*, *-i'ya'* after consonants (e. g. *'athy'-ya-satt* TO COME TO THE BEACH WHEN IT IS NIGHT, *kwist-i'ya'* TO BE AT A DIFFERENT TIME).

138. *ti'tca-tcutl*, inceptive aspect (TO BECOME ALIVE, TO GET WELL) of dur. *ti'tc* TO BE ALIVE (*ti'tca-* is used as durative base for other aspects, but not as independent durative; cf., further, iterative *ti'tca-tci't* TO BECOME WELL SEVERAL TIMES, distributive inceptive *titi'tca-tcutl* SEVERAL BECOME WELL), also used as verb stem *ti'tc-* (e. g. *ti'tc-ma'* HEART, *titi'tc-mi'* TO PRAY FOR HEALTH). *-tci-'εtt*, for *-tci-'att*, see notes 5, 1.

139. See notes 133, 5, 1, 22. *-'ut'q'* is here temporal not because of any inherent value but because time subordination is demanded by preceding *'oya'tt*.

140. See note 136.  $-e'$ , phonetic variant of  $-i'$ , see note 9. Note that quotative nominalizing  $-i'ca'$  (note 136) changes to non-quotative  $-i'$  because, once introduced, the  $i'ca'm'atly'$  is conceived as known.

141. Contracted from  $*i'nzma-'ak'-i'$ , see notes 14, 26.  $i'nzx-ma'$ , absolutive noun CLOTHING, REGALIA, derived from verb stem  $i'nax-$  TO BE PREPARED, READY (dur.  $i'nzxa'$  TO BE READY, DRESSED UP, graduative  $i'n'xa'$  TO BE GETTING READY, graduative causative  $i'n'xa'-ap'$  TO BE GETTING SOMETHING READY, momentaneous  $i'nzxi'-tcit'$  TO GET READY, momentaneous causative  $i'nzxi'-yap'$  TO GET SOMETHING READY);  $-ma'$ , absolutive noun suffix, cf. note 12.  $-ak'-i'$ , see note 15.

142.  $ti-$ ,  $ti'$ , verb-stem TO RUB (ONESELF) (e. g.  $ti'-tcit'$  TO RUB ONCE,  $ti'-tcu'$  TO RUB ONESELF DOWN, iterative  $tittli'y-a'$  TO RUB ONESELF ALL OVER,  $tlt-n'kumi'$  HAND-RUBBING-OBJECT, TOWEL).  $-m's-ap'$ , causative in  $-ap'$  (see note 72) of  $-m's$ ,  $-m's$ , local suffix MOVING ON THE BEACH (e. g.  $tta-mi's$  A STICK-LIKE OBJECT IS PUT UP SEVERAL TIMES ON THE BEACH,  $wk'-maq'-mi's$  TO GO ABOUT THE BEACH AND BE UNMANLY,  $'o-na'h-m's$  TO LOOK FOR SO AND SO ON THE BEACH,  $'ak'wat'-nah-m's$  TO LOOK ABOUT THE BEACH TO BORROW);  $-m's$  is contracted from  $*-m'ys$ ,  $*-mays$ , "softened" from  $-mat-$  MOVING ABOUT and  $-is$  ON THE BEACH, cf. note 84 (analogous forms are  $-mi't$ ,  $-mit$  MOVING ABOUT IN THE HOUSE,  $-ma's$ ,  $-mas$  MOVING ABOUT ON THE GROUND, FROM HOUSE TO HOUSE,  $-mi'a'$ ,  $-m'a'$  MOVING ABOUT ON THE ROCKS; with preserved  $-mat-$ , which does not seem to occur alone, e. g.  $-mat-ap'$  MOVING ABOUT STANDING,  $-mat-i'$  MOVING ABOUT ON THE BODY,  $-mat'-m'$  MOVING ABOUT IN THE WATER), and is not a true iterative (the true iterative of  $t\dot{t}z-is$  A STICK-LIKE OBJECT STANDS ON THE BEACH, e. g., is  $tta-si's$ ), though often practically used as such.

143. See note 84.

144. See note 28. Specifies the local idea contained in the preceding verb: HE WAS ON THAT BEACH.

145. "Softened" from  $mo-tci't$  TO BE FOR FOUR DAYS, see note 97, and  $-is$  ON THE BEACH.

146. Contracted from  $*hitats\dot{s}h^a'ta'-att-tta$ , see notes 14, 137.  $hta-$ , see note 106.  $-iss\dot{s}h^a'ta'$  (after vowels),  $-s\dot{s}h^a'ta'$  (after consonants), local suffix OUT OF THE WOODS, probably containing element  $-h^at-$  discussed in note 106 (e. g.  $yats-s\dot{s}h^a'ta'$  TO WALK OUT OF THE BUSH,  $mal'-s\dot{s}h^a'ta'$  TO FLY OUT OF THE BUSH,  $sa'-tss\dot{s}h^a'ta'$  [A WOLF] COMES OUT OF THE WOODS, iterative  $sa'-tss\dot{s}h^a'tu'it'$  [WOLVES] KEEP COMING OUT OF THE WOODS).  $-att$ , see note 1.  $-tta$ , see note 46.

147. Phonetic variant of  $qwayat'si'k'$ , absolutive noun WOLF from stem  $qwayats-$  (e. g.  $qwayats-i'nak'$  TO IMITATE A WOLF IN A DANCE,  $qwayats-ox'sumi'$  WOLF HEAD-MASK).  $-i'k'$  absolutive noun suffix "hardening" preceding consonants (cf.  $h\dot{e}'i'l'-i'k'$  LIGHTNING SERPENT, literally ALWAYS COILING DOWN TO THE GROUND?); perhaps ultimately identical with "hardening"  $-i'k'$  TO BE FOND OF — ING, TO BE ALWAYS — ING (e. g.  $tu'w-ik'$  TO BE FOND OF JUMPING,  $ts\dot{e}'-ik'$  TO BE FOND OF TALKING,  $na'-ik'$  TO BE A DRUNKARD),  $-i'k'$ , reduplicates with long vowel in reduplicating syllable, TO BE ALWAYS — ING (e. g.  $i'co'i'cuc-i'k'$  TO BE ALWAYS SUSPICIOUS,  $i'v'q\dot{h}auk'w-i'k'$  TO BE FOND OF TELLING THINGS).

148. See notes 109, 46.

149.  $tsusk-$ , verb-stem TO URINATE ON (used only of animals).  $-ci'-\dot{e}t-$ , see note 118.  $-uk'u$ , see note 10.

150.  $mutsm\dot{s}h-$ , irregularly reduplicated stem with  $-ts-$  after reduplicating vowel; other examples of this inserted  $-ts-$  in reduplicated forms are  $matsmay.xw\dot{w}n'$  SPIRITS WHO SPEAR PASSERS-BY, iterative  $i'tist'i'ya'$  TO SHOOT SEVERAL TIMES, and forms in  $-sut'$  IN THE EYE,  $-s\dot{m}i'$  WHAT IS AT THE EYE (e. g.  $'nuls'no'q'-sut'$  TO HAVE A BOIL ON THE EYE,  $yatsya'k'-sut'$  TO BE SORE INSIDE THE

EYE, *hatshunik-suni* EYELASHES, *k'utsk'o'x<sup>u</sup>-suni* SCALES IN THE EYE). -*aq'*, derivative noun-suffix HIDE, SKIN (e. g. *tukw-aq'* SKIN); more common is stem-shortening -*a'aq'* (e. g. *'atuc-a'aq'* DEER-HIDE < *'a'tuc* DEER, *'a'axw-a'aq'* BEAVER-HIDE).

151. *qwa-*, see notes 21, 27. -*ak'*, postvocalic form of word suffix denoting alienable possession, see notes 10, 149, also notes 15, 39, 141. What is possessed is here URINE (understood).

152. See note 22.

153. *kats-*, verb-stem TO HAIL (mom. *kats-cit* TO HAIL, dur. *kats-a'* TO BE HAILING, HAILY, mom.-iterative *katska'ts-c* TO HAIL AT FREQUENT INTERVALS). -*o'muni*, derivative noun suffix of unknown meaning (MASS OF GLOBULES? cf. *l'taq'-omuni* DISEASE LIKE CHICKEN-POX); contains absolutive noun suffix -*uni*, cf. note 23.

154. *wat-*, verb-stem TO RETURN HOME, cf. note 95. -*c'<sup>2</sup>εtt*, see note 53.

155. *mah'i'v'* NOUN HOUSE. *ma-*, stem GROUP OF PEOPLE, TO DWELL AS A COMMUNITY (e. g. *ma'<sup>2</sup>as* TRIBE, VILLAGE, *ma'-tt'sa's* A HOUSE STANDS AGAINST THE HILL, *ma-mat'<sup>2</sup>n'* DWELLING WHILE MOVING ABOUT IN THE WATER, WHITE MAN, *ma-tci't* TO BE INSIDE THE HOUSE, *mx-stc'mi* DWELLING NEXT TO, COMMON MAN). -*ht'v'*, derivative noun suffix of unknown meaning, perhaps related to -*ht-*, see notes 106, 135. *mah'i'v'* DWELLING PLACE OUT IN THE OPEN, AWAY FROM THE WOODS?

156. See note 6.

157. *l'cu-*, verb-stem FISH, SEA-MAMMALS RUN; dur. *l'cu'<sup>2</sup>ak'*. -*kwe'<sup>2</sup>att*, phonetic variant of -*kwi'<sup>2</sup>att*, for -*kwtl +<sup>2</sup>att*, see note 5; -*kwtl*, momentaneous suffix, see note 32; -*'att*, see note 1.

158. *qah<sup>u</sup>-*, see note 53. -*sa'p'*, momentaneous causative, see note 36.

159. *ya'a'ni'* = *yaq(w)-* + "hardening" -*a'n-ut'*, see note 62. *yaqw-* (before stem-suffixes), *yaq-* (before word suffixes, cf. note

185), general denominating stem for relative clauses, as is *'o-* (see note 1) for main clauses and *qwi-* (see note 55) for indirect questions; it may be translated WHO, WHICH, WHAT, and is always completed by a relative suffix (-*'ut'q'*, as here, some form in -*qa-*, see note 74, or some form in -*i-*, -*i'-*, -*yi-*, -*yi'-*, see note 73); examples of stem-form *yaqw-* are *yaq'-tci'<sup>2</sup>ath<sup>u</sup>-ut'q'* NEXT TO WHOM ONE LIVES, ONE'S NEIGHBORS, *yaqw-ats-ut'q'* TO WHOM IT BELONGS, *yaq-tsh<sup>u</sup>v'<sup>2</sup>ut'q'* TO WHOM HE IS MARRIED. -*a'n-ut-*, form taken by passive -*'at'*, see note 72, when combined with -*ut-*, perfective suffix (for active perfectives cf. *ho'ya't-ut-ah* I HAVE BEEN DANCING, *ha'wut-ut'-wε'uni* THERE WAS A CHIFF, IT IS SAID, *ho'ya't-ut-a'* HE HAS BEEN, HAD BEEN DANCING; for passive perfectives cf. *ha'ok'w-a-n-ut-a'* IT WAS EATEN UP); without perfective -*ut-* this form would be *ya'at'ut'q'*. -*'ut'q'*, see notes 22, 110, 139. *ya'a'ni'*, as passive, is analogous to *'ah'at'*, note 117; syntactically, *ya'a'ni' ut'q' l'tv'wmi'ap'at' k'wal'suts* is subject of *qah<sup>u</sup>sa'p'*.

160. Modal adverb; properly, durative absolute used as complementary infinitive to preceding verb. *'yo'-qwa'* is evidently compounded of *'yo-*, probably petrified demonstrative stem found only with following *qwa'*, and durative *qwa'* TO BE IN QUALITY, see notes 21, 27. It is one of the exceedingly rare cases in which a primary stem comes in second position.

161. *l'sax-cit*, see note 58. -*tta*, see notes 46, 146.

162. *h<sup>u</sup>n-*, see note 101. -*i'p'* (after consonants), -*'y'p'* (after vowels, see note 163), verbal suffix TO GET, TO OBTAIN (e. g. *p'ic-i'p'* TO GET SOME BAD [SICKNESS], see also notes 165, 173); -*i'p'* seems to be momentaneous in aspect, while -*i'p'*, lengthening stem-vowel, is durative (e. g. *'ay-i'p'* TO OBTAIN MANY THINGS AT A CERTAIN TIME, but *'a'y-i'p'* TO BE GETTING MUCH RIGHT ALONG). -*tta'*, see note 46.

163. *mo-*, see note 97. <sup>2</sup>*yɪp'* postvocalic form of <sup>2</sup>*v'p'*; see note 162 (see also notes 171, 172, 176).

164. Durative absolute in *-a'* (cf. inceptive <sup>2</sup>*ani'-cutt* TO GET TO BE THE ONLY ONE, TO ALONE BECOME); <sup>2</sup>*ana-* is freely used as verb stem TO BE ONLY, formally analogous to <sup>2</sup>*aya-* TO BE MUCH (e. g. <sup>2</sup>*ana-tssmo'is* TO BE THE ONLY ONE ALONG THE BEACH, <sup>2</sup>*ana-tcutt* TO DO SO AND SO ONLY TO, <sup>2</sup>*an-v's-cutt-sa'* TO EAT NOTHING BUT . . .).

165. *su'c-*, verb-stem TO BE FIVE (form of stem used before vowels, e. g. *su'c-v'q'* FIFTY-TWENTIES, ONE HUNDRED, *su'c-i'tss* TO CARRY FIVE OBJECTS IN THE HAND, *su'c-o'k'wat* FIVE ARE MISSING, *susut'c-wik'* [red.] TO BE FIVE FINGER-WIDTHS LONG; before consonantal suffixes it appears as *su'ca-*, e. g. *su'ca-qumit* FIVE ROUND OBJECTS, *su'ca-l'siq'* FIVE LONG CYLINDRICAL OBJECTS, *su'ca-p'it* FIVE LONG FLAT OBJECTS, *su'ca-h<sup>a</sup>tak'* FIVE BAGS FULL, *su'ca-tcutt* FIVE DAYS, *su'ca-qs* TO HAVE FIVE [SALMON] IN THE CANOE, *su'ca-p'at* TO CARRY FIVE OBJECTS ON THE BACK), as durative absolute *su'ca-*. <sup>2</sup>*v'p'*, see note 162 (but also note 171).

166. *t'ɪup'v'tch<sup>a</sup>* TO BE SUMMER consists of verb-stem *t'ɪup-* and "hardening" <sup>2</sup>*v'tch<sup>a</sup>*; *t'ɪup-*, verb-stem TO BE HOT (e. g. dur. *t'ɪop-a'* WEATHER IS HOT, *t'ɪop-a't* OBJECT IS HOT, *t'ɪop'<sup>2</sup>y'ha'* TO DIE OF HEAT, i. e. TO SWEAT, *t'ɪop'-qi'* TO BE HOT ON THE TOP END; less frequently *t'ɪom-*, e. g. *t'ɪo'm-ahs* TO BE HOT IN A RECEPTACLE, i. e. HOT WATER). <sup>2</sup>*v'tch<sup>a</sup>*, see note 61. *-cutt*, see note 61.

167. <sup>2</sup>*o-*, reduplicated form of *o-*, see note 1. <sup>2</sup>*v'ha'*, properly <sup>2</sup>*v'ha'*, "hardening" verb suffix which causes reduplication of stem, TO BE IN PURSUIT OF, TO TRY TO GET, TO HUNT (such animals or objects as may be obtained in number) (e. g. *ttutlu'y-v'ha'* TO GO HERRING-FISHING < *thus-mut'* HERRING, *tutuck'-v'ha'* TO GO COD-FISHING < *tuck-o'ha'* COD, *t'tott'onup'<sup>2</sup>v'ha'* TO HUNT ELK < *t'to'mmi'* ELK, *h'he'w-v'ha'* TO

GO FOR SEA-EGGS < *he'x*, stem *he'xw-* SEA-EGG); <sup>2</sup>*v'ha'* also occurs after both noun and verb stems, unreduplicated, to mean TO TRY TO GET, TO BE AFTER, generally with lengthened stem-vowel (e. g. *'me'-v'ha'* TO TRY TO GET THE ONE HELD IN THE MOUTH [BY THE WOLF], i. e. TO ATTEMPT TO CAPTURE A NOVICE IN THE WOLF RITUAL, *ya'l's-v'ha'* TO TRACK, TO TRY TO GET BY FOLLOWING IN ONE'S STEPS, *he'y-v'ha'* TO BE AFTER BLOOD < *hes-mus* BLOOD), also with unlengthened stem-vowel, in which case it means TO WANT (e. g. *k'ut's-v'ha'* TO WANT MUSSELS, *tu'c-v'ha'* TO WANT A WOMAN); finally, <sup>2</sup>*v'ha'* forms derivatives from certain verb-stems with both reduplication and lengthening of stem-vowel (e. g. *'na'na'l'c-v'ha'* TO WATCH FOR < *'nate-* TO LOOK). *-cutt*, inceptive suffix, see note 18 (cf. also *h'ni'-v'ha'-cutt* TO GO AFTER).

168. <sup>2</sup>*o-*, lengthened from *o-*, see note 1, because of iterative aspect (cf. note 50). *-w'a't* iterative form of *-w'a'* TO BE THE FIRST (e. g. *'o-w'a'* SO AND SO IS FIRST, *'o-w'a-tsaqa'* TO COOK SO AND SO FIRST, causative *'o-w'a'-ap'* TO LET SO AND SO BE THE FIRST). <sup>2</sup>*ap'*, causative suffix, see note 72 (all iteratives in final *-t* form their causative in <sup>2</sup>*ap'*, e. g. *'o't'-ap'* TO CAUSE REPEATEDLY TO BE ON THE ROCKS, *'ap'ub'it'-ap'* TO CAUSE REPEATEDLY TO BE UNDER, *'a't'-ap'* TO CAUSE REPEATEDLY TO BE OFF, *-i'it'-ap'* TO CAUSE REPEATEDLY INTO THE HOUSE).

169. *mo'y'p'att*, see notes 163, 1. *-tta*, see note 46.

170. *wk-*, see note 10. *-l'mv'-tcv'-xtt*, from unlauted *\*-l'ma'-cutt* + <sup>2</sup>*att*, see notes 79, 5. *-l'ma'*, derivative suffix denoting ABILITY (e. g. *wk-l'ma'* TO BE UNABLE). *-cutt*, inceptive suffix, see notes 109, 124. <sup>2</sup>*att*, see note 1.

171. *su'c'v'yp'*, parallel to and apparently entirely synonymous with *su'c'p'* (see note 165); based on *su'ca-*, which is lengthened and unlauted to *su'c'v-* before <sup>2</sup>*yp'* (as before *mom.* or inceptive *-cutt* and its causative

-*yap'*. cf. notes 79, 109). -*y'p'*, see note '63. -*'atl'*, see note 1. -*lta'*, see note 46.

172. *hayo-*, with lengthening of final vowel before -*y'p'* (cf. note 171) from *hayu-*, verb-stem TO BE TEN, durative absolute *hayu'* (examples of stem *hayu-* are *hayu'-q'* TEN-TWENTIES, TWO HUNDRED, *hayu'-qwm'it* TEN ROUND OBJECTS, *hayu'-l'siq'* TEN LONG CYLINDRICAL OBJECTS, *hayu'-p'at* TEN LONG FLAT OBJECTS, *hayu'-p'at* TO HAVE TEN OBJECTS ON THE BACK, *hayu'-tcl* TEN DAYS, *hayu'-lss* TO CARRY TEN OBJECTS IN THE HAND). -*cut'*, see note 18; form in -*cut'* apparently synonymous with simpler form without it (cf. note 176), unless -*cut'* is here perfective: HAD OBTAINED TEN.

173. *'attakwat*, numeral EIGHT, literally TWO ABSENT (FROM TEN). *'att-*, verb stem TO BE TWO (e. g. *'att-q'mit* TWO ROUND OBJECTS, *'att-i't* TO BE TWO IN THE HOUSE, *'att-h'at'* TWO BAGS FULL, *'att-tci't* TWO DAYS, *'a'at'-ah'ni* TO BE TWO ON THE END, *'att-sa'tso'* TO BE IN TWO PLACES), before certain suffixes *'atta-* (e. g. distributive *'a'atta-kwat* THERE ARE TWO MISSING OUT OF EACH [PILE], *'atta-qs-t'* TO BE TWO IN A RECEPTACLE IN THE HOUSE), durative absolute *'atta'*. -*kwa't*, -*kwa't*, verb suffix TO BE ABSENT, MISSING (e. g. *qe'-kwa't* TO STAY AWAY FOR A LONG TIME, *mo-kwa't* FOUR ARE GONE, *yaq'-kwa't-'u'q'* WHO IS ABSENT, *hta-kwat-cut* TOGETHER TO BE AWAY, TO GO AWAY, *'a'ya-kwat-cut-sa'* TO GET TO BE TOO MUCH-MISSING, TO SPEND TOO MUCH); analogous to *'atta-kwat* EIGHT is *'sawa-kwat* ONE ABSENT (FROM TEN), NINE. -*'p'*, see note 162.

174. *'o-*, see note 1. -*yo'at*, see note 65. -*t'*, perfective suffix, see note 159. -*'i'*, nominalizing suffix, see note 9. In apposition with *tca'ats'v'b'*.

175. See note 67. Formally, *'oh'* is complementary infinitive to *'oyo'at'*; it serves to emphasize *tca'ats'v'b'* in contrast to *k'wal'suts*: HE FOR HIS PART.

176. See note 172. *hayu-* merely phonetic variant of *hayo-*.

177. *ha'o-*, verb-stem TO DO IN TURN, TO PASS ON TO THE NEXT, metaphorically TO TAKE REVENGE (e. g. iterative *ha'tlho'-qsa-te* GENERATION PASSES AFTER GENERATION). -*kwo'-'εtl'*, for -*kwo'-'atl'*, see notes 157, 32, 5.

178. *satch-*, verb-stem TO BE SHARP (e. g. red. *sasatch'-wo'* TO BE SHARP-CLAWED, *satch-aq'sul* TO BE SHARP-TOOTHED, *satch'-ahs* COMB, literally BEING SHARP INSIDE), here metaphorically for STRONG. -*ok'*, see note 10. -*'l'ca-*, modal verb suffix denoting INFERENCE, IT SEEMS, here ironically; consists of -*'l'ca-* and -*c*, of which -*'l'ca-* is inferential (cf. nominalizing -*'l'ca'*, note 66) and -*c* emphasizing (e. g. *satchok'-si-c* MINE IS INDEED SHARP). The pronominal paradigm for -*'l'ca-c* (cf. interrogative paradigm in note 1) is:

Sing. 1. - <i>'l'ca-si-c</i>	Plur. 1. - <i>'l'cv-ni-c</i>
2. - <i>tca-k-c</i>	2. - <i>'l'ca-so'-c</i>
3. - <i>'l'ca-c</i>	3. - <i>'l'ca-c(-'at)</i>

179. See note 54.

180. *'a'qni'qha*, for *'a'qni'-qb-ha*. *'a'q-* lengthened from *'aq-* (before vowels), *'aqi-*, *'aqi-* (before consonants), interrogative verb-stem WHAT? always followed by interrogative -*ha-* (e. g. dur. absolute *'aq-ak'-ha'* WHAT IS IT? *'aqi-yh'itaqak'-ha'* WHAT IS IT MADE OF? *'a'qni-yuk'-ha-k'* WHY DO YOU CRY? *'a'qni-l'sus-ha-k'* WHAT ARE YOU LAUGHING ABOUT? *'aqi-sk'-ha'* WHY DID HE GO AWAY? *'aq-i's-hi-k'* WHAT ARE YOU EATING? *'a'aq-o'-i's-ha-k'* WHAT ARE YOU SAYING? *'aqi-yu'at-ha-k'* WHAT DO YOU SEE? *'aqe'-yim-t-ha-k'* WHAT DID YOU FIND? *'aqi-qs-ha-k'* WHAT [GAME] HAVE YOU IN YOUR CANOE? *'aqe'-s-ha'* WHAT IS ON IT? *'aqe'-tcictutl-ha'* WHAT CAME TO BE ON THE SURFACE OF THE WATER?). -*ni-*, verb suffix lengthening stem-vowel, probably TO BE BECAUSE OF, cf. causative *'a'qni'-ap-ha-k'* WHAT ARE YOU DOING? (this stem lengthening -*ni-*, which does not seem to occur freely, may be related to postvocalic -*no'tl'*, postconsonantal -*ni'tl'*, with movable momen-

taneous *-it*, TO BE BECAUSE OF, e. g. 'o'-no'-s-'u'-la' DO SO TO ME CUSTOMARILY FOR THE REASON THAT. . . !*qwa'-no'tt-it-ah* FOR THAT REASON I WAS, *yaqw-un'tt-'u'q'* FOR WHICH REASON HE. . .). *-qh* (after vowels and *h*), *-h-* (after consonants), see note 55. *-ha*, interrogative suffix, third person, see note 120. 'a'qun<sup>t</sup>*qh(h)a* would seem to mean literally FOR WHAT REASON IS HE WHILE (LOING SO) ? i. e. WHY DOES HE, WHY DID HE. . . ? *-qh-* anticipating 'atlakwat:p', which follows complementary infinitive.

181. See notes 164, 74.

182. 'zu'yi-, broken from 'o'yi-, see notes 179, 54. *-wxtt*, i. e. *-watt* (after vowels), *-awatt* (after consonants), verbal suffix which lengthens stem-vowel (SO AND SO) FALLS TO ONE'S LOT, TO HAVE SOMETHING COME TO ONE (e. g. 'o'-*watt* IT IS SO AND SO THAT FALLS TO ONE'S LOT, *wi'k-awatt* TO HAVE NOTHING COME TO ONE); loses *-it* before *-att* and analogous elements (see note 5). e. g. *wi'k-awa'-att*.

183. See notes 172, 176. *-'att*, see note 1. *-s-*, first person singular subject of absolute paradigm, see note 1.

184. Independent first person singular pronoun, here used because of emphasis. *si'ya-* is also used as base in certain verbal forms, e. g. *si'ya'-q-* TO BE I, *si'ya'-s-* TO BE MINE (generally with repeated first person singular pronominal suffix, e. g. *si'ya'-q-ah* IT IS I, literally 'I AM I; *si'ya'-s-ah* IT IS MINE, literally I AM I-HAVING; causative *si'ya'-'ap'-is* LET IT BE ME! literally CAUSE ME [-s] TO BE I). *si'-ya'* is evidently based on absolute *-si-*, sometimes reduced to *-s* (see notes 183, 1); *si-* is freely used as stem in derivatives, of which *si'-ya'* is really one (cf. *si'-tct* TO DO TO ME, *si'-atup'* TO DO FOR ME, *si'-putt-qa-s* THAT I GET TO BE I WHO AM ERECT, THAT I HAVE TAKEN FIRST RANK; *-putt* is

momentaneous of *-p:* stem-lengthening suffix, see note 90). Parallel to *si'ya'*, *si-* are *so'wa'* YOU (*so'wa'-q-ε'uts* IT IS YOU, *so'wa'-s-ε'uts* IT IS YOURS), *sot-* (e. g. *so't-it* TO DO TO YOU, *sut'-na'k'* TO HAVE YOU [AS CHIEF]); *ni'wa'* WE (*ni'wa'-q-un'* IT IS WE, *ni'wa'-s-un'* IT IS OURS), *ni(h)-* (e. g. *ni'h-εt* TO DO TO US, *ni'h-a'-atup'* TO MAKE FOR US); *si'wa'* YE (*si'wa'-q-ε'itso'* IT IS YE, *si'wa'-s-ε'itso'* IT IS YOURS), *si'h-* (e. g. *si'h-εt* TO DO TO YOU, *si'h-a'-atup'* TO DO FOR YOU).

185. *yaq-*, see note 159; note that absolute *yaq-*, not stem-form *yaqw-*, is used because it is followed by a word-suffix (relative *-e-*), not a stem-suffix. *-e'-s-*, relative suffix with first person singular subjective element, cf. note 73. Paradigm :

Sing. 1. <i>yaq-e'-s</i>	Plur. 1. <i>yaq-e-ni'</i>
2. <i>yaq-e'-k'</i>	2. <i>yaq-e'-so'</i>
3. <i>yaq-e'</i>	3. <i>yaq-e'-('at)</i>

Quotative *-tc-* (cf. notes 66, 178, 58) frequently unites with subordinating suffixes (e. g. interrogative *-ha-tc* HE, AS THEY SAY. . . ? 'am-*t'ci-ni'* THAT WE, AS IS SAID. . . ; *-qa-ts-s* THAT I, AS THEY SAY; *-qo'-tc-k'* IF YOU, AS IS SAID. . .). For relative forms of *yaq-* we have, as quotative paradigm :

Sing. 1. <i>yaq-e'-ts-s</i>	Plur. 1. <i>yaq-e'-t'ci-ni'</i>
2. <i>yaq-e'-tc-k'</i>	2. <i>yaq-e'-ts-so'</i>
3. <i>yaq-e'-tc</i>	3. <i>yaq-e'-tc('at)</i>

Other examples of first person singular relatives in *-i'-s*, *-yis*, *-yi'-s* are 'oyi'mat'-*citt-i'-s* THE-TIME THAT-I-FLEW-OFF, WHEN I FLEW OFF; *hamat'amah qw'-y'ha-yis* I-KNOW OF-WHAT-I-DIE; 'oyi'mala'-*yi'-s* WHEN I WAS FLYING.

186. *wa'-*, see note 122. *-'att*, see note 1.

## Editorial Note

Originally published in *International Journal of American Linguistics* 3, 76-102 (1924).

Sapir's ms. corrigenda on his copy are as follows:

<i>Original</i>	<i>For:</i>	<i>Read:</i>
p. 77, col. 1, l. 14	śu'yutci·lcu'etł	'śu'yutci·lcu'etł
p. 78, col. 1, l. 3	t'sá'ak'ú	t'sá'ak'ú
p. 78, col. 1, l. 28	qá'yap't'at'ú	qá'yap't'at'ú
p. 79, col. 2, l. 4	sa'tckok't'cac	sá'tckok't'cac
p. 79, col. 2, l. 8	Cha'atssib'.	Cha'atssib',
p. 81, col. 2, l. 2	'u·h <sup>a</sup> to·p'	'u·h <sup>a</sup> to·p'
p. 82, col. 1, last	', k',	t', k',
p. 83, col. 1, l. 27	surernatural	supernatural
p. 83, col. 1, l. 39	'o·sum'itcatł	'o·sum'it'catł
p. 83, col. 2, l. 15	(see note 1).	see note 1,
p. 84, col. 1, l. 34	'aná <sup>a</sup> -'us	'aná <sup>a</sup> -'us
p. 84, col. 2, l. 17	włk'nut'	włk'-nut'
p. 84, col. 2, l. 23	note.	note
p. 85, col. 1, l. 9	ma' redheaded woodpecker	ma' heart, t'leh <sup>a</sup> ma' red- headed woodpecker
p. 85, col. 1, l. 16	*tuq'w-as	*tuq'w-as
p. 85, col. 1, l. 27	'nat'c-	'nat'c-
p. 85, col. 2, l. 26	cont	con-
p. 86, col. 2, 2nd last	'ayaqa	'aya-qš
p. 87, col. 1, l. 14	to	to
p. 88, col. 1, l. 15	t'ł'.a·tcu'	t'ł'.-a·tcu'
p. 88, col. 1, l. 17	'nəq <sup>u</sup> -t'sa'.atcu	'nəq <sup>u</sup> -t'sa'.- atcu
p. 88, col. 2, l. 8	side end	side, end
p. 88, col. 2, l. 39	sa·wł'atł	sa·wł'-atł
p. 89, col. 1, l. 9	'əu'yú'	!əu'yú'
p. 89, col. 1, l. 9	.o·yú'	!o·yú'
p. 89, col. 1, l. 10	and .	and !
p. 89, col. 1, l. 25	qwu'yú...	qwu-yú...
p. 90, col. 1, l. 4	tła'o-	tła'o--
p. 90, col. 1, l. 5	tła'o·-yiy-a'	tła'o·-yiy-a'
p. 90, col. 1, l. 22	ḥayu.-aḥ <sup>as</sup>	ḥayu!-aḥ <sup>as</sup>
p. 90, col. 1, l. 34	'anaḥ-	'anaḥ-
p. 90, col. 1, l. 42	q'tł-'nukw-'us	q'tł-'nukw-'us
p. 91, col. 1, l. 2	at once	at once
p. 91, col. 1, l. 36	who suspected	who is suspected
p. 91, col. 2, l. 5	-t·	-t·-
p. 91, col. 2, l. 7	2. 'anu-so·	2. 'anu-so·'

<i>Original</i>	<i>For:</i>	<i>Read:</i>
p. 92, col. 2, l. 47	most	-most
p. 94, col. 2, l. 21	'tʰq-	'tʰq-
p. 94, col. 2, l. 21	'tʰq'w-	'tʰq'w-
p. 95, col. 1, l. 8	sa·'ok'u	sa·'ok'u
p. 95, col. 1, l. 36	ʌs	-ʌs
p. 96, col. 1, l. 1	-um'iḥ	-um'iḥ-
p. 96, col. 2, l. 23	act	acts
p. 97, col. 2, l. 16	tʰeḥ <sup>a</sup> cɪ'etʰ'tʰq'	tʰeḥ <sup>a</sup> cɪ'etʰ'tʰq'
p. 98, col. 1, l. 19	tʰitʰtʰi·y-a'	tʰitʰtʰi·y-a'
p. 99, col. 1, l. 5	'at'axw-a'aq'	'at'axw-a'aq'
p. 99, col. 2, l. 10	yaqw-ats-ɪ'tʰq'	yaqw-ats-ɪ'tʰq'
p. 100, col. 1, 2nd last	tʰotʰtʰ'onup'. <sup>a</sup> ɪ·ḥ <sup>a</sup>	tʰotʰtʰ'onup-'. <sup>a</sup> ɪ·ḥ <sup>a</sup>
p. 100, col. 2, l. 28	-'a·t-ap'	-'a·t-ap'
p. 102, col. 2, l. 10	sḥ ɛt	sḥ-ɛt



## Nootka Baby Words

The Nootka Indians have a number of words which are used only by or in speaking to infants and little children. Some of these are based on the regular vocabulary, others are quite unrelated to any other words in the language, so far as known. The following examples of these baby words were obtained from an Indian of the *ts'uca'ath* tribe of Nootkas, originally belonging to Barkley Sound.

'ɔ'éc 'dirty! don't do it!' (a warning to a child that handles dirt); normal word for 'dirty' is *tcí-c*.

*hoχ*, exclamation to scare off a child that is in the way.

*lɔ·lɔ* 'white man' (often used to scare a child, like our "boogie man"; this word is said to imitate the white man's talk, and note that *l* is not a normal Nootka sound, though often used in songs for *n*); normal word for 'white man' is *mamał'nu* 'dwelling while in motion on the water'.

*ho·c* 'to sleep'; normal word *wé'ut*.

*ka·χ* 'sore, hurt' (used by children as a conjugatable stem, e.g. *ka·χatah* 'I am hurt'); normal word *ya'kat*, stem *ya·kw-*.

*ma·h* 'to drink'; normal stem *naq-*.

*ta'ta* 'father' (said to be the first word pronounced by a child); normal word *nu'wu'q'so'*, vocative *'nɔ''wé*.

*ma'ma* 'mother'; normal word *'um'v'q'so'*, vocative *'ɔ''mú*.

*ma'mac* 'to begin to suck', based on *ma'ma*.

*pa'pa* 'to eat', *pa'pac* 'to begin to eat'; normal *ha'ok<sup>u</sup>* 'to eat' (stem *ha'w-*), *ha'ok<sup>u</sup>-citt* 'to begin to eat'.

*nan·íc* 'grandpa, grandma'; based on normal *nan·v'q'so'* 'grandparent', vocative *ne-n'*, irregular possessive *nan·ú* 'your grandparent'.

*'ma''muc* 'older brother, sister'; based on normal *'ma'mv'q'so'*, irregular possessive *'ma''mú* 'your older brother, sister'.

*'yúkwic* 'younger brother, sister'; based on normal *'yukwv'q'so'*, irregular possessive *'yúkwú* 'your younger brother, sister'.

A few linguistic remarks may be of some interest. The form *'ɔ'éc* 'dirty!' reconstructs to Wakashan \**oq̄ěχ*, while the normal *tcí-c* 'dirty, dirt, excrement' goes back to \**ki·χ*, perhaps palatalized and lengthened from \**k̄ěχ*. Now it seems very likely that the Kwakiutl *'k̄uχ-* (in Boas' orthography *k'!lx-*), palatalized from *'kəχ* (*k'!EX-*), 'to defecate (dog salmon or halibut)', is related to Nootka *tcí-c*. The consonantal alternation of *k* : *'k̄* is parallel to that of *q* : *q̄* in Nootka *qop-*: Kwakiutl *q̄o·p-* (*q!ōp-*) 'to copulate'. The old \**q̄ěχ* of Nootka *'ɔ'éc* may be a sort of emphasizing velarization of Wakashan \**k̄ěχ* (Kwak. *'k̄uχ-*). If this is so, Nootka *'ɔ'éc* and *tcí-c* would be related words.

It is even more likely that *ho·c* 'to sleep' and its normal correspondent *we'ut* are related. The latter goes back to *\*wa'ik̄*, while the baby word may reconstruct to *\*hauχ*, reduced from *\*hawax̄*.

The *-c* of *ma·'mα-c* 'to begin to suck' and of *pa·'pα-c* 'to begin to eat' is reduced from the *-ci-* of the normal postvocalic inceptive and momentaneous suffix *-ci-tl* (*tl* drops before certain word-suffixes, e.g. *-ci-'atl*). In normal Nootka this *-c* is used in reduplicated verb [119] forms to express the "momentaneous iterative" aspect, *-a'* being used in corresponding "durative iterative" forms (e.g. *'mut'mut-c* 'to rain repeatedly by brief spells', *'mu-tl'mu-tl-a'* 'to rain continuously time after time').

The *-c* of *nan·í-c*, *'ma·''mu-c*, and *'yúkw-c* is apparently a form of diminutive. The normal diminutive suffix is *-'us* (*-'uts-*). Perhaps *-c* is a baby-form of the normal *-s*.

### Editorial Note

Originally published in *International Journal of American Linguistics* 5, 118-119 (1929). Several diacritic marks have been added, following Sapir's ms. notes in his copy.

There is a substantial recent literature on baby talk, particularly concerning the relationship that baby talk and other "motherese" registers have to language acquisition. For surveys see Ferguson (1964) and Snow and Ferguson (1977). Kess and Kess (1986) have recently supplemented Sapir's Nootka study with observations on baby talk in the Ahousaht dialect (only minimally distinct from the Tsishaht described by Sapir). They were able to collect 19 fully suppletive baby talk words and several reduplicative derivations. It is noteworthy that several of the baby talk words cited by Sapir as being common in Tsishaht in 1910-14 are not in use in modern Ahousaht.

## Salish-Wakashan Comparisons

Edited by Morris Swadesh

These twenty-six Salish-Wakashan comparisons were found in the late Edward Sapir's materials on small cards, preceded by a guide-card, simply labeled "Salish and Wakashan." Eighteen of the items involve only one Salish language, namely, Comox, along with Kwakiutl or Nootka of the Wakashan group; the other eight items involve two or more Salish languages. It is likely that the Comox comparisons were a by-product of Sapir's personal study of *Noun Reduplication* in that language, published in 1915 as Memoir 63 of the Geological Survey of Canada. These comparisons include a few which could easily be due to recent borrowing, and others which hardly could have arisen in that manner. The words cited in Sapir's Comox paper include at least a few additional obvious similarities with Nootka, indicating that Sapir did not make a systematic search. It is important to note this fact in order to [172] realize that the present comparisons are a casually collected sample rather than the full measure of the Mosan theory. I have simplified the spelling along phonemic lines, following recent practice. Salish forms are listed first and Wakashan forms after the Salish. The spelling of languages is modernized, but Sapir's abbreviations are retained. "T.R." is evidently Thompson River; "Hail." is the Hailtsk dialect of Kwakiutl. B. evidently indicates Boas, as a source.

—Morris Swadesh.

Salish *-s* 'his'. Kw. *-s* 3d. per. vis. pron. suffix, postnominal 3d. per. vis. pos. suffix, poss. and instr. suf.; N. *siyā-s-ah* 'it is mine'.

Bella C. *ia* 'good' (B.) (= *ya?*), Satl. *ai* (B.), Pent. *aūtū* (B.), Sis. *ai* (B.), Snan. *ai* (B.), Lkun. *aīi* (B.), T.R. *ia* (B.) (= *ya?*, cf. Shusw. *la*); Kw. 'ək- 'good' (B.), Hail. *aikh* (B.).

Bella Coola *hmūt* 'we'; Satl.-Pent.-Sis. *nī mūt*; Snan. *ti thnīmūt*; Skk. *ti nīmat*; Lkun. *thningitl*. N. *nīwa* 'we'; Kw. *nu* 'I' (B.), *-ənu'x* 'excl.' (B.).

Comox *jigin* 'song', < \**yəwən*; Bella Coola *nū yam* 'to sing' (B.); Pentlatch *lūlum* 'to sing' (B.). N. *nu-* 'to sing', *nunūk* 'to sing', *nūk* 'song', *nuyāwa* 'to be singing'; Hail. *ninuya* 'to sing' (B.).

Shuswap *-kin* 'head' (B.) (= *-qin*); Okan. *-āyakən* (B.) (= *-qən*); Comox *mā-qin* 'hair'; Pent. *sqikīn* 'hair' (B.) (= *sxiqīn*); Snan. *smāqīn* (B.); Lil. *māqīn* (B.). N. *-qī* 'head', causative *-qīnup*; Hail. *-kīa* (B.) (= *-qīa*).

Comox *sūsīn* 'mouth'; Pent.-Sis. *sūsīn* (B.); Snan.-Lkun. *sōsin* (B.); Skk. *cūcən* (B.); Lil. *čūčīn* (B.). Kw.-Hail. *səms* 'mouth' (B.).

Comox *hīgus* 'chief'; Pent.-Sis. *hīwus* (B.). Hail. *hīmas* 'chief' (B.).

Comox *waxāci* 'pipe'; Pent. *waq'acən* (B.). Cf. Kw. *wax'aci* 'pipe, smoke receptacle' (B.).

- Comox *laq̄<sup>w</sup>* 'bow'. Kw. *tək<sup>w</sup>*- 'to pull', *tək̄<sup>w</sup>isi* 'bow'.
- Comox *tłpāūt* 'bag'. Kw. *tłābat* 'basket'; N. *tłapāt* 'big cedarbark basket for storing dried fish'.
- Comox *matāy* 'horse clam', Kw. *mət*- 'large clam'.
- Comox *mūs* 'four'. N. *mū*, Kw. *mu*.
- Comox *ḡigāy* 'halibut', < \**ḡiwāy*. Kw. *ḡo'i* 'halibut'; N. *ḡū'i*.
- Comox *qīgas* 'deer'. Kw. *Giwas* 'deer'.
- Comox *qāsa* 'sea-otter'. Kw. *qās*- 'sea-otter'. [173]
- Comox *sāčam* 'tyee salmon', *sa'an* 'coho salmon' (dim. *sī-s'ad-ūt*, dim. plur. *sī-su-su'ad-ūt*). N. *sacup* 'tyee salmon', *sācin* 'small salmon'; Kw. *sacəm* 'spring salmon' (stem *sas*-).
- Comox *tāq̄<sup>w</sup>a* 'devil-fish'. Kw. *təq̄<sup>w</sup>* 'octopus'.
- Comox *tičtičš* 'owl'. Kw. *dəxdəxəlīt* 'owl' (perhaps borrowed from Comox with folk-etymological *-līt*).
- Comox *tū-tx<sup>w</sup>lal* 'necklace' (dim. plur. *titax<sup>w</sup>tūttx<sup>w</sup>lat*). Kw. *təx<sup>w</sup>*- 'to fasten'; N. *tux<sup>w</sup>i* 'fastening strings in cradle-board'.
- Comox *t'akum* 'beaver'. N. *'at'ax<sup>w</sup>*- 'beaver'.
- Comox *xāp* 'baby basket'. Kw. *xə'āp* 'cradle'.
- Comox *xasam* 'box'. Kw. *xacəm* 'box'; N. *hayim* 'bailer', < \**χas-'im* 'little box' (?).
- Comox *k'ūdū* 'porpoise'. Kw. *k'ulut* 'porpoise'.
- Comox *kit* 'little finger'. Kw. *k'əd*- 'third finger' (Kw. *səlt*- 'little finger').
- Comox *k'ikāyu* 'oar' (Kw. loan-word with instrumental *-ayu*). Kw. *k'ik'əwəlx<sup>w</sup>ən* 'bar'.
- Comox *laqas* 'mt. goat blanket'. Kw. *ləq*- 'to put down soft things'.

### Editorial Note

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Section Nine:  
Other American Languages



## A TUTELO VOCABULARY<sup>1</sup>

**W**HILE on Six Nations Reserve, Ontario, in August, 1911, I was told of a Cayuga Indian named Andrew Sprague who had had opportunity during his childhood to hear Tutelo spoken fluently and who was supposed to remember considerable of it. As Tutelo is an extinct language, I thought it imperative to rescue from oblivion what was still to be obtained and thus add, if only a mite, to what had already been put on record. As a matter of fact, it turned out that Andrew remembered only very little indeed of Tutelo, and what small amount of material could be obtained from him was extorted with some difficulty. No attempt will here be made to discuss the data. They are given for what they are worth in the hope that they may at some future time prove of use to the student of comparative Siouan linguistics. If in nothing else, perhaps the words listed are of value because they have been recorded with greater phonetic accuracy than is generally attained in mere vocabularies.

### PERSONS

<i>mihâ(i)stîk'</i> man	<i>niskû'</i> child, children.
<i>wāreuá'</i> woman	<i>kukûk'</i> grandfather
<i>maŋgidá'</i> my cousin	
<i>uŋgidá'</i> his cousin	

### ANIMALS

<i>mâp'ayenk'</i> cow, ox, cattle	<i>ts'uŋgidê'e</i> horse (literally, "big dog")
<i>ts'unċ'</i> dog	
<i>māsgōl'ô'</i> pig	<i>ts'uŋgîwe'</i> wolf (literally, "like a dog")
<i>hêmō</i> frog	
<i>dalúsgik'</i> cat	
<i>babósgo'°</i> deer buck	

### OBJECTS

<i>mâksāpà'a</i> bread	<i>māθċ'e</i> knife
------------------------	---------------------

<sup>1</sup> Published by permission of the Geological Survey of Canada.

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<i>matsigóyɔ</i> salt	<i>yǎhĕ'</i> <sup>e</sup> lacrosse stick
<i>bēbahĕ'</i> <sup>e</sup> pepper	<i>wahok'mĕ'</i> <sup>i</sup> false face
<i>wādēwí</i> sugar	<i>meni'igāt'ē'ǎ'</i> <sup>a</sup> kettle (evidently contains <i>meni-</i> "water")
<i>wōhĕ'</i> <sup>e</sup> soup	<i>meni'igōdō</i> jug, jar, glass, bottle (dit.)
<i>wāsaksĕ'</i> <sup>i</sup> shorts in grinding corn	<i>kc'embái'</i> <sup>i</sup> pipe
<i>gāk'saginagō'</i> <sup>o</sup> silver armlet	<i>kcémbāi nqní'</i> tobacco

## ADVERBS, ADJECTIVES

<i>dābadū'</i> <sup>a</sup> down river	<i>mǎ'ganǎ'ga'</i> <sup>a</sup> white
<i>ūdaphái'</i> <sup>i</sup> up river	<i>mihǎ mǎ'ganǎ'ga'</i> <sup>a</sup> white man
<i>bīwā</i> good	<i>mǎ'ganǎ'kasít'</i> negro
<i>nyagutsgáhĕk'</i> dizzy woman	
<i>nihĕtsgahĕk'</i> dizzy man	

## PRONOUN

*henígu* I

## VERBS

<i>wālút' máksāpà'</i> <sup>a</sup> eat bread	<i>gwa'gilída</i> I must go home
<i>wāgĕts'í'</i> <sup>i</sup> to dance	<i>wāk'niendabēwā</i> I'm going to bed
<i>hadít'gilĕda</i> he's gone home	<i>biláhuk'</i> thank you!
<i>wet'gilída</i> let's go home	<i>hĕhĕ gidāya k'ĕk'úk'arĕwaya</i> surely, everything is all right

## NUMERALS

1, <i>blōs</i>	6, <i>agás</i>
2, <i>nōs</i>	7, <i>sakú</i>
3, <i>nā</i>	8, <i>pĕlǎk'</i>
4, <i>tū</i>	9, <i>sĕk'</i>
5, <i>bī</i>	10, <i>bitská'</i>

## PHONETIC NOTE

## Short vowels

<i>a</i> , as in German <i>Mann</i>	<i>i</i> , as in English <i>bit</i>
<i>ä</i> , as in English <i>hat</i>	<i>ĩ</i> , as in French <i>fini</i>
<i>e</i> , as in English <i>met</i>	<i>o</i> , as in French <i>beau</i>
<i>ē</i> , as in French <i>été</i>	<i>u</i> , as in English <i>put</i>

## Long Vowels

<i>ā</i> , as in German <i>Kahn</i>	<i>ō</i> , as in German <i>Sohn</i>
<i>ē</i> , as in German <i>See</i>	<i>ū</i> , as in German <i>gut</i>
<i>ī</i> , as in German <i>Sie</i>	

*Nasalized vowels**a*, as in French *quand**ã*, as in French *vin**ɛ̃*, nasalized open *e* (not as open as in French *vin*)*õ*, nasalized close *o* (*ɔ*), not open as in French *bon**ũ*, nasalized open *u**ã̃*, long *a**õ̃*, long *o**Diphthong**ai*, as in German *mein**Stopped Consonants**b*, *d*, *g*, sonant stops as in English*p*, *t*, *k*, *ts*, "intermediate" stops*p*, *t*, *k*, *ts*, unaspirated surds*pʰ*, *tʰ*, *kʰ*, *tsʰ*, aspirated surds*tʃʰ*, aspirated *tʃ* (midway between *ts* and *tc* of English *church*)*Continuants**w*, as in English*y*, as in English*h*, as in English*s*, as in English*ç*, as in English *she**θ*, interdental spirant, as in English *thick**l*, (approximately) as in English*r*, trilled *r* (alveolar?). In *k'ek'yuk'aréwaya* *r* sounded much like *l**m*, as in English*n*, as in English*ŋ*, as in English *sing**Miscellaneous**ʔ*, glottal stop*-a<sup>a</sup>* (and similarly for other vowels), broken vowel, second part of which is murmured ("echoed")*ʰ*, final breath release*ɨ*, occurs once as glide vowel from *ç* to *e**ˈ*, main stress*ˋ*, secondary stress

GEOLOGICAL SURVEY OF CANADA

OTTAWA, ONTARIO

## Editorial Note

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Tutelo, Ofo, and Biloxi have been grouped as a distinct branch of Siouan, called Ohio Valley or Southeastern Siouan (Voegelin 1941; Rood 1979: 243-248). None of these languages is well attested, and every scrap of data on them is valuable for comparative work. Sapir's vocabulary, although brief, is especially valuable for the accuracy of its phonetic transcription. Although Sapir believed Tutelo to be extinct in 1911, Frachtenberg (1913a) published some Tutelo material that he obtained from a speaker in 1907, and Mithun discovered a speaker at the Six Nations Reserve as late as 1982 (Mithun 1983).

Review of  
Benigno Bibolotti, *Moseteno Vocabulary  
and Treatises*

*Moseteno Vocabulary and Treatises*. Benigno Bibolotti, Priest of the Franciscan Mission of Immaculada Concepción de Covendo in Bolivia. From an unpublished manuscript in possession of Northwestern University Library. With an Introduction by Rudolph Schuller. Northwestern University: Evanston and Chicago, 1917. pp. cxiii, 141, facsimile, map of Bolivia.

The external facts leading up to the publication of this sumptuously printed volume are given by Dr. Schuller in his preface: "Northwestern University Library possesses a fairly large collection of unpublished Spanish manuscripts which are probably unique in the United States... Professor Lichtenstein, Librarian of Northwestern University, acquired this material, consisting of books, pamphlets, early periodicals and the like, from Señor Donato Lanza y Lanza during a sojourn in Bolivia. In September, 1916, Professor Lichtenstein asked me to arrange and collate the manuscripts and prepare them for the binder. While examining the different packages in order to make a preliminary selection of the papers according to the subjects treated in them, I found Bibolotti's manuscript dealing with the Moseteno language. The unexpected discovery is all the more important since it concerns extensive materials gathered together by a yet unknown author of a relatively little studied Bolivian aboriginal idiom spoken by Indians who have almost vanished. If there are still a few of them remaining without foreign admixture, they are destined to be absorbed completely in the near future by the process of amalgamation... Within a few years the name of the Moseteno will be added to the alarmingly long list of extinct South American Indian tribes." The manuscript is the work of an Italian Franciscan, concerning whom very little is known; it was written some time between 1857 and 1868.

The Moseteno, also known as Chumanos or Chomanes, are or were one of the Andean tribes of western Bolivia; their territory was embraced within the present province of Yungas. More exactly, to quote from Dr. Schuller, "the habitat of the Moseteno-Chumano embraced the mountainous regions to the east of the Beni, more or less between 15° and 16° south latitude, and 69° to 71° longitude west of Paris. Their eastern neighbors were the Yurucaré; in the north they reached as far as the territories occupied by Mobima and Moxo, or Mojo, tribes, and in the northwest they touched Tacana and Leco speaking peoples. The natural border to the south and the west is the range of the higher Andes."

Dr. Schuller's editorial work has been most painstaking, and the volume is a highly welcome addition to our knowledge of the exceedingly tangled and obscure problems of Bolivian linguistics. In his lengthy introduction Dr. Schuller discusses first the manuscript; the author; the Mosesteno Indians and the Franciscan Missions ("in spite of uninterrupted intercourse for many centuries with the more highly developed culture of Peru and Bolivia, the primitive tribes, like the Mosesteno, Tacana, Leco, Araona, etc., were not much influenced"); and gives a critical analysis of previous writings on Mosesteno. Pages xxviii to xciv of the introduction give a digest in English of our present knowledge of Mosesteno, as based on Bibolotti and other writers (Wendell, Heath, Armentia). This section includes notes on phonetics; vocabularies; grammatical processes (nouns: number, gender, formation of nouns, grammatical cases; adjectives; pronouns: personal, possessive, relative and demonstrative, indefinite, interrogative; numerals; adverbs; prepositions; conjunctions; [184] verbs: verbal stems, classification of verbs, tenses, the imperative mood, the participial mood, other moods); and general observations on suffixes, reduplication, and affiliated languages and peoples. Of the three appendices, one is devoted to a full bibliography of manuscript and printed sources. The body of the work is a transcript of Bibolotti's Spanish text (Spanish-Mosesteno vocabulary and supplementary papers).

A few of the more interesting points may be noted here. Sex gender is indicated in nouns and adjectives by distinctive suffixes (e.g., *izanqui-t* 'baby boy': *izanqui-s* 'baby girl'; *moči-t* 'new' m.: *moči-s* 'new' f.). There is a genitive suffix in *-s* or *-si*, also a number of local case suffixes. The curiously widespread American second person singular in *m-* meets us here once more (*mi* 'thou'). Pronouns are not welded with the verb stem, but occur independently (e.g., *ye queti* 'I plant'). A considerable number of verbal suffixes have been isolated by Dr. Schuller, but more intensive study of Mosesteno, at first hand, if possible, is needed to make clear their functions. Phonetically, Mosesteno would seem to be "far from agreeable to the ear"; it has many "clusters of totally heterogeneous consonants." In this respect it differs from Tacana, Cavineño and other languages of the Bolivian highlands, approaching the "Chaco-Guaycurú linguistic family, although it does not have the slightest affinity with the latter." Nevertheless, Dr. Schuller finds that "the morphological and syntactical structure convey the impression that the Mosesteno is related to the Tacana group, and particularly to the Cavineño."

Dr. Schuller leaves no doubt of the thoroughness of his task, and students of American linguistics owe him a very real debt of gratitude. Perhaps one may be pardoned, however, for expressing the wish that penetrating first-hand phonetic and morphological studies of a number of South American languages, of a standard corresponding to some already accessible for certain North American languages, be vouchsafed to us in the course of time. These interminable vocabularies, grammatical notes, and classificatory speculations are, let us hope, but the harbingers of more substantial meals.

## Editorial Note

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Moseteno is a linguistic isolate, although Greenberg (1987: 73-73) includes it with Panoan, Tacanan, and a number of smaller groups in his "Macro-Panoan" phylum. Sapir's passing remark on "the curiously widespread American second person singular in *m-*" (p. 184) is his only published allusion to the possible linguistic unity of all (or nearly all) American Indian languages; see his unpublished notes on "proto American" in Golla (1984: 452), and a remark in a letter to Frank Speck cited in Darnell and Sherzer (1971: 27). Greenberg has cited *m-* 'second person', together with *n-* 'first person', as evidence for a hemisphere-wide genetic group, "Amerind" (1987: 49-57).



# Appendix



Review of  
Edward Sapir: *Notes on Chasta Costa Phonology  
and Morphology*

A. G. Morice

Dr. E. Sapir achieved lately what the French could not help calling a veritable *tour de force*. Enlarging upon linguistic material incidentally derived from an Indian, mere bits of an aboriginal language which would not fill one common-sized page, he managed to write in explanation of the same no fewer than sixty-seven pages of first-class philological literature. His *Notes on the Chasta Costa Phonology and Morphology*, are perfectly illuminating, and betray not only a very keen ear but a quite creditable analytic acumen. After thirty-two-years' study of the Déné group of languages, to which his "Chasta Costa" belongs, I am tempted to pronounce Dr. Sapir's essay one of the most satisfactory monographs of its kind ever issued on any of the southern Déné languages.

The work does not pretend to be more than mere notes, and so far as completeness is concerned it could not compare with more elaborate productions already published on the Hupa and Navajo dialects. Some might also object to the graphic signs the author has resorted to in transcribing his texts and disapprove of the strange appearance which sometimes results therefrom. His own language might furthermore have been simpler and less Hellenic or Latin in complexion. But I maintain that, with few unimportant exceptions, he has grasped and faithfully rendered not only the phonetics but the morphology of an idiom whose intricacies must be above the average, unless it be not Déné.

I note with special satisfaction in his paper those particular sounds, such as the aspirated *t*'s and *k*'s, as well as the lingual and glottal explosions, which I had always thought, and sometimes asserted, must exist in the southern Déné languages, in spite of the inability of former students to perceive them or of their carelessness in noting down their texts — a presumption for which I was even taken to task.

These are as many essential points of the Déné phonetics, so very essential, indeed, that I felt they could not possibly be missing in any dialect claiming relationship to the Déné languages of the North. In Déné the vowels are the flesh of the body: they vary according to the dialect in the same way as the flesh is different in quantity or texture according to the individuals. The consonants are the bones of its makeup, therefore much more important, homogeneous, and persistent, while the grammar may be compared to the arteries, without which blood, that is life, could not circulate therein. But the "clicks" which affect letters or groups of letters are the very nerves which alone enable the Déné body to stand.

I have so often insisted on this point that this simple remark must suffice. I may nevertheless be pardoned for confessing a feeling of satisfaction at seeing my contention of former years borne out by the researches of the latest investigator in the southern field.

Only a very few hiatuses seem to have escaped the notice of Dr. Sapir, and I am all the more free to call his attention to this point, as throughout his paper he seems animated by that sense of diffidence which behooves a genuine scholar who enters a new field with the knowledge that he is more of a philologist than of a linguist. Moreover, a mere passing acquaintance with a language cannot, of course, shield one against possible oversights.

I shall therefore make bold to remark that in Déné the desinential radicals of the verbs of vision (*-i*, *-in*, *-en*) are immediately preceded by a stop, or hiatus, which prevents them from being merged into the consonantal element of the pronoun. Thus I do not think I am mistaken when I observe that in *néli*(1), 'you are looking at him' (*nił-en* in Carrier), the desinence *-i* must be separated from the preceding *l* by a hiatus, which should be shown on paper as prominently as it is expressed by the native speaker.

The same remark applies to *yīn* (Carrier *yī-en*), *at*, 'wife' (Carrier and Chilcotin *·at*), as well as to the verb *ALAZ*, 'he sneezes,' which, barring the medial *l* and final *z*, is the exact equivalent of the Carrier *æt·æs* (same signification).

This hiatus plays a double role in the North. While at times it merely cuts asunder, as it were, articulations which would otherwise coalesce into one sound (*nił-en*, i.e., *nił + en*, not *ni-ten*), or is prefixed to monosyllables often expressive of distance, remoteness, or even repulsion (*·æn*, Chasta Costa *An*); it also denotes the disappearance of a weak vowel through contact with a stronger one. Thus the indicative present of the verb 'to work' is *æs-en* in Carrier, and, normally, its pronominal element *æs* should be developed into *æzæs* in the negative. But the *e* of the negative particle *te* is stronger than the initial *æ* of *æzæs*; hence the negative of *æs·ten* is merely *te·zæstēn*, the hiatus (*·*) standing here for the vanished *æ*.

The same happens even when a stronger desinential vowel of a word comes in contact with a weaker initial vowel of another. Example: *spa·hutqa huni*, 'I am lucky indeed' (for *spa æhutqa huni*, literally, me-for it-has-happened it-is-so).

The consonant *q* reminds me of Dr. Sapir's *dj*. If my own letter represents the same sound which that gentleman has in mind when he uses his double consonant, I must be allowed to object to the latter as misleading. Pronounce it as you will, you are bound to have a double operation of the tongue and mouth when you utter the sound *dja*, the dental one being always distinct from that caused by the fricative *j*, whilst in pronouncing the sound I render by *q* but one operation is needed.

Were one bent on ultra-criticism, he might remark that in Déné all such parts of the body as are naturally twofold are normally dual in meaning, the singular being formed by suffixing a syllable which is [350] generally synonymous of our word 'half' (i.e., half of two = one). According to this rule Dr. Sapir's *hwā* must

not mean foot, but feet, in the same way as his *la* should be translated hands, not hand.

Dr. Sapir's analysis of the short text which closes his essay is simply admirable, and betrays an insight into the morphology of his material which one is at a loss to know where, or how, it was acquired. Scarcely more than one criticism have I to offer on this part of his paper. The last syllable of the compound *dō-at-ṭi* is not a "noun suffix," as he believes (30). It is a regular verb, or rather a verbal stem, since the pronominal element of the same has disappeared through the process of word formation. *Dō* is the Carrier negation *au*, the Babine *so·*, Chilcotin *tla*, Sekanais *ussé*, Nahanaïis *wtû*. These particles or words can, in the North, conveniently be omitted in many cases. They are the equivalents of the French *ne...pas*. *·At*, as we have seen, means 'wife'; *-ṭi* is the root of the verb *ætī* 'he has'.

This is about the sum total of the criticisms I have to make on that author's rendering and interpreting of the southern dialect he introduces to the philological world.

### Editorial Note

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## CHASTA COSTA AND THE DENE LANGUAGES OF THE NORTH<sup>1</sup>

By A. G. MORICE, O.M.I.

ALL English scholars are familiar with the fact that the growth of a language is evidenced not only by the alterations in the material make-up, the morphology, of its component parts, but by the remarkable evolution which those parts occasionally undergo in their meaning while they remain unaltered in their structure. For instance, the word "villain" had in Chaucer's time a quite different value from that which modern usage attributes to it. No Christian of our days would feel flattered by being called the "villain of the Lord," an expression which originally meant the "servant of the Lord."

Likewise, instances of such alterations in the meaning of words are not wanting in American aboriginal philology, though said alterations may not be the result of time, but rather due to other circumstances such as, for instance, linguistic borrowing or changed cultural environment.

An example will make my meaning clearer. There never was any buffalo within British Columbia. When Cree-speaking half-breeds reached the northern interior of that region, in the wake of the Northwest Company traders, they told the natives of a wonderful animal they called *mustus*, which roamed by the million over the immense plains east of the Rockies. Later on, domestic cattle were introduced in the same country and dubbed *mæstus* by analogy with the game the natives had heard so much about—the *u* of *mus* being altered to *æ* conformably to the requirements of the Déné law of phonetic sequence.

So that with time *mæstus* came to be universally understood of domestic cattle, instead of the buffalo to which alone the name is

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<sup>1</sup> A further discussion of *Notes on Chasta Costa Phonology and Morphology*, by Edward Sapir. See p. 347 above.

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strictly speaking applicable, and when the Carrier had to refer to the latter they called it *tłoḳat məstus*, or prairie cattle (lit. grass-on cattle). Meantime, buffalo remained *mustus* to the Cree who, in turn, gave the name of *awokhâni-mustus*, slave ox, to domestic cattle.

Here we have, therefore, significatory evolution resulting from the importation of a loan word. In Dr Sapir's "Notes on Chasta Costa Philology and Morphology," there are several terms or roots the meaning of which seems to have undergone an analogous transformation, through the action of time, contact with alien populations or the shifting of environment, unless, of course, we choose to ascribe it to imperfect information on the part of the essayist.

A characteristic instance of this I find in the word *tc!ac*,<sup>1</sup> which Sapir gives us as the equivalent of the English term "bird." This is evidently none other than the Carrier *tšaxš*, which in that language means not "bird" but "feather-down." Is it possible that in this instance a part of one thing should have come to represent the whole thing? This seems to be all the more likely as that one thing is too well known to have ever been taken for another by Dr Sapir's informant.

Color would also seem to be lent to this probability by the fact that *pəw*, which means "roof" in Carrier, denotes a whole house in Chasta Costa. However, it would require no great flight of the imagination to see in that word something like a reminiscence of the time when a Déné habitation consisted almost entirely of a double shelter in the shape of a roof squatting on the ground, as we still see some in the recesses of the North.

A still more curious terminological mutation, which affects both the structure and the sense of a word and is perhaps the result of accident or of growth along lines unknown in the latter regions, is to be found in the Chasta Costa possessive form of the term for "dog," *li*, whose variants are everywhere unimportant. In the

<sup>1</sup> The exclamation mark denotes the "click" in Dr Sapir's texts, and with him as with me *c* = *sh*. Dr Sapir's *a* is my *æ*, almost the sound of *u* in "but," more exactly that of *e* in the French *je, te, le*.

South as in the North, the sibilant *l* is converted by the possessive into a common *l*; but the analogy does not go any further. According to Sapir, this possessive entails in Chasta Costa the accretion of a sort of suffix which he writes *tc!e*, the equivalent of my *tʃe*. Now *litʃe* means in Carrier, not somebody's dog, but she-dog! Is this again a mere accident, the result of word development or of some other cause?

Another change of meaning in a vocable, coupled, this time, with an anomalous formation, which is perfectly recognizable to a Carrier I find on p. 311 of Dr Sapir's "Notes." There he gives us *t'enī'lat* as the equivalent of the English "you drown," and to this he adds, by way of comparison, the verb *tc'nnūllat*, which he represents as the Kato synonym of "it floated there." This circumstance is virtually a voucher that our author is conscious of a diversity of significations: to drown is evidently not to float.

But if we turn to the Carrier of the North we meet with a somewhat homonymous counterpart of the former term in *thénūllat*, which means not "you drown," or "you float," but "you sink," or rather "thou sinkest."

This may not be the exact synonym of Dr Sapir's verb, though it is nearest to it in meaning; but how are we to explain that the act of drowning is rendered in Chasta Costa by a word the two roots of which seem self-exclusive, while the principal one refers to an act which is the opposite of drowning, namely that of floating?

*Thé-* and *-lat* are self-exclusive, I have said. For the former, at least in the North, does not merely mean "in the water," as Sapir would have it—*tha-* p. 302, which he gives as "referring to the water,"<sup>1</sup> has really that signification—but it hints at the "bottom of the water" (from the Carrier *ther*, "water-bottom"), while *-lat*, as we have seen, is expressive of the act of staying on the surface of the same.

*Thénūllat*, on the other hand, is easy of explanation and of quite logical construction. The desinence *-llat* refers to any pre-

<sup>1</sup> Carrier *næcyā*, "I walk along;" *næ-tha-dæcyā*, "I walk in the water, I wade." Compare: *tha-kæł*, "deep" (water); *thé-huska*, "shallow" (may be analyzed: the bottom, *thé-*, near the surface, *-ka*).

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precipitate action, and, closely analyzed, the whole verb amounts to thou art precipitately brought to the bottom, that is, thou sinkest. "I drown" is said in Carrier *thû sæzælreh*, "water kills me."

Apropos of water, Sapir gives the verbal stems *-êl* and *-al* as representing the acts of bathing and coming, respectively, while to him the desinence *-ya* is synonymous of going or coming.<sup>1</sup> There must be a slight inaccuracy here. The first of those desinential radicals (*-êl*) certainly wants the initial hiatus ('); for his *nadaγlêl*, "we are bathing," is none other than the Carrier *nætšæl'il*, which has the same value.

As to the verbal stem *-al*, which he believes to mean "to come," I more than suspect that it is but a corresponding form of *-ya*, which he represents as expressing the idea of "going, coming," and should be *-yal*. In the first place, the difference between going and coming flows in Déné from the apposition of locative adverbs, or results from a diversity of prefixes, not of a dissimilarity of desinential roots. The suffix *-ya* denotes merely the action of moving about on both feet as a man (there is another for the walk of birds). Such is the meaning in Carrier of the word *næcyā*.

But another form of the same verb, which I call the actualizing form, changes this term and its characteristic desinence into *æcyāl*, which means "I am actually walking" (with both legs). This form is also commonly used in connection with locative adverbs, as in the phrases: *tiz înyāl*, "come here"; *hwæz înyāl*, "go there"; *ʼæn înyāl*, go on (which recalls Sapir's *An γl'al*, the equivalent, he claims, of "come on").

Dr Sapir furthermore quotes the verb stem *-llo* (*-lō*) as denotive of the act of swimming, while, according to him, that of paddling is rendered by the radical *-xe* (*-kē*). Now, in most northern Déné dialects, the former (*-lō*) refers to paddling, while the latter indicates the act of navigating, or moving about in a canoe. Are those roots, with their changed value, new evidence of evolution in the meaning of words?

<sup>1</sup> P. 323 of his essay.

The verbal stem *-lal*, or rather *-l<sup>l</sup>al*,<sup>1</sup> to which our author attributes the sense of "to sleep," has in Carrier the value of "to dream of" (with a complement). Might not Dr Sapir's informant have misunderstood his questioner and thus unwittingly misled him? If not, such changes in the meaning of words or roots otherwise so closely related are well worth a moment's reflection.

If Dr Sapir will allow me, I will also observe that the desinence *-t<sup>c</sup>ac* (*-thæc*), which he gives as a distinct verbal element,<sup>2</sup> is nothing else than the plural stem of the same verb *nanisthi*, whose derivative *nthæsthih* effectively means "to lie down, go to bed." That plural stem is in Carrier *-thés* for the present, *-théz* for the past, and *-thæs* for the proximate future.

Likewise, Sapir's verbal desinence *t<sup>h</sup>i* (*tš<sup>i</sup>i*) is simply the plural form of the verbal stem *-ta*, "to sit," which he gives elsewhere as *-dā*.

Our essayist very properly represents<sup>3</sup> the root *-xwi* (*-kwi*) as denoting the idea of vomiting, and compares it with the Carrier substantive *ku*, "vomiting." He will be pleased to learn that the former is *-kwe* in the Lower Carrier dialect.

Elsewhere he speculates on the value of the verbal elements *l* and *ḷ*, and, p. 332, he goes to some trouble in order to explain the passive form of the Chasta Costa verbs. Unless I am very much mistaken, what he adduces as the equivalent of "I am seen, you are seen, he is seen," etc., really means simply: "people see me" (French: *on me voit*), "people see thee," etc.

It may be of interest to state that in Carrier the passive form

<sup>1</sup> As may be seen by Sapir's rendering: *ṭ<sup>l</sup>l<sup>l</sup>al*, p. 315. The double consonants *tl* and *ts* (both of which may be affected by a click) are of frequent occurrence in Déné and form as many indivisible groups. The syllables of all Sapir's verbs in the first person plural are wrongly cut up: the *t* which he attributes to the penultimate syllable should commence the last one: *-l<sup>l</sup>al*, *-tš<sup>l</sup>al*, *-l<sup>l</sup>at*, *-thæc*, etc. Hence several of his verb stems on pp. 323-26 are incomplete. For instance, *-se*, "to cry," should be *-tse* (Carrier *-tso*, though the first person singular of the verb is in *-so*); *-si*, "to cause," should be *-tsi* (Carrier *-tsi*, same remark as to first person sing.); *-lo*, "to laugh," cannot be understood without its *t*, as is shown even by the examples the Doctor adduces in explanation. Were he familiar with the Dénés' syllabic way of writing their own language, he would have been spared this little inaccuracy.

<sup>2</sup> P. 326.

<sup>3</sup> P. 325.

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very often results from a mere change from the second to the third conjugation. Here is an example:

<i>Active</i>	<i>Passive</i>
<i>æ's'en</i> , I do (something)	<i>æz'en</i> , I am done, etc.
<i>il'en</i> , thou doest	<i>il'en</i>
<i>æ(yæ)'l'en</i> , he does it	<i>æl'en</i>
<i>ætʂæl'en</i> , we do	<i>ætʂæl'en</i>
<i>a'l'en</i> , you do	<i>a'l'en</i>
<i>æRæ(yæ)'l'en</i> , they do it	<i>æRæl'en</i>
<i>il'en</i> , both of us do	<i>il'en</i>

When the verb under its active form belongs to the first conjugation, its passive is sometimes represented by a verb which has nothing but the radical desinence in common with the active, and which offers the strange characteristic of being at the same time pluripersonal and unipersonal. The following will be clearer than all possible explanations:

<i>Active</i>	<i>Passive</i>
<i>uḱwéssi'</i> , I love him	<i>sḱéidĩntsi'</i> , I am loved, etc.
<i>uḱwéĩntsi'</i> , thou lovest him	<i>nḱéidĩntsi'</i>
<i>yæḱentsi'</i> , he loves him	<i>uḱwéidĩntsi'</i>
<i>uḱwéłĩntsi'</i> , we love him	<i>neḱéidĩntsi'</i>
<i>uḱwéhłtsi'</i> , you love him	<i>nuḱwéidĩntsi'</i>
<i>niḱentsi'</i> , they love him	<i>pæḱéidĩntsi'</i>
<i>uḱwéłłtsi'</i> , both of us love him	<i>neḱéidĩntsi'</i>
<i>uḱwa'dəsni</i> , I call him, etc.	<i>ska'hwotni</i> , I am called, etc.

In the first verb *u-* is the third personal pronoun in the singular, which is here the complement of the verb *-ḱéssi'*, which cannot stand alone;<sup>1</sup> *ḱwé* is the postposition *ḱé*, "by attraction to," inflected into *ḱwé* by the stronger vowel *u*; the first of the two *s* represents the first person singular present (which would be *æs*, were it not for the contact with the stronger vowel *e* immediately before); the same pronominal element of the first person (*s*) in turn modifies into *-si'* the verbal stem *-łtsi'*, denoting badness, avarice. This verb, therefore, stands for *uḱwéłłtsi'*, and, considered in its component parts, yields the literal meaning of: "by attrac-

<sup>1</sup> Unless it is immediately preceded by its complement, formed of a single word.

tion to him I am bad," or avaricious, that is, I feel so much inclined towards him that I cannot share him with others.

As to the passive form of this verb, it is in reality a regular phrase commencing by the personal pronouns (*s-*, *n-*, *u-*, *ne-*, *nuh-*, *pa-*), to which is added a unipersonal verb. For instance, the first person can be thus decomposed: *s-*, "me;" *ké-*, "by attraction to," *idîntsi*, "one is avaricious."<sup>1</sup>

The same analysis applies to *ukwa'dæsnî* (lit., him for-the-want-of I-say something) and to *ska'hwotni* (me-for one-says something—with a very impersonal meaning), in both of which verbs the reader will not fail to remark the elision of initial *æ-* of *ædæsnî* and *æhwotni* represented as usual by the hiatus.

Such passives, however, are not very numerous in Carrier. Their verbal part *-idîntsi*, *-hwotni*, varies alone according to the tense: past, *sķéidantsî*, *ska'hwodani*; proximate future, *sķéidæthîtsî*, *ska'hwodæthatnîl*; eventual, *sķéidutsî*, *ska'hwodôni*. The negative furthermore affects not only those verbal forms, but even the postposition *-ké* of the first. *Sķéidîntsi* then becomes *sķæleidîtsî*, etc. But enough of this. Entering into the question of the intricacies and niceties of the Carrier verbs would lead us too far.

Lastly, many other verbs obtain their passive merely by changing the second conjugation into the first. Ex.: *nainælnéh*, he distinguishes it; *nanišno*, it is extinguished. It is only right to remark that in such cases the equivalent of our passive is just as much of a primary form as that of our active, both being independent of each other.

If we are to believe Dr Sapir, the Chasta Costa radical *-to* expresses the ideas of both swimming and sucking. The former is rendered by *-pe*, *-pi* in Carrier and the latter by *-tuk* (which is an instance of onomatopœia). According to the same authority, *-na* represents as well the act of drinking as that of lying on. In Carrier "I drink" is said *æsnai* when the verb is transitive, while the same language boasts an infinity of roots corresponding to the English "he or it lies on," which change according to the nature of the

<sup>1</sup> The *d* of *dîntsi* refers to self-interest, and belongs to a characteristic form which affects most of the Carrier verbs.

subject. We are also told that in Chasta Costa the desinence *-lec* does duty for "to wager" and "to smoke." In the first case, the Carrier equivalent is *-le*, if the verb is intransitive, and, as to the second, it all depends on what is meant by smoking. If this refers to the favorite pastime of the votaries of the pipe, the Carriers have the root *-tæt* (another case of onomatopoeia) therefor. If Dr Sapir means the act of treating with smoke, for instance, meat, those Indians then say: *tsæl æssi*, "I make, or cause to be, soot;" if the complement is a skin, they change this into *læt pe æsléh*, literally smoke with I make.

To the root *-ya* our essayist attributes an even larger number of significations. It refers, he says, to locomotion, manducation, and the feeling of shame. Normal human locomotion on both legs is, in fact, expressed by *-ya* in Carrier; but the act of eating is rendered by the desinence *-at* among the northern half of the tribe, while the southern part of the same replace it by the root *-yî*. On the other hand, the Chilcotin word for eatable is *tsiyan*, and the general root for manducation is *-yan* in that idiom.

As to the verb "to be ashamed," it is in Carrier one of the two or three whose structure exactly tallies with the English synonym. *Yuya æslli*, "ashamed I am," is what they say, and in some compounds the root for shame (substantive, not verb) is *ya*.

With regard to the plural of verbs Dr E. Sapir writes: "Among deictic elements are further to be reckoned certain prefixes that serve to indicate either plurality as such or more specifically third personal plurality."<sup>1</sup> Whereupon he gives us a few examples of verbs commencing in *ya-*. A word or two on this subject, such as we find it in the Carrier and other Déné dialects of British Columbia may be of interest to him, and possibly to others as well.

In the first place, the third personal plural of all the Carrier verbs is rendered by the particle *R-*, *Ræ-* or *Ri-* prefixed to, or coalescing with, the pronominal element—the equivalents of the Chilcotin *qe-* and *qæ*. Added to this is the particular inflexion of the desinential radical for each of the three plural persons when it is a question of a verb of human locomotion on both legs (*-ya* = *-tîl*

<sup>1</sup> "Notes," p. 306.

in the plural), of locomotion on all fours (*-kret* = *-'as*), of running (*-kraih* = *-ras*), of station (*-ta* = *-tse*), of cubation (*-thi* = *-thés*), of natation (*-pi* = *-'il*, first conjugation for the singular, third for the plural), of navigation (*-ke* = *-'il*, first conjugation for both singular and plural), of physical feeling (to suffer, to swoon: *-zit* = *-léh*), of ejection with a human complement (to throw: *-néh* = *-til*, first conjugation for the singular, second for the plural), of bursting into laughter (*-tsit* = *-kæk*). The verbs of flotation make their plural as the verbs of navigation.

All of these plural desinences, and indeed the singular desinences as well, furthermore undergo material changes according to the tense.

Then there are the objective verbs, some of which have for all their tenses a desinential plural of their own. Ex.: *nenæs'aih*, "I put (in a certain place) a single object with no special characteristics;" *nenæstle*, "I put many such (in the same way)." *Adítai*, "it (a single unspecialized object) is put in a hole;" *adítlya*, "several such objects are put in the same place."<sup>1</sup>

We now come to the real verbs of plurality. They are characterized by the element *næ-* (*ne-* and sometimes *no-*, when in direct contact with stronger vowels) introduced before the pronominal syllable, the reduplicative prefix, or again the negative particle. Here are a few instances:

<i>Common Verbs</i>	<i>Verbs of Plurality</i>
<i>tha-dæssel</i> , I cut up in various lengths with an axe	<i>thænæ-dæssel</i>
<i>thænna-skræs</i> , I wash (linen, skins)	<i>thænnænna-skræz</i>
<i>pe'-dæstcæz</i> , I bind it	<i>pæne'-dæstcæz</i>
<i>tsé-sæ'a</i> , it is straight	<i>tsénæ-sæ'a</i>

As may be seen in the case of *thænnaskræs*, the pluralizing form sometimes affect the verbal desinence. It changes that of the present, and the two futures into that of the past, which then remains unchangeable.

<sup>1</sup> It will be noticed that the plural-forming particle of the third person is wanting in this verb. It is used only in connection with human subjects, and even then it disappears whenever the subject is itself in the plural. Ex.: *tedækul tsiyauh hventi*, "all the girls went away" (instead of *hvenantil*).

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Should the subject or complement be evidently plural or imply such number, the verb of plurality is not resorted to, unless one wants to draw attention to the fact that he refers to a multiple object or several persons.

Another kind of pluralizing verbs, which are perhaps the ones Dr Sapir had in mind when he penned the above quoted remark, do indeed commence with the prefix *ya-*; but they mean much more than the common verbs of plurality of which I have just given a few instances. They refer not merely to several, but to all. In other words, they imply totality rather than simple plurality. The very substantive verb to be (*æstli*, I am) can be thus affected. *kînli*, "they are;" *yarînli*, "they are all, or at least in very large numbers."<sup>1</sup>

Sometimes the prefix *ya-* denotes also a repeated action (especially if followed by the crement *-das-*) rather than a plural complement. Examples:

<i>Common Verbs</i>	<i>Verbs of Totality</i>
<i>æstah</i> , I cut with a knife in a slashing way	<i>yastah</i> , I cut to pieces with a knife
<i>æsqul</i> , I tear	<i>yasqul</i> , I tear to pieces
<i>thæskat</i> , I throw away with a shovel	<i>yaidaskat</i> , I throw away on all sides with a shovel, I scatter, etc.
<i>dæsnat</i> , I split	<i>yaidasnat</i> , I split in very many places

Oftentimes these verbs combine the crement *næ-* indicative of plurality with the prefix *ya-* which denotes a large number, or even totality, and may furthermore take the pluralizing particle *kæ-* proper to the third person plural, as may be seen in the following:

<i>ltcan</i> , she is with child	<i>yanoltcan</i> (contraction of <i>yanææltcan</i> ), they are all with child
<i>ucyul</i> , I blow repeatedly on (as a shaman)	<i>yanæpucyul</i> , I blow repeatedly on all

The desinence of the first verb means "womb" in Carrier. Déné phonetics always contract *ææ-* into *o-*; hence the peculiar form of totality noticeable in that verb. In *ucyul*, the real signification

<sup>1</sup> Strictly speaking, they imply totality, but the Indians are so addicted to the practice of exaggerating that such verbs practically refer to large numbers only.

of which is "I exorcize" in English, we have still another category of verbs, the frequentative. The original form of the same is *æcyuł*, "I blow." When one is told that the pretended exorcism of the shamans consists in incessant blowing on the part of the body which is affected by disease, he will realize the appropriateness of the frequentative form to express the nature of their operations.

In *yanæpucyul* we have a further instance of a weak vowel (*æ* of *pæ*, "them") disappearing under the influence of a stronger vowel (initial *u* of *ucyul*). That compound stands for *yanæpæucyul*.<sup>1</sup>

Very often also the verbs have not only a pluralizing but a totalizing form, as is the case in the following: *tharænišnai*, "they are drunk;" *thanonišnai*, "many are drunk;" *yatharinatnai*, they are all drunk; *ærwæništæt*, "they are drunk with tobacco;" *noništæt*, "many are drunk with tobacco," *yarinatæt*, "they are all drunk with tobacco."

The dissection of these two series of verbs is quite interesting. The desinence *-nai* of the first denotes the act of drinking, while the prefix *tha-* indicates that something stronger than milk, namely "fire-water," has been absorbed. *æ-* is the usual particle of the third person plural, and *-niš-* shows that the above mentioned potations have been excessive, being attended with fatal results.<sup>2</sup> The reader will not fail to remark how this accretion *-niš-* is converted into *-na-* under the influence of initial *ya-* of totality (*yatharinatnai*).

In the second verb *-tæt* is onomatopoeic. It denotes the act of smoking, and is intended to reproduce the peculiar noise made by the lips when pulling at a pipe. As to *noništæt* the reader will have guessed that it is a contraction of *næræništæt*, prompted by the phonetic rule already alluded to.

Before dismissing the question of the verbs in *ya-* referred to

<sup>1</sup> Were not the frequentative form intended, the sequence of two vowels in *æ* would be against the principles of Carrier phonetics.

<sup>2</sup> These verbs belong to still another class, that of the verbs of error, which denotes an action with unforeseen, or fatal, results. Almost all the Carrier verbs can be clothed with this significant form, which, in common with the frequentative and other forms, constitutes a new series of verbs.

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by Dr Sapir, it may be worth the while to observe that, independently from the value of that prefix as a multiplicative element, it is also the root of numerous verbs meaning "to land, to go (or take) ashore." Here are some examples illustrating that new rôle:

- yasæskéh*, I land in a boat.  
*yasæcyaih*, I land on foot (as on the ice).  
*yasæzkraih*, I land while running.  
*yasæskuh*, I land in a sleigh.  
*yasæstzût*, I land while skating.  
*yasæzkret*, I land on all fours.  
*yasæzkuh*, I land on one leg.  
*yasæstlat*, I land floating on the water.  
*yasæspih*, I land swimming.  
*yasæstah*, I land in a balloon, flying.  
*yasæstzas*, I land hopping about like a bird.  
*ya'næs'æs*, I land while limping about.  
*yadæzquh*, I land while throwing out the throwing stick (game).  
*yasæzqéh*, I land under the influence of anger.  
*yasæstcih*, I land with head erect.<sup>1</sup>  
*yasæztlas*, I land on crutches.<sup>2</sup>  
*yadæzthis*, I land with a walking stick.<sup>3</sup>  
*yasæstzît*, I land while chasing large game,  
 etc., etc.  
*ya-tsi'-dæs'aih*, I, being a worthless fellow, land on foot.<sup>4</sup>  
*ya-ké-næz'ih*, I land by stealth.<sup>5</sup>  
*ya-cæn-dîjyaih*, I land on foot and while singing.<sup>6</sup>  
*ya-tso-dîjyaih*, I land on foot while crying.<sup>7</sup>  
*ya-tsé-sæztlés*, I land nodding right and left.<sup>8</sup>  
*ya-kwæ-distéh*, I land on my knees.<sup>9</sup>

<sup>1</sup> The desinence *-cih* of the present becomes in the past *-cæn*, which means "stick, tree," and hints at the subject of the verb landing while "stuck up" as the trunk of a tree.

<sup>2</sup> From the root *-l̥a*, "posterior," because in such a case the person seems to an Indian to be walking with his posterior instead of his legs.

<sup>3</sup> From *thæz*, "walking stick," which is the desinence assumed by the verb for the past tense.

<sup>4</sup> From the root *-tsi'*, which, as we have already seen, is the Carrier for "bad."

<sup>5</sup> Literally: I land hiding (*næz'ih*) my feet (*ké*).

<sup>6</sup> *Cæn* means "song."

<sup>7</sup> From the root *tso*, "crying."

<sup>8</sup> From *tsé*, equivalent in compounds of *-tsi*, "head," and *-tlés*, stem of the verb "to throw."

<sup>9</sup> From *-kwæt*, "knee."

*ya-kel-uzæzkeh*, I land in a canoe with the intention of buying.<sup>1</sup>  
*ya-lsé-næstaih*, I land on foot under the influence of fear.<sup>2</sup>  
*ya-na-lsé-næstaih*, I land again on foot under the influence of fear.<sup>3</sup>  
*ya-na-hwe-næsga*, I commenced again to land on foot,<sup>4</sup>  
 etc., etc., etc.

The compound, *dō-at-ti*,<sup>5</sup> leads me to remark on the evident inferiority of the Chasta Costa compared with the northern Déné languages, especially those of British Columbia. "Not-wife-he has" appears almost childishly simple in construction by the side of the negative forms prevailing there. Indeed, this phrase recalls to mind the similarly inelegant mode of expressing themselves adopted by the Sekanais of Bear lake (Fort Connolly), British Columbia, when they attempt to speak Carrier. *Awontuh 'at aṭi*, "no a wife he has," they would then say instead of the classical *au 'at lṭih*, which contains three distinct negative elements: first, *au*, "not;" second, *lṭi*-, made up of negative *l* and pronominal element *æ* inflected into *ṭ*; and, third, the verbal stem *-ti* altered into *-ṭih* by the same negative prefix.<sup>6</sup>

Moreover, if, as is well known, the natural tendency of languages is to disintegrate with time their constitutive elements, that is, to pass from synthesis to analysis, the material presented to the public by Dr Sapir, meagre as it may be, suffices to prove that the Chasta Costa dialect is much less primitive, because more analytic, than the Déné idioms of the Canadian North.

To mention but one point of the grammar of the latter, they form their futures by means of particular inflections, or even

<sup>1</sup> From *Kel*, which denotes the act of buying. The *uzæ-* of the verb furthermore indicates that the person has "arrived" at the place.

<sup>2</sup> This is one of the verbs of error, as can be seen by the particle *lsé-*, which inflects the *-cyaih* of *næcyaih* into *-staih* (*næstaih*).

<sup>3</sup> The reduplicative prefix *na-* is here introduced.

<sup>4</sup> To the reduplicative particle the initiative prefix *hwe-* is here added. The verb is in the past tense (*-qa* instead of *-taih*, which is itself altered from *-yaih* by *na-*), because such verbs are never used in the present tense.

<sup>5</sup> See footnote 82, p. 337.

<sup>6</sup> Strange to say, while, considered in its constitutive elements, this compound should mean "he has no wife, he is unmarried" in Carrier as well as in Chasta Costa, usage has given it the sense of "he did not get married" in the former dialect, since "he got married" is said *'a-ti* (with a contraction similar to that of the Chasta Costa).

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excrescences, of the pronominal crements. Thus the proximate future of the Carriers changes the present *æs'æs*, "I sneeze," into *æthîs'æs*.

Quite often also, the desinential radical of said verbs undergoes itself a characteristic transformation indicative of the new meaning assumed. For instance, *dæsni*, "I say," becomes *dæthasnił* in that same future.

On the other hand, the Chasta Costa decomposes and scatters, as it were, the elements of its verbs, much after the way the modern Romance languages have treated the parent Latin. Thus to form the above mentioned future it simply adds the suffix, or rather separate particle, *thé* to the present.<sup>1</sup> No more any of the two or three original inflections of the Déné negative, no more any internal growth, but instead an independent monosyllable, for the future: such are, indeed, unmistakable tokens of analytic disintegration which bespeaks unfavorable ground or unpropitious environment for the life of the language.

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<sup>1</sup> The words Sapir gives as synonymous of "I shall sneeze, I shall look at him," etc., should be translated: "If I sneeze, if I look at him," etc., in Carrier, *thé* and *te* being in that language the conjunction *if*.

## Editorial Note

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## Misconceptions Concerning Déné Morphology Remarks on Dr. Sapir's Would-be Corrigenda

THE fourth number of the *American Anthropologist* for 1915 contained a series of remarks by Dr. Sapir on my review of his *Notes on the Chasta Costa Phonology and Morphology* under a caption<sup>1</sup> to which exception could well be taken. It is not usual to see *errata* or *corrigenda* thus glaringly paraded by another than the party responsible for the production in which they are supposed to be found. In the present case such a title is a misnomer, and, even if warranted by the circumstances, it would come with a better grace from an old hand in the field of Déné linguistics. Most of the eleven statements which Dr. Sapir seems to criticize were simply proffered in a tentative way, as mere suggestions or bids for explanations.<sup>2</sup> One "corrects" assertions, not suggestions. Practically all of the few that were unequivocal affirmations are the expression of real facts, and therefore not any more *corrigenda* than the others. One exception refers to my taking Dr. Sapir's *A* for my *æ*, an error which is perhaps imputable to the printer, and should not certainly take eight pages of small text to "correct".<sup>3</sup> Moreover, with regard to two of his would-be *corrigenda* (Nos. 6 and 11), my critic admits that I was right.

I trust that, even in his kind reference to what he is pleased to call my "admirable mastery of the Carrier language," one is not to see something akin to a hint that I should confine myself to its exposition, a suggestion that has already appeared in print. To ward off the accusation of unbecoming presumption in treating of other related dialects, I am forced to remark, once for all, that a man who used to preach without an interpreter in Chilcotin before he knew one word of Carrier or Babine,

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<sup>1</sup> *Corrigenda to Father Morice's "Chasta Costa and the Déné Languages of the North,"* vol. 17, p. 765.

<sup>2</sup> "I more than suspect;" "might not Dr. Sapir's informant have misunderstood the questioner?" "unless I am very much mistaken," etc.

<sup>3</sup> Dr. Sapir is very obscure with regard to the definition of the value of his graphic signs. Nowhere can I find an explicit statement concerning the phonetic identity of his *A*; the nearest approach to it is an incidental remark (p. 278): "*æ* (probably identical with our *A*) in Carrier," he says.

and had acquired these two last idioms before he understood Sékanais, or who could catechize unaided in Nah'ane, five Déné dialects differing widely in their lexicon and grammar (with the exception of Carrier and Babine), that man, I say, should be able to detect errors or misapprehensions concerning phonetic and morphological points which run through the whole Déné linguistic family, especially when he has been, since 1882, studying those idioms, twenty-four years among those who speak them, and then with the help of all the literature bearing on the subject. It must be admitted that this help is not always infallible, because, occasionally, of an imperfect ear on the part of the transcriber, distractions or printer's errors, such as those which Dr. Sapir himself points out at the end of his remarks under Nos. 3 and 11.

This scholar claims that Chasta Costa *tc!Ac* "can have nothing to do with this *th'aθ*, but must go back to Ath.<sup>1</sup> *\*kʷ!ac*," and he props up his contention by remarking that, according to Dr. Goddard, *kīyauw* happens to have in Hupa the same signification, "birds," as his own *tc'Ac*. He likewise takes exception to my practically assimilating the suffix *-tcle* of *li-tcle* with that of my *li-tʃe*, declaring at the same time that this really corresponds to Ath. *kʷ!e*, which assertion he similarly bases on the *-ke* of Hupa *liñ-ke*.

He might not be far astray if the guttural sound was accompanied by the glottal explosion which we find in C.C.<sup>2</sup> *tc!Ac*, Carrier and Montagnais *tšəž* (according to my orthography), Navajo *tʃos* (do.), Loucheux *tʃaw* (do.), as well as in the various equivalents of "woman" (*tʃe* or *tc!e*), an all-important explosion, or click, which Dr. Sapir renders by an exclamation point and I by a dot under the letter affected thereby. Dr. Sapir is himself so well aware of this that he obligingly supplies that "click" (p. 766) to the *ki-* of the first word and the *-ke* of the second! If Dr. Goddard really meant *ḳ* (Sapir's *k!*) when he wrote *k*, may I ask how, in that case, he rendered the common *k* sound?<sup>3</sup>

<sup>1</sup> Athapascan.

<sup>2</sup> Chasta Costa.

<sup>3</sup> Years ago I criticized that scholar for having failed, as I thought, to render in his Hupa Texts the particular aspirated *t* (my *th*, the Franciscan Fathers' *tq*) common to all the Déné dialects. As a matter of fact, his *t* was the equivalent of my *th*, and he rendered the ordinary *t* by *d*. But I still fail to see how he expressed the real *d* sound, which does exist in Déné, though the natives themselves do not differentiate it from *t*. A. G. M.

The aspirated *ḳ* sound Father Morice writes *κ*, becomes everywhere in Hupa a continuant written *x*. The character *k* was therefore used for the sound Father Morice calls "click," and writes *k*. What Father Morice calls the common *k* is

As to the Hupa root *-tsōts* or *-tsōs*, which my critic adduces in this connection (Carrier, Chilcotin, Sékanais and Nah'ane *-tʃus*, Babine *-tʃōs*, Montagnais and Loucheux *-tʃun*, Hare *-tʃu*), it has no affinity with *-tʃæʒ*.

With regard to his strictures under No. 4, I could not, with the best of will, change what I wrote concerning the point he refers to therein. He may refuse as stoutly as he can to agree with me; further study and a little speaking knowledge of a few Déné dialects will ultimately convince him that I am right in this connection. But we must understand each other. When I said that *thé-* "hinted" at the bottom of the water, I did not mean that it denoted exclusively the ground under the same (though that prefix has frequently reference thereto); I had especially in mind the water that is near the bottom of the body of water.

Now the very words which Dr. Sapir quotes to dispose of my assertion redound against him to the extent of proving even more than I meant. I even unnecessarily qualified my statement when I said that this was the case "at least in the north," since that prefix has the same value among some of the southern tribes, as is unwittingly shown by my critic himself. He adduces Navajo *tqě-lī* (my *thé-liñ*), "water-horse," which, forgetful, or unaware, of Indian exquisite accuracy in rendering linguistically the individual characteristics of natural elements, he imagines must mean literally "in-the-water horse." But I claim that he is mistaken in this. The native mind could not possibly form the concept of a horse without thinking of an animal with four feet. It is too radically exact for that when it is a question of concrete ideas. Even though the object denominated may be a real fish, the *name* given to it predicates the notion of legs and feet, which cannot be used as fins "in the water," but as means of locomotion "over" some hard substance, namely the *bottom* of the water.

This is so true that when, referring in Déné to the Eucharistic elements, I used the verbal desinence implying a personal, not material, complement, to show that these were none other than Our Lord Jesus-Christ himself, I could never prevail upon the Indians to follow me in this. They believed as firmly as I did in transsubstantiation; but their language was too strictly logical to use a verb connoting a personal complement when the *word* expressing that complement referred to a thing—a Sacrament, or the Eucharistic bread—not to a person.<sup>1</sup>

really intermediate in sonancy in Hupa and was written *q* when velar, *g* when prepalatal, and sometimes *k* when postpalatal as in *Lūk kai*, "white. These facts have been called to the attention of Father Morice in print previously. Ed.

<sup>1</sup> The following passage from a letter lately received from Rev. Father Leopold,

Dr. Sapir gives as another proof(?) that Déné *thé-* simply refers to the water, and not to the bottom of it, the fact that the Kato verb expressing the idea of washing is in *t'e'*-. In the first place, this is not to the point, since my statement did not embrace southern linguistics. Then here again his pretended proof turns against him. The Chilcotins have indeed *thénasqæs* and the Carriers *thønnaskræs* for "I wash"; but what kind of action do these terms represent to the native mind? How do the primitive aborigines wash? By laying over the clayey "bottom" of the shore of a sheet of water the soiled skin or blanket, on which they tread with bare feet and legs as do the wine-makers of Europe! I have witnessed this operation a number of times during my twenty-eight years' stay in British Columbia, and the Kato word referred to plainly hints that, though the natives who use it may have discarded this aboriginal method of washing, they none the less practised it formerly.

Did my diagnosis of the case stand in need of confirmation, I would have but to produce the fact that the Déné have an altogether different word to render the idea of washing either their hands or their face.

Yet, as these particular operations were very little practised formerly, the notions of washing and water bottom have remained so inseparably correlated in the Déné estimation that the term which they use to designate soap is radically identical with "mud" or "clay." The latter is called *kwætlès* in Chilcotin, *hwotlæs* in Carrier, *wotlæs* in Sékanais, and practically the same among the Eastern Déné of the north. The root, which is a primary one (hence its striking similarity), is *-tlès*, *-læs*. Now the same dialects have respectively for "soap" *la-tlès*, *la-læs* and *ta-læs*, which, in the first two cases, mean "hands-mud," and in the last "eyes-mud."

The mode of washing skins or stuffs above referred to seems to have been originally unknown of the Nah'ane of the Far Northwest (the so-called Thałthan), who use in this connection a word, *ærathas'ôts*,<sup>1</sup> which simply implies that the action is done in the water, or with water, while

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the chief contributor to the *Navaho Dictionary*, who had not been told of my contention concerning the true etymological meaning of southern *tqě-l̄i*, is especially illuminating: "There are," he writes (April 27), "such words as *tqě-l̄i*, water-horse, and *tqě-holtsodi*, water-ox. Both are mythological animals, that live in, and walk in, or *on the bottom* of the water. This last is expressed by the prefix *tqě*." The italics are mine.

<sup>1</sup> Henceforth I shall represent the hiatus by an apostrophe ('), instead of an upper dot (·) as before, and shall retain the dot exclusively for the exploded sounds *t*, *k*, *l̄*, etc.

Chilcotin *thénasqæs* is analyzed: "I drag, rub (-sqæs) repeatedly (-na)<sup>1</sup> over the bottom of the water (*thé*-)."

"Even in northern Athabaskan I do not find Father Morice's remark [on the real meaning of *thé*-] to apply without qualification, even if correct for Carrier." This is from Dr. Sapir's (p. 767). Let us then have recourse to his usual authorities, to which I shall add what I personally know of the Western Déné dialects. For "bottom of a body of water" the Montagnais say (with my spelling) *thèrè*; the Hares, *thèè*; the Loucheux, *thè*; the Chilcotin, Carrier and Babine *thèr*; the Sékanais, *tcéRé*. This last is consistent with the foregoing, because in Sékanais *th* is convertible into *tc*. Ex.: "the Big Water" (the name of a British Columbia lake): Carrier, *Thú-thí*; Sékanais, *Tcú-tcî*.

As to *tha*-, my eagerness to clearly differentiate it from *thé*- induced me inadvertently to go a little too far. It is simply the equivalent in compounds—and in compounds only—of the word *thú*, *thô*, *tcú*, etc., "water," and may contribute to the formation of substantives, adjectives, verbs and adverbs. Here are a few examples:

Substantives: Navajo *thă-ba*, "shore" (for *tho-ba*, "water-edge"); Chilcotin *tha-zæl*, "soup" (for *thô-nezæl*, "water-warm"): Carrier *tha-iši*, "wave" (for *thú-tši*, lit. "water-head").

Adjectives: Chilcotin *tha-diñsat*,<sup>2</sup> "deep (water)," from *thô*, "water," and *nəzat*, "far off"; Babine *tha-lłuk*, "shallow," from *thô*, "water," and *nłuk*, "short"; Carrier *tha-sə̀kəz*, "spring water" (for *thú-sə̀kəz*, "water-cold").

Verbs: Chilcotin *tha-stnan*, "I drink (water)"; Carrier *tha-s'aih*, "I put in the water," etc.—too many verbs of that kind in all dialects for enumeration.

Adverbs: *tha-niz*, "at large on the water" (lit. "in the middle," *-niz*, "of the water," *th-*); *tha-lłat*, "at the further end (of the lake)," etc.

This element appears "in compounds only," I have said. By this I meant to controvert Dr. Sapir's statement to the effect that "in several Mackenzie Valley dialects Ath. *ʔ'a* even occurs as uncompounded noun stem" (p. 768). For this he relies, of course, on Petitot's dictionary,

<sup>1</sup> Etymologically, *na*- (a contraction of *nat*, "twice") implies reduplication; but it is also frequently used simply to show that the action is not done for the first time. In those cases, it even occasionally alters somewhat the meaning of the word. Thus in Carrier *thé-təstli* is the equivalent of "I beseech"; changed to *théna-dəstli*, it assumes the signification of "I say my prayers, I pray," because praying is an action which is normally done more than once.

<sup>2</sup> In Chilcotin *iñ* has the phonetic value of *in* in French *singe*, not of the same in English *sing*.

*sub voce* "flot." But here we have one of the cases when mere book knowledge falls short of its purpose. I never saw but one Mackenzie Valley Indian, and never spoke to her, any more than I ever addressed, or heard, a Navajo or a Hupa; yet I am positive, and if necessary will stake my reputation as a Carrier scholar (the only one which Sapir seems willing to concede) that the prefix *tha-* meaning "water"<sup>1</sup> as well as "flot";<sup>2</sup> is never used uncompounded anywhere. This would be against the morphological laws of the Déné dialects, such as my speaking knowledge of five of them and book study of many years' duration have revealed them to me. Were I not anxious to be as brief as possible, I might give my reasons for this.

In other words, you may see this terminological element written alone, as in Petitot's dictionary, or preceding independently without hyphen some other words, as in the work of the Franciscan Fathers; I insist that it cannot stand by itself, and needs the support of some other element to exist. It is to *thûl*, etc., "water," what *tsé-* is to *kwon*, "fire"; *tšé-* to *tšî*, "head";<sup>3</sup> *za-* to *-zê*, "mouth," *-tze* to *-tzi*, "heart," and *ne-* or *na-* to *nèn*, *næn*, *yæn*, "earth," "ground."

But I have tarried too long on these two particles. Dr. Sapir almost ends his No. 6 criticism by adopting my suggestion that his desinence *-al* should be *-yal*. "I now incline to think that *-yal* is correct," he admits. He is not quite so yielding in his No. 7, since he objects under that head that "there is plenty of evidence to show that Ath. *-xk'e*, *-k'en*, *-k'ên*, *-k'i* frequently refers to, or implies, paddling," which I had declared is expressed by the root *-to*, Sapir's equivalent of the idea of swimming. The instances he gives absolutely fail to convince me. Nay, some of them must have appeared of very little weight even to him.

Thus when Goddard renders Chipewayan *-kî* (*i. e.*, *Kî*) by "to paddle a canoe, to travel by canoe," he is quite right; but this refers to

<sup>1</sup> Sapir's "in the water" is not quite exact, for several dialects have a desinential letter (generally *-t*) which is locative in intent (*thûl*, "in the water"; *tha-tlat*, "at the upper end of the lake," etc.), in the same way as final *-z* denotes recess from (*thûz*, *tha-tlaz*, etc.).

<sup>2</sup> Petitot gives to this French word the signification of "water," which it has sometimes in French poetry, as may be seen by the words he produces as synonymous of "vague."

<sup>3</sup> A somewhat extreme case of compounding into which this particle enters is *tha-na-tšé-le-dæs'æR*, "I do not drink again flat on the ground," which is thus analyzed: "I am not (*-le-*) doing (*-æR*) with my bent body (*æ* replaced by the hiatus *'dæs-*) a renewed (*-na-*) action connected with water (*tha-*) wherein my head (*-tšé-*) takes a part."

locomotion, or the act of moving on the water through the action of a paddle, instead of, for instance, by swimming, *-pih*, "floating on a raft," *-llat*, "poling up," *-thæz*, etc.

So is it with the example quoted from Father Legoff, whose remark is quite appropriate, and applies to all the Déné dialects that I know. *Naviguer en ramant* never meant "to paddle," any more than *j'avance en ramant*, which has the same signification. All these terms refer to locomotion which accidentally is effected by paddling, or the use of oars, on the water.

With regard to Sapir's criticism under No. 8, I merely stated the value of *-lal* in Carrier and asked whether his informant might not have misunderstood him. He shows me by examples that this was not the case. I am satisfied. This point consisted of a statement by me which was perfectly correct, and of a question which is now answered. I do not see here any room for a *corrigendum*.

I wish I could be as brief in connection with his No. 9, which he subdivided into four parts. As usual, Sapir believes that he "abundantly" proves his case by references to other dialects. Were I sure that I do not impose on the reader's patience, I feel I could, by the same process, "super-abundantly" prove the contrary. The main point at issue here is either the absence of *t*- in my critic's root stems, such as *-se*, "to cry," *-si*, "to cause," or his cutting up his words in such a way that this same letter is made to belong to the preceding pronominal element instead of the radical desinence. Thus he wrote *-t-lat*, for *-llat*, root for the action of floating (which is in the same category as his *-lal*); *-t-lo*, "to laugh," instead of *-llo*, and now, in his last paper, *-t-nā* (*t'a-γit-nā*), which should be *-tnā* (*t'a-γi-tnā*, "thou drinkest").

Speaking of the root for sleeping in some dialects, he claims that "not *-llal*, but *-lal* must be considered as the root stem," because, forsooth, the dental happens to be absent in the second persons singular and plural (*t'ī-lal* and *t'ō-lal*). He adds: "Were *-t-* part of the stem, there would be absolutely no reason for its disappearance in these forms" (p. 769). May I ask the learned doctor, firstly, whether this *t* is not found in the first person singular, or at least dual and plural, of his verb, and, secondly, why we find it in these persons of the following analogous verbs, and not in any of the second ones?

	Carrier	Chilcotin	Navajo
	I float	I am	I give him a horse
Sing.	{ <i>næstlat</i>	<i>néstli</i>	<i>bānistlōs'</i>
	{ <i>nīnlat</i>	<i>nīnli</i>	<i>bāñlos</i>
	{ <i>nællat</i>	<i>henli</i>	<i>γēi'los</i>

Plur.	{	<i>nætšællat</i>	<i>nîlli</i>	<i>bādānīdlos'</i> <sup>1</sup>
		<i>næhlat</i>	<i>nēlli</i>	<i>bādānō'los'</i>
		<i>næællat</i>	<i>qīnli</i>	<i>yādei'los</i>
Dual		<i>nīllat</i> , we float (both of us)		<i>bānīdlos'</i>

To get a proper idea of the real root stem in such verbs, we must go back to those dialects which have preserved it for occasional independent use. You ask, for instance, a Carrier: "How did you come? By canoe?" *Tatqahoh hwosaiŋya? ke pe a?*<sup>2</sup> He may have to answer you: *Awontuh; llat pe æsqa*; "No, I did it by floating (on a raft)." *Lat* would here have absolutely no meaning.

In his Hupa material Goddard also gives this monosyllable instead of *llat*; but it will be noticed that all the examples he produces as containing that root are in the third person, which, as we have seen, does not exhibit it in full. *-Tlat*, not *-lat*, is so evidently the true verbal stem that, under the transitive or causative form, the former appears in all the persons of all the tenses, both affirmative and negative, as we may see hereunder. The verb "I make him float" is conjugated as follows:

## AFFIRMATIVE

<i>Present</i>	<i>Past</i>	<i>Proximate Future</i>	<i>Eventual</i>
<i>næstlat</i>	<i>næsæstlat</i>	<i>næthīstlæl</i>	<i>nōstlat</i>
<i>nīllat</i>	<i>næsīllat</i>	<i>næthālllæl</i>	<i>nōlllat</i>
<i>næ(yæ)lllat</i>	<i>næ(yæ)lllat</i>	<i>nē(i)thīlllæl</i>	<i>næ(yu)lllat</i> <sup>3</sup>
<i>nætšællat</i>	<i>nætšællat</i>	<i>næzthīlllæl</i>	<i>nætšulllat</i>
<i>nælllat</i>	<i>næsælllat</i>	<i>næthīlllæl</i>	<i>nūlllat</i>
<i>nææ(yæ)lllat</i>	<i>nææ(yæ)lllat</i>	<i>nææ(i)thīlllæl</i>	<i>nææ(yu)lllat</i>
<i>D. nīllat</i>	<i>næsīllat</i>	<i>næthālllæl</i>	<i>nōlllat</i>

## NEGATIVE

<i>Present</i>	<i>Past</i>	<i>Proximate Future</i>	<i>Eventual</i>
<i>nælæzæstlat</i>	<i>nælæstlat</i>	<i>nælthæzīstlæl</i>	<i>nælæzōstlat</i>
<i>nælæzīllat</i>	<i>nælīllat</i>	<i>nælthæzālllæl</i>	<i>nælæzōlllat</i>
<i>nælæ(yæ)lllat</i>	<i>nælæ(yī)lllat</i>	<i>næle(i)thīlllæl</i>	<i>nælæ(yu)lllat</i>
<i>næltsællat</i>	<i>næltsīllat</i>	<i>næltsæthīlllæl</i>	<i>næltsulllat</i>
<i>nælæzællat</i>	<i>nælællat</i>	<i>nælthæzælllæl</i>	<i>nælæzulllat</i>
<i>nælææ(yæ)lllat</i>	<i>nælææ(yī)lllat</i>	<i>nælææ(i)thīlllæl</i>	<i>nælææ(yu)lllat</i>
<i>D. nælæzīllat</i>	<i>nælīllat</i>	<i>nælthæzālllæl</i>	<i>nælæzōlllat</i>

<sup>1</sup> It must be borne in mind that the Déné ear perceives no difference between *d* and *t*.

<sup>2</sup> Of course, *ke* does not literally mean "canoe," but "navigation."

<sup>3</sup> The particles within parentheses represent the personal complement without which a native will scarcely ever pronounce the word. This element may be omitted when the complement immediately precedes the verb; but even then it is not considered a useless redundancy in Carrier. Ex.: "Paul will take all my cattle (from one place to another) by floating," *Pol smæstus tšiyauh næyulllat*.

The desinential roots *-tlæł* of both proximate futures and *-tlal* of the negative past tense are nothing else than the general stem *-llat*, inflected in conformity with well known, and invariably observed, laws of Carrier verbal morphology.

In the same way, the desinence of Chilcotin *néstli*, "I am," which is in Carrier *æstli*, and similarly loses its *t-* in all but the first persons singular, dual and plural, always takes it back when used substantively or as a compound element; in other words, whenever it has to play independently its rôle of a root. Thus "I am dressed" is said: *e-tæne-æstli*; "thou art dressed," *e-tæne-înli*, etc., and the compound word for clothing will be *pe-tæne-ælli*, literally "that-wherewith man one-is."

So is it with the verbal stem *-tlo*, representing the idea of laughing, which Sapir would fain have us believe to be really *-lo*, since he writes it *-t-lo*, disassociating therefrom the *t* which he unduly refers to the pronominal element of the verb. This radical quite often fills the rôle of a genuine independent noun, in fact it is a regular noun, in all the dialects: Carrier, *tlo*; Navajo, *dlo*; Chilcotin, *tlâr*; Sékanais, *tlôh*; Nah'ane, *tlok*; Montagnais, *tlô* and *dlôr*; Hare, *tlô*, *klô*, Loucheux, *tlôg*, *dlôg*.

Here are a few instances of their use: *tlo sæzïtre*, "laughter killed me,"<sup>1</sup>

<sup>1</sup> An idiomism, the like of which we find again in Navajo. In this connection, I think it worth while to quote again from Fr. Leopold's letter (written on receipt of a copy of my review of Dr. Sapir's paper), were it only to show how, for those who are familiar with them, the dialects of the south have really preserved even minor points of the Déné morphology, such as we find it in the north.

"What you say on pages 348-49 regarding the hiatus preceding the root of the verbs of vision obtains exactly in Navaho, where this root is: 'i, 'î, 'îl for the three tenses: *nesh'î*, "I look at;" *neh'î*, "I looked at;" *dînesh'îl*, "I will look at." Your remark concerning the word "wife" also applies to the Navaho word 'ad, which is generally used with the possessive pronoun: *sha'ād*, *na'ād*, *ba'ād*, "my, your, his wife." The same hiatus occurs in Navaho before other verbal roots beginning with a vowel: *shana'a*, one of the forms for "give me." . . .

"Your remark on the double parts of the body holds good partly in Navaho: a one-eyed-man would be described as *binā'kis* ('*kūs* being a now obsolete word meaning 'half.' However, *shikke* or *shila* is used in the singular or plural for "foot" or "hand." . . . Navaho has, as the Carrier, such personifying expressions as: *tqö shinilqi*, "water kills me," or "I am drowning." In like manner they say: *dichî shinilqi*, "hunger is killing me;" *dabā' shinilqi*, 'thirst is killing me,' to express a high degree of hunger or thirst."

Had my correspondent been familiar with the Déné dialects of the north, he would have saved himself the trouble of giving me translations of his Navajo material. There is scarcely more than one or two words (*dichî* for "hunger" and the future of *nesh'î*, i. e., *neh'îñ*: Chilcotin *nis'in*, Nah'ane *nes'ih*, Carrier *næs'en*) which would not be understood in the north. Thus "my, thy, his wife" is said *sæ'at*, *næ'at*, *pæ'at*, in

that is, "I am dying of laughing"; *tlo kəwne'dəsni*, "I am acting the buffoon," literally "laughter in-conformity-with I-say-many-things" (*ne'dəsni*); *tlo dīzta*, "I sit laughing"; *tlo dījyin*, "I stand laughing"; *tlo dīzthi*, "I laugh while lying down," etc. *Lo* could not be thought of in this connection.<sup>1</sup>

With regard to the root for such an idea as weeping, *tso*, *tsær* in most dialects, which Sapir again writes without its *t*, here is one tense of the verb to which it belongs, together with that of a Carrier verb which is morphologically identical:

Chilcotin	Carrier
<i>hæssá</i> , I cry	<i>æssí'</i> , I am bad
<i>hæntsá</i>	<i>ínsi'</i>
<i>hætsá</i>	<i>ntsí'</i>
<i>hetsá</i>	<i>tşínsi'</i>
<i>hatsá</i>	<i>æhtsi'</i>
<i>qetsá</i>	<i>rínsi'</i>

Dual: *ítsi'*, both of us are bad

The Carrier for *hæssá* is *æssær*,<sup>2</sup> and its past, instead of making *retsèr* as in Chilcotin, becomes *íssé*, yielding the very same root as that of Sapir's Chasta Costa; but, of course, it does not fail to assume a *t* at all its other persons. Now *tso*, *tsær* (not *so*, which means "sleet," not "weeping") is employed in exactly the same way as *tlo*. So is it with *tsi'*, not *sí'*, which has no signification. It is given, under its independent form, the sense of badness, malice, wretchedness, while it is also used depreciatively in compounds, as in *ya-tsi'-dæs'aih* (see p. 570 of my last paper).

Chilcotin; Navajo *shana'a* is none other than Chilcotin *sani'añ* (last syllable as French *en*); *biná'kis* is simply Lower Carrier *bəna'kəz*, or *pənakəz*, etc.

I repeat that this information was spontaneous on the part of Fr. Leopold, who had not been told of Dr. Sapir's criticism.

As to the former's remark concerning *shikke* (or *ci-Ke*: Chilcotin *səKe*) and *shila* (Chilcotin *sə-lla*), it applies likewise to Northern Déné. Thus a Carrier will say: *sla ilkét*, "my hand is swollen," without using the singularizing suffix—a point I had noted long ago in the outlines of a grammar which, duly developed, may later on be published. But whenever it is necessary to specify that one hand only is intended, this particle (*-kəz* in Carrier, *-kis* in Navajo, *-qəs*, in Chilcotin, etc.) must be agglutinated to the noun. You must then say: *sla-kəz*, "the half of my hands." Were you to use in this case the numeral "one," as is done in our European languages, nobody would understand you.

<sup>1</sup> Dr. Goddard duly transcribes that *t* when he gives us the Hupa correlatives *tcwá* and *tcwe* for *tso*.

<sup>2</sup> This desinential *-r* is scarcely audible at all, and many Indians, especially among the younger generation, say *tso* instead of *tsær*.

The part of Dr. Sapir's criticism where he is the most positive is in connection with syllabification. Here he declares that he "must emphatically disagree with" me (p. 771), and to show his utter disregard of what I wrote on this subject, he gives us *t'ā-γit-nā*, for *t'ā-γi-tnā*; *γit-lō* instead of *γi-tlō*, etc., thereby absolutely disfiguring the words and granting to their pronominal inflective part that which in reality pertains to their stem. I must therefore be allowed to make a confession:

Out of sheer presumption, and imagining that my 34 years' study of the Déné language had fitted me for the task of writing thereon from mere personal knowledge, the thought of consulting a book or published paper on the subject did not as much as occur to me when I wrote my review of Sapir's able essay on Chasta Costa. Now that he "emphatically" rejects my criticism on his peculiar way of dividing syllables, which, I claim, entails a wrong idea of the personal elements no less than of the nature of the verbal stems, I must have recourse to a book. On the other hand, since it is the fashion in certain quarters to have nothing to do with the morphological notions of the North, when treating of southern dialects, I open the *Navaho Dictionary* of the Franciscan Fathers, and find, page 10 of its second part, the following caution noted in as prominent a manner as possible:

The digraphs and trigraphs used in this alphabet are not two or three distinct consonants in juxtaposition; but represent a single sound whenever they occur initially or otherwise. We hyphenize and pronounce *bi-tqo*, not *bit-qo*; *bi-t'ō'*, not *bit'ō'*, etc., a distinction which is noticed by a Navaho ear.

This remark applies to pronouns and nouns, which are always coupled together as inseparably as the various elements of a verb, since the possessive pronoun (*bi-*), for instance, cannot any more stand without the support of its noun (*tqo*) than we could dream of *t'ā-γi-* existing without the immediate adjunction of its sense-giving stem *-tnā*. The above mentioned caution of the Navajo scholars is, therefore, just as much to the point when it is a question of verbs, as in connection with a pronominal-substantival compound.

Hence let me tell my critic that he cannot possibly be half as emphatic concerning the accuracy of his syllabic divisions as I am with regard to their inaccuracy. His plea that his informant "was particularly careful in syllabifying" merely betrays an inexperience with Déné teachers which time will not fail to reveal. To prepare my monumental Dictionary of the Carrier language, which was destroyed by fire, I must have had, during the sixteen years that I worked on it, between 4,500 and 5,000 lessons or consultations, generally of several hours' duration.

I likewise took down vocabularies of the Chilcotin, Babine, Sékanais and Nah'ane dialects. Now I never once found a native instructor who could syllabify correctly, or in the same way as the preceding one! This task must be done by the scholar who has mastered the language sufficiently to be in a position to judge for himself, after a careful deductive process.

Perhaps the conjugation of one tense, the eventual, of the very verb of which Sapir gives one C. C. person (*t'ā-γi-tnā*) will help opening his eyes to the truth of my contention.

<i>Chilcotin</i>	<i>Carrier</i>
<i>tha-ros-tnan</i> , I shall drink	<i>tha-us-naï'</i>
<i>tha-roñ-tnan</i>	<i>tha-ûñ-tnai'</i>
<i>tha-ro-tnan</i>	<i>tha-u-tnai'</i>
<i>tha-rô-tnan</i>	<i>tha-t̥su-tnai'</i>
<i>tha-roh-tnan</i>	<i>tha-uh-tnai'</i>
<i>tha-qu-tnan</i>	<i>tha-Ru-tnai'</i>
	Dual: <i>tha-ô-tnai'</i>

Here we have at a glance the full root *-tnan*, *-tnai'*, the equivalent of C. C. *-tnā*, Sékanais and Hare *-toñ*, Montagnais *-dañ*, fully distinct from the pronominal crements *-ros-*, *-us-*; *-roñ-*, *-ûñ-* etc., which latter are, in turn, clearly differentiated from the qualifying prefix *tha-*, which stands for *thû*, *thô*, "water," and indicates that the verb is intransitive, because it already contains in its make-up some sort of a complement. Who, with ever so slight a tincture of Déné morphology, would dream of having, for instance, *tha-st-nan*, "I drink"; *tha-înt-nan*, "thou drinkest," etc., any more than Montagnais *esd-añ*, Hare *el-oñ*?

As to Dr. Sapir's No. 10, while he admits that his verbal stem *-t'ac* (or *-thæc*) is genetically related to my *-thæs*, which in all the dialects that I know of refers to the plural, he assures me that it is in Chasta Costa really used in connection with singular subjects. This is very surprising and well deserves deep investigation. Pending this, I accept his word for it, merely suggesting that this root is possibly not the equivalent of northern *-thæs*, which is strictly plural in intent, but of singular *-thih*, the desinential *-h* corresponding here to C. C. *-c*. Until I get incontrovertible evidence of it I cannot conceive of a plural form coming to express a singular concept.

With regard to Dr. Sapir's criticism under No. 11, he writes (p. 722): "Father Morice is, in my opinion, quite right." What, then, is *corrigendum* in this, his own statement or mine?

N. B.—I take this opportunity to remark that, in addition to those pointed out by Dr. Sapir, the following misprints occurred in my appreciation of his paper on the Chasta Costa language:

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Page	instead of	read
560	<i>l.oḱæt</i>	<i>l̥oḱæt</i>
561	<i>thēr</i>	<i>thèr</i>
564	<i>æræl'en</i>	<i>æræl'en</i>
564	<i>nuḱwéid̥ĩntsi'</i>	<i>nuhḱwéid̥ĩntsi'</i>
564	verb - <i>késsi'</i>	verb - <i>ḱéssi'</i>
567	<i>tsil</i>	<i>t̥sil</i>
567	(note 2) <i>ʔedæḱul ʔedæḱu</i>	

Page	instead of	read
567	<i>hwenti</i>	<i>hwentil</i>
567	<i>łtsénæ-sæ'a</i>	<i>łtsénæ-sæ'a</i>
570	<i>yadæzquh</i>	<i>yadæzquh</i>
570	<i>yadæzqéh</i>	<i>yadæzqéh</i>
570	<i>yatsé-sæst.s</i>	<i>yatsé-sæstis</i>
571	(note 3) <i>tsé</i>	<i>t̥sé</i>
571	(do.) <i>łsi</i>	<i>ł̥si</i> <sup>1</sup>

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<sup>1</sup> Just to show Dr. Sapir that, especially in material such as his and mine, an author is not always responsible for the printed mistakes, I will point out the fact that his *kʷ!* does not correspond to my *q*, as he is made to say in note 16 of his first essay. This, at least, is a real *corrigendum*—but, I am sure, imputable to the printer alone.

### Editorial Note

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## Corrigenda and Addenda to *Takelma Texts*

[After the publication of *Takelma Texts* (Sapir 1909c), Sapir published a set of corrigenda and addenda to that work; these were bound with his *Notes on Chasta Costa Phonology and Morphology* (1914c: 265–267). The corrections made in the *Takelma Texts* as they appear in Volume VIII of *The Collected Works* were based on Sapir's manuscript notes in his own copy of the texts. The latter do not fully coincide with the published Corrigenda. The items given below are noted in the 1914 publication, but were not in the manuscript notes, and were inadvertently omitted from Volume VIII. The remainder of the changes listed in 1914 appear in Volume VIII, either as corrections in the text itself, or as editorial endnotes. The following items should therefore be incorporated in the texts in volume VIII, which appeared before the present volume. (Note that Sapir's line count refers to lines of native text plus gloss, so that "l. 4 (interlinear)" is the gloss of the fourth line of text; page numbers are those of the original.)

— Eds.]

- p. 13, l. 10 (interlinear): change "mourning" to "bereft of child"
- p. 14, l. 11 (text): change *abailiwil<sup>uc</sup>* to *abailiwil<sup>uc</sup>*
- p. 22, l. 8 (interlinear): change "Di<sup>o</sup>lo<sup>u</sup>mi<sup>1</sup>" to "Di<sup>e</sup>lo<sup>u</sup>mi"
- p. 22, l. 10 (text): change *xá<sup>e</sup>iyasgip!<sup>ilhi</sup>* to *xá<sup>e</sup>iyasgip<sup>ilhi</sup>*
- p. 22, l. 10 (interlinear): omit " , it is said"
- p. 23, l. 2 (interlinear): insert quotes before "Strings"
- p. 25, l. 3 (text): change *da-idamá<sup>k</sup>* to *de<sup>e</sup>idamá<sup>k</sup>*
- p. 31, l. 14 (text): change *mü<sup>iu</sup>x-dánhi<sup>l</sup>* to *mu<sup>uc</sup>xdánhi*
- p. 46, l. 1 (text): change *!<sup>il</sup>lāp'agit'gwa* to *!<sup>il</sup>lāp'igit'gwa*
- p. 50, l. 2 (text): change *he<sup>e</sup>ilem<sup>e</sup>k'wana<sup>e</sup>* to *he<sup>e</sup>ilem<sup>e<sup>u</sup></sup>k'wana<sup>e</sup>*
- p. 60, ll. 6, 7 (text): change *nagaik'wa<sup>e</sup>* to *nagaik'wa*
- p. 76, l. 8 (interlinear): change "with it" to "thereby"
- p. 78, l. 4 (text): change *he<sup>e</sup>dedá<sup>e</sup>* to *he<sup>e</sup>dadá<sup>e</sup>*
- p. 105, l. 14 (text): change <sup>1</sup> to <sup>2</sup>
- p. 122, l. 21 (text): change *debü<sup>iu</sup>k'i* to *debü<sup>iu</sup>k'i*
- p. 127, note 6, add: *-t'güt' <sup>e</sup>it<sup>e</sup>* is very likely transformed from *-t'gwat' <sup>e</sup>eit<sup>e</sup>* "I am provided with ...". See *T. L.*, p. 261, footnote.
- p. 142, l. 7 (text): change *k'a<sup>r</sup>lāp'ak'li* to *k'a<sup>r</sup>lāp'ik'li*
- p. 144, l. 17 (text): change *sgaláuk*, to *sgaláuk'*
- p. 188, l. 9 (text): change *w<sup>r</sup>wákdi'* to *w<sup>r</sup>wák'di*
- p. 194, l. 10: change *!<sup>l</sup>omómán* to *!<sup>l</sup>omómán*
- p. 229, l. 34: change *iter.* to *usit.*
- p. 229, l. 35: change *usit.* to *iter.*
- p. 230, l. 21: change *ha<sup>e</sup>wi-* to *hawi-*

p. 238, s.v. *yewei-*, add:

*ba<sup>a</sup>-*

*ba<sup>a</sup>-i-yewe<sup>e</sup>-n-(i-)*      2 III

: *-ye<sup>e</sup>w-an-*

revive, be cured

cure, bring to life

p. 263, note 1: change *yowo* to *yowo-*

# Phonetic Key to Publications of Edward Sapir

Compiled by William Bright

The following list of symbols is based on the planned contents of *The Collected Works of Edward Sapir*, volumes V and VI, plus selected monographic works. It does not attempt to include symbols of unambiguous value (such as *a* or *k*); or symbols used only in material quoted from other authors; or symbols used in standard orthographies or Roman transliterations of familiar Old World languages. Phonetic symbols proposed in the Report of the Committee on Phonetic Transcription (1916), but not found in Sapir's publications, are also omitted here.

Part 1 consists of diacritic modifications which are used with the entire class of consonants (indicated by C) or of vowels (indicated by v). Part 2 consists of letters or digraphs of the Roman alphabet which are used with special values, with or without diacritics. Part 3 consists of Greek alphabetic symbols. Part 4 consists of miscellaneous segmental symbols.

## Part 1.

- C<sup>ʔ</sup> Glottalized or ejective stop or affricate; glottalized spirant or sonorant. Also printed as C' and 'C. In some earlier work, this notation indicated a weaker degree of glottalization in stops than C!
- C! Glottalized or ejective stop or affricate (in earlier work). Note that ts! te! are glottalized affricates.
- C<sup>ʰ</sup> Stop or affricate with strong aspiration.
- C̣ Syllabic consonant.
- <sup>n</sup>C Nasalized consonant.
- C<sup>u</sup>, C<sup>w</sup> Labialized consonant.
- C<sup>y</sup> Palatalized consonant.
- C· Long or geminated consonant.
- C.C Non-affricate consonantal sequence, e.g. ts when it represents a sequence of two independent consonants.
- <sup>c</sup> (Superscript) Weakly articulated consonant, echoed consonant, or consonantal glide. In early work, whispered or voiceless sonorant (later written with a small capital).

- ǎ Primary stress; in Athabaskan, high pitch. In Takelma forms of Sapir & Swadesh 1946, stress with high or rising tone.
- ǎ Secondary stress; in Athabaskan, low pitch. In Takelma forms of Sapir & Swadesh 1946, "stress with falling pitch". In the traditional orthography of Nahuatl, vowel with following glottal stop.
- ǎ Falling pitch in Athabaskan.
- ǎ Rising pitch in Athabaskan.
- ǎ Intermediate pitch in Sarcee. (For intermediate falling and rising pitches, see Sapir 1925f, Volume VI).
- ǎ Rising pitch in Takelma and Pawnee.
- ǎ Vowel length; in some early work, close vowel quality, not necessarily with length. (See specific symbols in Part 2, below.)
- ǎ Nasalization of vowel.
- ǎ Glottalization of vowel.
- ǎ Primary stress.
- ǎ Secondary stress.
- ǎ Length of vowel.
- ǎ: Length of vowel; when contrasted with ǎ, indicates more than ordinary length.
- ǎ Unusual shortness of vowel.
- (ǎ) Glide value of vowel.
- ǎ.ǎ Non-diphthongal sequence of vowels, e.g. a.i divided between two syllables.
- ǎ'ǎ or ǎ'ǎ Glottal interruption of vowel; the latter alternative is recommended when the post-glottal portion is weakly articulated.
- ǎ<sup>v</sup> or ǎ<sup>v</sup> "Over-long" vowel with glide-like rearticulation, as in Takelma and Sarcee.
- X<sup>v</sup> (Superscript vowel) Reduced prominence of vowel; e.g. murmured or echoed quality, or vocalic resonance of a preceding consonant. Also indicates whispered or voiceless vowels, later written with small capitals.
- X<sub>v</sub> (Subscript vowel) In Indo-European, a reduced vowel.

*Part 2.*

- ǎ Open mid-back unrounded vowel, as in Eng. *but*; usually replaced by small capital A or Greek alpha.

- â Long low back rounded vowel, as in Eng. *law*.
- ä Low front unrounded vowel, as in Eng. *hat*.
- å Open low back rounded vowel.
- ą In Sarcee, “a velarized, dark-timbred a”.
- А (small capital) Voiceless **a**, as in Southern Paiute; in Wishram, a mid back unrounded vowel, as in Eng. *but*.
- А (large capital) Voiceless **a**; in Takelma and Chasta Costa, a mid back unrounded vowel, as in Eng. *but*; in Indo-European, cover symbol for a reconstructed ‘laryngeal’.
- А In Indo-European, cover symbol for an **a**-coloring laryngeal, i.e. one which induces **a**-timbre in an adjacent vowel.
- ḅ Voiced or “intermediate” labial stop; “intermediate” refers to sounds heard sometimes voiced, sometimes voiceless — probably voiceless lenis in most cases (esp. in Hittite.)
- ḅ (barred **b**) In Hebrew, spirant *b*.
- Ḃ, Ḅ (Capital or small capital) “Intermediate” labial stop; see **b** above.
- ç In Nahuatl traditional orthography, used as in Spanish: *s* before *i* or *e*, but **k** elsewhere. In Sapir’s earlier works, a voiceless alveo-palatal sibilant like Eng. *sh* — subsequently replaced by *š*; in later works, a voiceless alveolar affricate, equivalent to earlier **ts**.
- ç In Nahuatl traditional orthography, equivalent to Mexican Spanish *z*, i.e. Eng. *s*.
- č Voiceless alveo-palatal affricate, English *ch* as in *church*, equivalent to earlier **tc** or **tš**.
- ĉ In Esperanto, equivalent to **č**.
- ch In Nahuatl traditional orthography, equivalent to **č**.
- ḍ Voiced or “intermediate” apical stop; see **b** above.
- ḍ Voiced “cerebral” or retroflex apical stop.
- ḏ In Hebrew, spirant **d**.
- ð Voiced interdental spirant, as in English *this*.
- Ḍ, Ḏ (capital or small capital) Voiced or “intermediate” apical stop; see **b** above.
- dj, dž Voiced or “intermediate” alveo-palatal affricate (see **b**, above); replaced in later work by *ž*.
- é Long open mid front unrounded vowel, as in French *fête*.



- I (capital) In early work on Southern Paiute, an "obscure" i.
- j In earlier work, an alveo-palatal sibilant, like French *j* in *jour*; later replaced by ž.
- ǰ Voiced or "intermediate" alveo-palatal affricate.
- ḱ, ḳ, ǰ, ḳ· Voiceless front-velar stop.
- ḳ Voiceless back-velar stop, = q.
- k (with underbar) In Tutelo, an "intermediate" velar stop.
- ky, kʸ Voiceless front-velar stop.
- l (Italic l) In Yana, a voiceless lateral.
- ɭ Voiceless lateral spirant of American Indian languages; in Wishram, described as "voiceless palatal lateral".
- ɭ, l Voiceless lateral spirant as in Welsh *ll*.
- ɮ (Small capital) In early work, a voiceless lateral spirant, replaced later by ɭ.
- L (Capital) In early work, sometimes a voiceless lateral spirant (ɭ), sometimes the corresponding affricate (equivalent to tL, tɭ, or ʎ).
- m (italic) In Yana, an unvoiced bilabial nasal.
- M (small capital) Unvoiced labial nasal.
- n (italic) In Yana, an unvoiced apical nasal.
- ṅ In earlier work, a velar nasal; later replaced by ŋ.
- ṅ In earlier work, a back velar nasal.
- v<sup>n</sup> (superscript) Nasalization of preceding vowel.
- ŋ Velar nasal; varies typographically with Greek eta (η).
- N (small capital) Voiceless apical nasal.
- N (small capital) Voiceless velar nasal.
- ô In earlier work, an open mid back rounded vowel, as in German *voll*; in Southern Paiute and Nootka, a long low back rounded vowel, as in Eng. *saw*. Later replaced in both values by ɔ.
- ö Mid front rounded vowel, as in German *schön*.
- ō In Nootka, a close mid back rounded vowel, as in French *chaud*.
- o In Indo-European, low back rounded [â], produced by the 'laryngeal' γ next to the e-type full-grade vowel.

- C<sub>o</sub> (Subscript o) In Indo-European, cover symbol for shwa (murmur vowel) or syllabic resonance.
- ou In Takelma, "like o but with final u-vanish".
- ɔ Open mid or low back rounded vowel.
- ö Low mid back rounded vowel, as in German *Götter*.
- p (with underbar) In Tutelo, an "intermediate" labial stop.
- q Voiceless uvular (back-velar) stop.
- qu In traditional Nahuatl orthography, a voiceless labiovelar stop (**kw, k<sup>w</sup>**).
- r (italic) In Yana, voiceless r; in Tsimshian, a voiced uvular r.
- ṛ Voiced uvular r.
- ṛ (superscript) In Yana, the combination **ṛt** indicates a "peculiar voiceless-r quality" of t.
- R, R Voiceless vibrant.
- R̥ (small capital) Voiceless uvular r.
- š Voiceless alveo-palatal sibilant, replacing earlier c.
- ŝ In Esperanto, equivalent to š.
- ś In Chasta Costa and Nootka, a "palatalized" c (i.e. ś), "acoustically midway between s and c".
- ṣ In Yana, a sibilant "midway acoustically" between s and c (i.e. š).
- ṭ Voiceless "cerebral" or retroflex stop.
- ṭ (with underbar) in Tutelo, an "intermediate" apical stop.
- tc In earlier work, a voiceless alveo-palatal affricate; later replaced by tš, č.
- tl In traditional Nahuatl orthography, a voiceless lateral affricate, equivalent to tʃ or λ.
- tL, tʃ In earlier work, a voiceless lateral affricate, equivalent to λ.
- tl, tʃ Equivalent to λ.
- ts In earlier work, a voiceless alveolar affricate; later replaced by c.
- tṣ In Yana, an affricate corresponding to ṣ.
- tš In earlier work, a voiceless alveo-palatal affricate, like English *ch* in *church*; later replaced by č.

- tθ In Chasta Costa and other Athabaskan, a voiceless interdental affricate.
- tz In traditional Nahuatl orthography, a voiceless alveolar affricate, equivalent to phonetic *ts*.
- û In early work on Southern Paiute, a long open high back rounded vowel.
- ü High front rounded vowel, as in German *kühl*; in early work on Southern Paiute, used for a high back unrounded vowel (later written as *ī*).
- uh In traditional Nahuatl orthography, a voiceless labiovelar semi-vowel, equivalent to phonetic **W**.
- U (capital) In Southern Paiute, "a duller variety of *ī*".
- U (small capital) In Southern Paiute, same as U; elsewhere, voiceless **u**.
- v In early work on Southern Paiute, a voiced bilabial spirant; later written with Greek beta.
- v (italic) In early work on Southern Paiute, a voiceless bilabial spirant; later written with Greek phi.
- vw In early work on Southern Paiute, a voiced bilabial spirant "with inner rounding".
- V (capital) In early work on Southern Paiute, a voiceless bilabial spirant; later replaced by Greek phi.
- w, w In Indo-European, systematic equivalent for **u**.
- W (capital) Voiceless bilabial semivowel.
- x In Nahuatl traditional orthography, a voiceless alveo-palatal sibilant, equivalent to *š*; in phonetic transcription, a voiceless velar spirant, like German *ch* in *ach*; but in Wishram, further back than the German sound.
- x̣, x̣̄, x̣̄' Voiceless front-velar fricative, like *ch* in German *ich*.
- x̣̄ Voiceless uvular (back-velar) fricative; in Wishram, a fricative "between *ch* of German *ach* and *ch* of German *ich*"; in Hittite, velar.
- x' In Yana, "as in German *ich*".
- x<sup>y</sup> Voiceless front-velar fricative, as in German *ich*.
- x<sup>C</sup> (superscript x) In earlier work on Southern Paiute, "weak x developed from [aspiration] before . . . velar q".

- y, y In Indo-European, systematic equivalent for **i**.  
 ʏ (small capital) Voiceless palatal semivowel.  
 ž Voiceless alveo-palatal sibilant, replacing earlier **j**.  
 ʒ Voiced or lenis alveolar affricate, replacing earlier **dž**.  
 ʒ̣ Voiced or lenis alveo-palatal affricate, replacing earlier **dj** or **dž**.

*Part 3 (Greek letters)*

- α (alpha) Lower mid back unrounded vowel, as in Eng. *but*.  
 β (beta) Voiced bilabial spirant.  
 γ (gamma) Voiced velar spirant (“North German *g* in *Tage*”, Arabic ‘ghain’).  
 γ Voiced front-velar spirant.  
 γ Voiced back-velar spirant.  
 δ (delta) Voiced interdental spirant, as in Eng. *this*.  
 ε (epsilon) Open mid front unrounded vowel, as in Eng. *met*.  
 ̵ (superscript) In earlier works, indicates a glottal stop; varies typographically with an inverted superscript “3”. Replaced in later work by ʔ.  
 η (eta) A typographical variant of η, the velar nasal.  
 η In Eskimo, the uvular (back-velar) nasal.  
 θ (theta) Voiceless interdental spirant, as in Eng. *think*.  
 ι (iota) Open front unrounded vowel, as in Eng. *pit*.  
 i̇ (iota with dot) In Southern Paiute, a high central unrounded vowel.  
 ï (iota with dieresis) Open back unrounded vowel.  
 λ (lambda) Voiced or lenis lateral affricate, equivalent of **dl**.  
 λ̄ (barred lambda) Voiceless lateral affricate, equivalent to **tL** or **tł**.  
 ρ (rho) Uvular **r**.  
 υ (upsilon) Open high back rounded vowel, as in Eng. *put*.  
 ü (upsilon with dieresis) Open high front rounded vowel, as in German *Mütze*.  
 φ (phi) Voiceless bilabial spirant.  
 χ (chi) Voiceless velar fricative, equivalent to **x**.  
 χ̣ Voiceless front velar fricative, equivalent to **x̣**.

- χ Voiceless back velar fricative, equivalent to x.  
 ω (omega) Low back rounded vowel, as in Eng. *law*.

Part 4. Other symbols

- ε (inverted superscript "3"; varies typographically with superscript Greek epsilon). In earliest work, indicates glottal stop. Later replaced by the apostrophe, then by ʔ.
- ̤ In Nootka, "a peculiarly harsh and choky glottal stop," i.e. a pharyngealized glottal stop, in later work written as ʔ.
- ˘ ("smooth breathing") In earlier American Indian work (and as late as 1938 for Indo-European), the glottal stop; sometimes indicates a weak articulation, as opposed to a "true" ʔ. In later work, the apostrophe is retained only to mark glottalization of consonants; elsewhere, ʔ is used. When used for glottalization, the apostrophe is placed before resonants (˘m ˘n ˘w ˘y), after stops (p' t' k'), and internally for affricates (t's t'š). — In Wishram, denotes elision of final vowel. In Ugaritic, '1 '2 '3 indicate glottal stop with one of three vowels.
- ˙ (prime) A feature of "hardening" which imparts glottalization in Nootka.
- ʔ Glottal stop.
- ˚ ("rough breathing") In earlier work, the voiceless laryngeal spirant; sometimes indicates a weak articulation, as opposed to h. In later work, the rough breathing is retained only to mark aspiration of stops; elsewhere, h is used. In Semitic, indicates the Arabic *ʿain*, inexactly stated to be a "voiced laryngeal spirant".
- ˚y "Palatalized aspiration", equivalent to the voiceless front-palatal spirant of German *ich*.
- ˚ In Nootka, a pharyngealized glottal stop; in Indo-European, a glottal (stop) phoneme inducing velar or a-timbre.
- ə ("shwa") A weak mid central unrounded vowel, like the *a* in Eng. *idea*.
- + Extra length of a preceding symbol.
- = Between vowels in Wishram, denotes that they "are to be pronounced separately".



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