THE LANGUAGES OF NATIVE NORTH AMERICA

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ATHABASKAN-EYAK-TLINGIT FAMILY

ATHABASKAN = ATHAPASKAN = ATHABASCAN = ATHAPASCAN

- NORTHERN ATHABASKAN
  - SOUTHERN ALASKAN
    - **Ahtna=Atna=Ahtena=Copper River**
    - **Tanaina=Dena'ina**
  - CENTRAL ALASKA - YUKON
    - **Deg Hit'an=Ingalik**
    - **Holikachuk=Innoko**
    - **Koyukon=Ten'a**
    - **Han=Moosehide=Dawson**
    - **Gwich'in=Kutchin=Loucheux=Takudh**
    - **Upper Kuskokwim=Kolchan**
    - **Lower Tanana=Tanana=Minto**
    - **Tanacross**
    - **Upper Tanana**
    - **Tutchone:** *Southern, Northern*
  - NORTHWESTERN CANADA
    - **Tahltan-Tagish-Kaska=Nahanni**
    - **Sekani**
    - **Beaver**
    - **Slave(y)-Hare-Bearlake-Mountain**
    - **Dogrib**
    - **Chipewyan**
  - **Tsetsaut***
  - CENTRAL BRITISH COLUMBIA
    - **Babine-Witsuwit'en=N. Carrier**
    - **Carrier**
    - **Chilcotin-(Nicola=Tinneh*)**
  - **Sarcee=Sarsi=Tsuut'ina**
  - **Kwalhioqua-Clatskanie=Kwalhioqua-Tlatskanie***: *Willapa=Willoopah, Suwal*
- PACIFIC COAST ATHABASKAN
  - OREGON ATHABASKAN
    - **Upper Umpqua***
    - **Rogue River:** *Upper Coquille*, Sixes*, Tututni, Euchre Creek*, Chasta Costa**
    - **Galice-Applegate***
    - **Tolowa:** *Chetco, Smith River*
  - CALIFORNIA ATHABASKAN
    - **Hupa=Hoopa-Chilula:** *Hupa, Chilula/Whilkut**
    - **Mattole-Bear River***: *Mattole, Bear River*
    - **Eel River***: *Sinkyone-Wailaki-Nongatl-Lassik-Cahto=Kato*
- APACHEAN
  - WESTERN APACHEAN
    - **Navajo=Navaho=Diné**
    - **Western Apache**
    - **Chiricahua-Mescalero**
  - EASTERN APACHEAN
    - **Jicarilla**
    - **Plains Apache=Kiowa-Apache=Na'isha**
    - **Lipan**

Eyak

Tlingit

The Athabaskan-Eyak-Tlingit family is the largest in North America in several senses. It covers the widest territory, from northeastern Alaska across the Yukon and Northwest Territories to Hudson Bay, south through British Columbia, Alberta, Saskatchewan, and Manitoba, down into Washington, Oregon, and California, and into the Southwest. It also contains more languages than any other family and is spoken by more people of all ages. Divisions within Athabaskan are as much geographical as genetic. The Pacific Coast languages, for example, may not constitute a subgroup, but rather a chain with several deeply differentiated units. Among the Alaskan and Canadian languages, subgrouping is tentative; long contact has resulted in dialect complexes with fuzzy boundaries between neighbors and many shared features due to areal diffusion. The classification given here is by Keren Rice. Further dialectal divisions are discussed with each language group. (Two spellings, *Athabaskan* and *Athapaskan*, are in current academic use. The first was adopted by the Alaska Native Language Center, the second by the Smithsonian and the National Museum of Civilization in Canada. The spelling *Athapascan* was used in Powell 1891, and *Athabascan* is preferred by the Tanana Chiefs' Conference.) The possibility of a deeper relationship to Haida has been proposed, but many similarities are now seen to be a result of contact or earlier misanalysis of Haida (Levine 1979, Leer 1990, 1991). (See section 6.3.) Extensive bibliographies of work on Athabaskan languages are in Pilling 1892, Parr 1974, and Krauss & McGary 1980, and surveys in Krauss 1973a, 1979, 1980, 1997, Krauss & Golla 1990, Cook & Rice 1989a, and Cook 1979, 1992. The present sketch has benefited immensely from these sources and from a seminar given by Keren Rice at the 1995 Linguistic Institute in Albuquerque.

Of the 23 Northern Athabaskan languages, 11 are spoken in Alaska. The bulk of the documentation of these languages has come out of the Alaska Native Language Center at the University of Alaska, Fairbanks, under Michael Krauss. Estimates of numbers of speakers of the Alaska languages given here are from Krauss 1997.

Ahtna is spoken by about 80 people over age 50 along the Copper River in four dialects: Lower Copper River (Chitina to Copper Center), Central Copper River (Copper Center to Chistochina), and Western (Mendeltna, Tyone Lake, Sutton, Cantwell), which are similar, and Upper or Mentasta (Chistochina, Batzulnetas, Mentasta), which is more divergent, sharing features with the neighboring Tanacross and Upper Tanana. The Western dialect has exerted considerable influence on the neighboring Upper Inlet Tanaina (Kari 1977a). There is a noun dictionary arranged topically in Kari & Buck 1975, and a comprehensive dictionary with example sentences and appendices of kin terms, verbal morphology, and loanwords, in Kari 1990. Placenames are in Kari 1983. Texts with interlinear translation are in Buck 1975 and Kari 1986. Verb structure is also discussed in Kari 1979, 1989, and 1992.

Tanaina or Dena'ina ('people') is spoken around Cook Inlet on the South coast of

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Alaska by around 75 adults, the youngest in their 30s at Lime Village. Dialect divisions are deep. Kari 1975a recognizes two major groups, Upper Inlet and Lower Inlet. Upper Inlet includes Tyonek, Eklutna, Knik, Kroto, Montana Creek, and formerly Susitna. Lower Inlet is subdivided into Outer Inlet (Kenai, Polly Creek, and formerly Kustatan and Seldovia); Iliamna (Pedro Bay, Old Iliamna); and Inland (Nondalton, Lime Village, Stony River). Kari describes diffusion between Tanaina and Ahtna (1977a) and linguistic prehistory (1989b). Noun dictionaries are in Kari 1974, 1977b, and Tenenbaum 1975, grammatical discussions in Kari 1975b,c, and texts in Pete 1974, 1977, Kari 1975d, 1977c,d, Nicolie 1977, Chickalusion & Chickalusion 1979, Kari & Fall 1978, Tenenbaum & McGary 1984 (originally published in 1976), and Kari & Boraas 1991. A grammar is in Tenenbaum 1978. Tanaina speakers are writing as well. Albert Wassilie of Nondalton produced educational materials, including a dictionary (1978). Peter Kalifornsky of Kenai, born in 1911, began to write in 1972 and produced language lessons, satires, poems, and autobiographical essays. His work appears with translation in Kalifornsky 1977, 1984, and Kari & Boraas 1991.

There are two dialects of Deg Hit'an or Ingalik (also called Deg Xinag), one along the lower Yukon River in Alaska in Shageluk, Anvik, and Holy Cross, the other on the middle Kuskokwim from Aniak to below Vinesale. There are perhaps 40 speakers, the youngest, at Shageluk, in their 50's. Pilling 1892 and Parr 1974 list early missionary materials. Especially important are the texts published in 1914 by the Episcopalian missionary John Chapman (44 stories in English, 17 in Deg Hit'an and English with vocabulary by Pliny Earle Goddard). A re-edition of Chapman's stories with interlinear translation is in Chapman & Kari 1981. Additional texts with free translations are in Paul 1985, Deacon 1987, and Kari 1987, and a noun dictionary is in Kari 1978b. A literacy manual with texts and tapes is in Hargus & Taff 1993.

Holikachuk or Innoko, spoken now at Grayling on the lower Yukon River in Alaska, was the language of Holikachuk on the upper Innoko River until 1964. There are now perhaps a dozen speakers, all over age 60, the youngest at Saheluk. Krauss & Golla note that it is linguistically close to Koyukon, socially and geographically close to Ingalik, and partially intelligible to both, though Koyukon and Ingalik are not intelligible to each other. A noun dictionary is in Kari 1978a. Children's stories are in Rock 1985a,b,c, and Maillelle 1985, 1987.

Koyukon is spoken by around 300 adults over the age of 50 in west-central Alaska, in 11 villages along the Yukon and Koyukuk Rivers. Three major dialects are recognized: Lower (Kaltag, Nulato), Central (Koyukuk, Huslia, Hughes, Allakaket, Galena, Ruby), and Upper (Stevens Village, Manley Hot Springs, Tanana, Rampart, South Fork; Crossjacket, Minchumina-Bearpaw). These last may constitute divergent dialects. References to early missionary contributions are in the bibliographies and sketches cited above. Notable among these is the work of the Jesuit Jules Jetté from

the early 20th century, which includes a grammar and extensive dictionary. A new dictionary should appear soon (Jones & Jetté forthcoming). Texts are in Jones & Henry 1979 (with free translation); Attla 1983 (with notes in McCurry & Jones 1983), 1989 (with guide in C. Thompson & H.F. Thompson 1989), 1990 (with guide in Thompson 1990); and Thompson 1983. Grammatical studies include Henry & Henry 1965 and Landar 1967a on classificatory verbs, Henry & Henry 1969 on locationals, Thompson 1980 on verb morphology, Thompson 1989a,b, 1991, 1993 and Axelrod 1994 on pronouns and voice, Axelrod 1990 on incorporation, Fortescue 1992a and especially Axelrod 1993 on aspect, and Thompson 1995 on inalienable possession.

Han is spoken on the Yukon River by perhaps 7 in Eagle, Alaska and 8 in adjacent Dawson in Canada. A collection of stories in Han and English is in Ridley 1983.

Kutchin or Gwich'in is spoken in northern Alaska and Canada, where it was earlier referred to as Loucheux or Takudh. Alaskan or Western Kutchin is spoken by around 300 along the Yukon River at Circle, Birch Creek, Beaver, Fort Yukon, Chalkyitsik, Venetie, and Arctic Village. Canadian or Eastern Kutchin is spoken by about 100 at Old Crow in the Yukon Territory, and about 300 at Aklavik, Inuvik, Fort McPherson (Peel River), and Tsiigehtchic (Arctic Red River) on the Mackenzie Flats in the Northwest Territories. The Anglican missionary Robert McDonald devised an orthography and translated the Bible (1886, 1898), the Book of Common Prayer, and hymns which were read by speakers. He published a grammar and dictionary in 1911. A revised orthography was introduced in a dictionary in Mueller 1964 and is now in use. Texts with free translation are in Peter 1975a,b, 1978, 1979, 1980, 1992, Williams & Gabriel 1975a,b, Herbert, Pfisterer, & Peter 1981, Tritt-Frank 1989, and Mishler 1995. Dictionaries of the Eastern Fort McPherson dialect are in Ritter 1976a and Firth 1991. Placenames are examined in Ritter 1976b and Caulfield, Peter, & Alexander 1983. Leer 1996a unravels the complex history of stem shape.

Upper Kuskokwim, also called Kolchan or McGrath Ingalik, has about 40 adult speakers at Nikolai, Telida, and McGrath. First recorded by Krauss in 1961, it was earlier considered part of Ingalik and is partly intelligible with Lower Tanana, from which it has been separated since the late 19th century. A dictionary is in Collins & Collins 1966, and stories from various Athabaskan languages translated into Upper Kuskokwim with free translations are in Petruska 1990a,b,c,d,e,f,g,h,i,j,k.

Lower Tanana (also called Tanana), is spoken by about 30 elders along the Tanana River. One dialect group includes the lower bands Minto-Tolovana, Toklat, Nenana, and Wood River. A second dialect, Chena, was spoken until 1976. A noun dictionary is in Krauss 1974, practical orthography and placename list with tape in Kari 1991, text on basket-making in Titus & Titus 1991, a Christmas story in John 1991, and traditional stories with interlinear translation in Charlie 1992. A third variety, Salcha-Goodpastor is considered a distinct language by Kari. It was last spoken in 1993. A

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lexicon is in Moffitt et al. 1994, metrical structures are discussed in Tuttle 1992, and object prefixes are treated in Tuttle 1996.

Tanacross, formerly classified as a dialect of Tanana, has been considered distinct since 1974. It is spoken by the former Healy Lake-Joseph Village and Mansfield Lake-Ketchumstuk bands now mostly at Tanacross. There are about 40 speakers over age 30 in Tanacross village and 10 more in Dot Lake and Healy Lake (Gary Holton p.c. 1998). Children's stories are in Brean 1982a,b and Paul & Scollon 1980.

Upper Tanana is spoken by around 100 along the Tanana River in eastern Alaska and another 10 in Canada. Minoura 1994 recognizes five dialects: Nabesna, Tetlin, Northway, Scottie Creek, and Canadian. The phonology is described in Milanowski 1962. A school dictionary is in Milanowski & John 1979 and 17 stories in Tyone 1996.

Moving into Canada we come to Tutchone in the Yukon. There are two significantly different dialects or languages, each spoken by about 200 adults: Northern Tutchone (Mayo, Pelly Crossing formerly at Fort Selkirk, Carmacks) and Southern Tutchone (Aishihik, Champagne, Burwash Landing, Kluane and former Lake Laberge residents now living in Whitehorse). There are noun dictionaries for the Northern Mayo and Selkirk dialects (Ritter 1976c, Ritter, McGinty, & Edwards 1977), and a volume on toponyms with 8 travel narratives with free translation (Tom 1987).

Tahltan, Kaska, and Tagish are mutually intelligible but diverging dialects in the southern Yukon and northern British Columbia. Tahltan is spoken by fewer than 40 in the upper Stikine drainage (Pat Shaw p.c. 1992) at Telegraph Creek and Iskut. Kaska is spoken by 400 adults in the Dease and Liard drainages (Krauss p.c. 1998). Tagish territory lies around Bennett and Tagish lakes in northern British Columbia and the southern Yukon. One or two elderly speakers remain (Krauss p.c. 1998). The term Nahanni and variants have been used for this group, but they have also been used for Tahltan or Kaska alone or for a number of other Athabaskan groups. Little material has been published on the language. Tahltan stress and tone are investigated in Cook 1972a, and sibilant harmony in Shaw 1991. A discussion of phonology is in Nater 1989b, and a description of phonology and morphology is in Hardwick 1984.

Sekani is spoken in north central British Columbia at Fort Ware, Ingenika (Fort Grahame), and McLeod Lake, by perhaps 50 adults (1996). It forms a dialect complex with Beaver, but the area is in need of further mapping. Sekani phonology is described in Hargus 1987a, 1988a,b, and 1989a, compounding in Halpern 1991, and verbal prefixes in Halpern 1992. A dictionary is in Hargus forthcoming a. In Hargus 1989b, what had been earlier analyzed as a future prefix with possible progressive use is shown to constitute two different prefixes that occur in different positions. Arguments for the separation of conjugation and mode are in Rice & Hargus 1989.

Beaver is spoken in two separate communities, one in eastern British Columbia (Doig, Blueberry, Hudson Hope, Prophet River), the other in northwestern Alberta, (Horse Lakes, Clear Hills, Boyer River, Rock Lane) by approximately 300 adults (Dale Kinkade p.c. 1990). Goddard published a description of the language and texts (1917). More recently Story has published a description of phonology (1989a) and Randoja has discussed word formation and accompanying phonological processes (1990), as well as syllabification among the verb prefixes (1991).

Slave (Dene) is a dialect complex spoken in the Mackenzie River area of the Northwest Territories and northern British Columbia and Alberta. Several major groups are recognized and sometimes referred to as separate languages. Slavey or South Slavey (Slave proper) is spoken at Fort Liard, Fort Providence, Kakisa, Jean Marie River, Trout Lake, Nahanni Butte, Liidli Koe (Fort Simpson), and by some in Wrigley in the Northwest Territories; at Meander River, Chateh Lake, and Hay River in Alberta; and at Fort Nelson in British Columbia. Mountain, grouped with South Slavey, is spoken by some residents of Wrigley, at Tulit'a (Fort Norman), and at Ross River. Bearlake is in Deline (Fort Franklin), and Hare in Fort Good Hope and Colville Lake. Bearlake and Hare are sometimes grouped together as North Slavey (Rice 1989: 9). There are an estimated 3000 speakers of South Slavey and 900 of North Slavey (Krauss 1997), including children, though these figures may be high. References to early documentation of the language are in the surveys above. Especially important among these was the Oblate missionary Emile Petitot, who published a large number of works, in particular a dictionary with grammatical sketch (1876a) based on material primarily from Hare but also including some Slavey, Mountain, and Bearlake, as well as Chipewyan and Gwich'in (Loucheux). Fang-Kuei Li worked with Hare in 1929, and though his material was not published, it served as the basis of publications by Hoijer on phonology (1966a). A dictionary of Hare is in Rice 1978, and South Slavey in Howard 1977 and 1991. The 1991 dictionary includes appendices on grammar and dialects, charts of prefixes, and paradigms. A large volume of Dene texts from Northern Alberta, with interlinear and free translations, is in Moore & Wheelock 1990. A grammatical sketch of Hare is in Rice 1977a, and a monumental Slave grammar, with three Bearlake texts, is in Rice 1989. On more specific topics, discussions of phonology include Howard 1963, Rice 1976, 1977b, 1979, 1980, 1988a,b,c,d, 1990, 1992a, 1993a, with 1987a, 1991a, and 1992b on prosodic structure. Pepper 1985 shows the resistance to diachronic change of expressive vocabulary. Aspects of morphology are treated in Rice 1985a,b,c, 1987b, 1993b. In Rice 1989b, consequences are shown of the development of tonal patterns in Fort Nelson Slave, of British Columbia for analyses of syntactic structure. Arguments for the separation of the prefixes traditionally grouped together as 'mode', based on material from Slave and Sekani, are in Rice & Hargus 1989. The use of classificatory verbs is discussed in Rushforth 1991. Rice (1991b) presents evidence for two classes of intransitives and Saxon (1989a) argues that Slave is syntactially

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projected, with overt nominals as arguments rather than adjuncts. Rushforth 1981 discusses communication with in-laws, Rushforth & Gorbett 1989 relative clauses, DeLancey 1990 enclitics, and Rice 1986 direct and indirect discourse.

Dogrib (once called Thlingchadine) is spoken by nearly the full population of 2400, in the Northwest Territories between Great Bear Lake and Great Slave Lake at Rae, Rae Lakes, Snare Lake, Wha Ti (Lac la Martre), and Detah near Yellowknife. It was earlier considered part of the Slave dialect complex, and more fluent speakers could communicate to some extent with Slave speakers, but the two languages are not mutually intelligible to less fluent speakers. A sketch of verb morphology is in Davidson 1964, a grammar in Ackroyd 1982 and dictionary in Saxon & Siemens 1996. Phonology is described in Howren 1968, 1979 and Coleman 1976. Howren 1971 discusses the 'D-effect', a fusional process involving transitivity prefixes. The optative is treated in Howren & Coleman 1970, pronominal prefixes and agreement in Saxon 1984, 1986, 1989b, 1990, 1993, and Thompson 1993, and complements in Saxon 1998.

The earliest Athabaskan language to be documented was Chipewyan (referred to as *Montagnais* in early French documents) with six 18th-century vocabularies beginning in 1742 (Krauss 1982). The language is spoken in the Northwest Territories, Saskatchewan, Alberta, and Manitoba by about 4000 people of all ages. Many speakers are bilingual, especially in Cree. Early work includes dictionaries in Petitot 1876, Lemoine 1901, and Legoff 1916, a grammar in Legoff 1889, and preliminary analysis and texts in Goddard 1912a followed by a study by Li on consonants (1933a), a stem list (1933b), grammatical sketch (1946), and text (1964). A collection of 19 texts, dictated by Francois Mandeville and edited by Scollon with facing-page translations, is in Li & Scollon 1976. (Original interlinear translations were omitted.) A dictionary is in Elford & Elford 1981. Developments among the consonants in various dialects are taken up in Haas 1968a (with glossary), Rice 1978, Scollon 1979a,b, and Krauss 1982a. Vowels are discussed in Cook 1983a, and the nature of syllable weight alternations, somewhat obscured by phonological change, in Cook 1977. A description of the subject, aspect, and classifier prefixes in verbs is in Richardson 1964, the deictic *ts'e-* in Saxon 1993, and a grammatical sketch in Richardson 1968. Classificatory verbs are described in Davidson, Elford, & Hoijer 1963, Haas 1968, Carter 1976, and S. Rice 1998. Cook 1992b pulls together the functions of enclitic *=u* in conjoining clauses, marking yes/no questions, and enumerating. Carter 1975 is a full treatment of semantics, and Scollon 1977, 1985, and Scollon & Scollon 1979 examine aspects of discourse structure. The possibility is raised in Cook 1989a and 1995a that processes of simplification in obsolescing Chipewyan mirror the stages of natural acquisition.

Tsetsaut or Ts'ets'aut (Tsimshian for 'Athabaskan') was spoken around Portland Canal in British Columbia and Alaska. The only documentation of the language is a

vocabulary recorded in 1894 by Boas at Kinkolith from two boys and an elderly man, only the last fluent (Boas & Goddard 1924b). It is not clear when it was last spoken; Barbeau mentioned a speaker who was alive in 1927. Despite the paucity of material, Krauss reports (1973a: 296-7) that the language has much to contribute to our understanding of the development of Athabaskan because of its phonological divergence. He proposes that the Tsetsaut migrated to the coast from the North, because the language shares certain phonological developments (stem-initial labial affricates, stem-final obstruent loss) with languages of that area. An investigation of the position of the language within Northern Athabaskan is in Tharp 1972.

Babine-Witsuwit'en, formerly considered a dialect of Carrier, is spoken in central British Columbia by about 500 (Hargus p.c. 1997). Dialects are Babine (Burns Lake, Babine Lake, Granisle), Takla, Witsuwit'en (New Hazelton (Hagwilget), Moricetown, Broman Lake, Grassy Plains), and Francois Lake. The language has also been called Babine Carrier and Northern Carrier. It shows an interesting phonological development (Story 1984, Cook 1989b, 1990) which significantly modifies the system. Vowels are laxed or pharyngealized after fortis consonants (aspirated stops, ejectives, and voiceless continuants): **i>ə, *æ>e, *ɔ>a, *u>o*. They are tensed after lenis consonants (plain stops, voiced continuants): **i>i, *æ>i, *ɔ>e, *u>u*. Furthermore, syllables with fortis onsets and pharyngealized vowels show higher tone than those with lenis onsets and raised vowels. The phonology of verbal prefixes is treated in Hargus 1991, a dictionary is in Patrick & Tress 1991, and phonology and morphology in Hargus forthcoming b. Hargus 1995 introduces literacy and contains 15 texts with literal and free translation.

East and south of Babine is Carrier proper, consisting of two primary dialect groups: Central or Upper (Stuart, Trembleur, and Takla lakes) and Southern or Lower (Prince George (Lheivli), Cheslatta (Saint Mary's Lake), Stellaquo, Fraser Lake, Stony Creek (Saik'uz), Kluskus, Nazko, Quesnel, Ulkatcho, Anahim Lake (Ulkatcho or Netcaut'in)). There are around 2000 speakers (Bill Poser p.c. 1994). A massive grammar and dictionary with texts was compiled by the missionary Morice (1932). In 1974, the Carrier Dictionary Committee, working with Richard Walker, published a dictionary with grammatical sketch. Basic phonology is laid out in Walker 1979. Syllable weight is discussed in Cook 1977, nasals in Cook 1985, tone in Pike 1986 and Story 1989b, and French loans in Prunet 1990.

The southernmost Northern language is Chilcotin, spoken around Williams Lake in south central British Columbia in 6 communities: Alexandria, Alexis Creek (Redstone), Anaham, Nemiah Valley, Stone, and Toosey. Dialect differences are small. SIL estimated the number of speakers in 1982 at 1200. Vocabulary from a language 150 miles to the south in the Nicola and Similkameen Valleys of British Columbia, recorded by Mackay, Dawson, and Teit, suggest that Nicola-Similkameen

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constituted a dialect of Chilcotin (Boas 1895a, 1924a), though the data are too scarce for confirmation. Basic phonology and vocabulary are in King 1979; syllable structure is discussed in Cook 1977 and 1986a. A process of vowel pharyngealization or 'flattening' under the influence of adjacent consonants is described in Cook 1983b and 1993a. Tone is treated in Cook 1989c. Processes of language obsolescence are taken up in Cook 1989a, 1995a, and Pye 1992.

On the Plains just southwest of Calgary, Alberta, is the Sarcee community, where there are under a dozen fluent elderly speakers and perhaps another several dozen now in their 50s and 60s who can speak (Cook 1984). Cook reports that Sarcee has developed complex tone and retains some stem-final consonants lost in other languages. In 1915 Goddard published a collection of texts, which Cook notes (1984: 4) differ interestingly in style from material collected in 1922 by Sapir. Sapir's field notes resulted in a paper on pitch accent (1925a) then served as the basis for a study of verb stems by Li (1931) and one on nouns by Hoijer & Joël (1963). The next important work was by Cook. It includes a paper on lexical, paradigmatic, and syntagmatic tone (1971a), the recovery of a lost stem-initial consonant through sibilant harmony (1978a), the fate of phonology under obsolescence (1989a), and other phonological studies (1971b,c, 1977, 1978b, 1981). There is also a description of verb inflection (1972b), a note on copular sentences (1978c), discussion of numerals (1971d), and reconstruction of the development of number categories (1974). A full grammar is in Cook 1984.

Washington and Oregon were once home to an Athabaskan language, Kwalhioqua-Clatskanie. The Kwalhioqua consisted of two groups: the Willapa, who lived east of Willapa Bay in southwestern Washington, and the Suwal, who lived east of them, in the Chehalis River drainage. The Clatskanie, an offshoot of the Suwal, were south of the Columbia River in Oregon. Vocabularies were recorded by Hale in 1846, Anderson in 1854 or 1855 (Clatskanie), Gibbs in 1856, Wickersham in 1888, and Teit, Frachtenberg, and Curtis, all in 1910. Frachtenberg also recorded a text of about a dozen words without translation. Some of this material was published in Boas & Goddard 1924b. The language was gone by about 1930 (Melville Jacobs in Thompson & Kinkade 1990: 31). After careful study of all manuscript material, Krauss has concluded that the language had only partial affinity with Pacific Athabaskan (Krauss p.c. 1998).

The Pacific Coast Athabaskan languages extend from southern Oregon into northwestern California. A comparative survey of the languages is in Hoijer 1960. Krauss (1973a) notes that they differ more from the Northern languages than do the Apachean languages of the Southwest. They share some common innovations, but differences among them are deep, and Krauss concludes that they probably never constituted an undifferentiated linguistic unit (1973a). They fall into two groups:

Oregon and California. Most documentation remains unpublished. References to manuscripts are in Pierce & Ryherd 1964 and Parr 1974. The southwest Oregon groups were moved to the Siletz reservation in the 1850s.

The northernmost Oregon language, Upper Umpqua, diverges sharply from the other three. (Lower Umpqua, a dialect of Siuslaw, is genetically unrelated.) It was spoken inland along the upper Umpqua River and its tributary, the North Umpqua, near Roseburg. There is little published material. Wordlists were collected in the 19th century by Tolmie (Scouler 1841: 215-51), Hale (1846), and Gatschet (1877 ms 76, NAASI), and in the 20th by Harrington (1940 ms 4360, NAASI).

Tututni or Lower Rogue River consists of four primary attested dialects: Upper Coquille, Tututni, Euchre Creek, and Chasta Costa. Upper Coquille (Coquille, Flores Creek) was to the west of Upper Umpqua in the drainage of the Coquille River and its tributaries. Tututni (including Tututunne, Mikwunutunne, Joshua or Chemetunne, Sixes, Pistol River or Chetleshin, Wishtenatin or Khwaishtunnetunne) was centered around the mouth of the Rogue River and extended along the coast. The Chasta Costa or Illinois River dialect was to the west of Tututni near present Agness. In 1964 Pierce & Ryherd listed one remaining 88-year-old Flores Creek speaker, one 85-year-old Joshua speaker, three Euchre Creek speakers, and two Mikwunutunne speakers. While working with Takelma in 1906, Sapir lived with Wolverton Orton, a Chasta Costa speaker. Material he collected from Mr. Orton was worked into a description of phonology and morphology with text (1914). A sketch of Euchre Creek Tututni is in Golla 1976, based on fieldwork in 1962 and 1964. Mikwunutunne vocabulary tape-recorded from Miller Collins by Swadesh in 1953 and 120 Chasta Costa forms collected by Harrington in 1942 are in Landar 1977.

Galice and Applegate (Nabiltse) were very similar dialects spoken on Galice Creek, a branch of the upper Rogue River, and Applegate Creek respectively, in Takelma country. The last known Galice speaker was Hoxie Simmons, who died in 1963. Jacobs collected a large body of texts in 1933-4, one of which was published in 1968. Based on these texts and two months of fieldwork with Mr. Simmons in 1956, Hoijer produced a grammatical sketch (1966) and stem list (1973). Additional vocabulary was recorded from Mr. Simmons by Landar (1977). Manuscript vocabularies of Applegate by Anderson, Dorsey, Gibbs, and Hazen are listed in Parr 1974.

Tolowa is part of the Oregon group but extends from southern Oregon down into California. The Chetco dialect was spoken on the Chetco and Winchuck rivers near present Brookings, in Oregon. There were four known Chetco speakers in 1964 (Pierce & Ryherd). In 1935, Elizabeth Jacobs transcribed 17 Chetco texts from Billy Metcalf at Siletz. Two have been published, a flood myth with free translation in E. Jacobs 1968, and a legend with word-by-word and free translations in E. Jacobs 1977. The other Tolowa dialects are in California, the best-known at the Smith River

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rancheria near present Crescent City, where there are perhaps 7 elderly speakers (Loren Bommelyn 1994). Smith River phonology is described in J. Bright 1964. Goddard collected extensive texts between 1902 and 1911, but these remain unpublished. Collins discusses syllable structure (1989) and reanalysis of inflected nouns (1985). Tuttle 1970 describes stress and length. The most fluent Tolowa elders are now gone, but Loren Bommelyn, who learned the language as a young man, has published materials (1984, 1989, 1995, 1997) with sections on placenames, kinship, counting, time, money, house parts, basketry, prayers, dance songs, and grammar.

Northernmost of the California group are the closely related Hupa and Chilula-Whilkut dialects. The Hupa occupy the Hoopa Valley along the lower Trinity River. One to two dozen Hupa elders are still fluent (Victor Golla p.c. 1996). The Chilula (or Bald Hills) were to the west along lower Redwood Creek, and the Whilkut to the south of the Chilula on upper Redwood Creek. Chilula and Whilkut are no longer spoken. Early 20th-century work on Hupa was by Goddard, who first lived at Hoopa as a lay missionary. His publications include a note on conscious word-making (1901), discussions of sounds (1907), pitch accent (1928), and morphology (1905), a grammatical sketch (1911a), and texts (1904). In 1927 Sapir collected 76 texts and compiled lexical and grammatical files, but these remain unpublished. Sounds are described in Woodward 1964. More recent is work by Golla: studies of noun stems (1964b), verb stems (1977a), texts (1977b, 1984b), a practical grammar (1985), longer grammar (1970), and longer sketch (1996a). Most Chilula and Whilkut material is unpublished; Goddard collected extensive lexical material and texts in each. Chilula material is in Loud 1918: 234-5, 253-5, 259-65, 290-2, and Goddard 1914a,b.

To the south, around Cape Mendocino, were the Bear River people along the Bear River, and the Mattole along the Mattole River, who spoke mutually intelligible dialects. Goddard published Bear River vocabulary in 1929, when only one elderly speaker remained. Li published a grammar with vocabulary and text (1930) based on work with one of the last speakers of Mattole.

East and south of Mattole, along the drainage of the Eel River, was a set of dialects consisting of Nongatl (Van Duzen River, Upper Mad River), Sinkyone (Lower Eel River, South Fork of the Eel), Lassik (Middle Eel River), Wailaki (Upper Eel River) and Cahto or Kato. Golla (p.c. 1996) notes that Kato was beginning to emerge as distinct. All of these dialects may have disappeared by the end of the 20th century. No Nongatl material has been published, but Goddard collected 40 Nongatl texts with interlinear translation (Kroeber 1967). Nearly the same can be said of Sinkyone, and Lassik; Goddard filled numerous notebooks for each with vocabulary, texts, and notes. He did publish 36 Wailaki texts with literal translation, recorded at Round Valley in 1901 and 1906 from Captain Jim (1921-3). In 1927 Li collected 24 texts at Round Valley from John Tip, two of which appear, edited and with notes, in

Seaburg 1977a,b. More was published on Kato, the southernmost California Athabaskan dialect. A grammar is in Goddard 1912b and texts in Goddard 1909. About 325 Kato words with Lassik counterparts appear in Essene 1942: 85-8.

The third major Athabaskan division is Apachean: Navajo, Western Apache, Chiricahua, Mescalero, and Jicarilla in the Pueblo Southwest, and Lipan and Plains Apache or Kiowa-Apache on the Plains. The languages are very similar, and appear to represent a common migration out of the north, distinct from that of the Pacific Coast Athabaskans. An important early comparative study is in Hoijer 1938a, supplemented in 1963 and 1971a. Hoijer also produced comparative studies of tone (1943) and verbal morphology (1945a, 1946b,c, 1948, 1949c). Stress patterns are compared across the languages in Landar 1980, and handling verbs in Liebe-Harkort 1984. Huld 1985 argues for the distinctness of Plains from the fate of palatals. Young 1983 provides a useful survey. Liebe-Harkort 1980 describes language maintenance.

Navajo is spoken over a large area in Arizona, New Mexico, and Utah. There are more speakers of Navajo than of any other North American language, over 100,000, though fewer children are now learning the language each year. There is an immense volume of published material on and in the language. Of monumental significance is the dictionary with grammar in Young & Morgan 1980, revised in 1987; this 1500+ page work alone would make Navajo one of the best documented languages of North America. Early work included texts by Goddard (1933) and important documentation by Sapir, which resulted in the publication of texts (1942) and a description of phonology and morphology (Sapir & Hoijer 1967, reviewed at length in Krauss 1970). Two puns are in Sapir 1932, a note on relativization in 1923b, and his famous 'Internal linguistic evidence suggestive of the northern origin of Navaho' in 1936. Hoijer's additional work on Navajo includes a phonology (1945c), a dictionary (1974), and studies of lexical categories (1966), semantics (1951, 1959), 'reference' or pro-verbs ('do so') (1968), and internal reconstruction (1969). The Franciscan missionary Berard Haile, who also worked with Sapir, published grammars (1926, Haile 1941-8) texts (1984), and dictionaries (Franciscan Fathers 1910, 1912, Haile 1950-1). The collaboration of Robert Young and William Morgan has been extremely fruitful, resulting in an early grammar with dictionary (1943), a description of particles (1948), and colloquial lexicon (1951). Gladys Reichard contributed important work, including studies of agency and causation with Bittany (1940), dialect variation (1945a), aspiration (1958), verbal morphology (1949), and a grammar (1952). Herbert Landar has studies on intonation (1959), morphology (1962, 1989), and syntax (1960a, 1961, 1962, 1966, 1967b). The status of stress is discussed in Hung 1959. Lexicographic work has dealt with ethnobotany (Wyman & Harris 1941, 1957), ethnoentomology (Wyman & Bailey 1964), anatomical terms (Werner & Begishe 1970), medical terms (Werner 1965), foods (Perchonock & Werner 1965), eating (Berlin 1967), personal

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description (Ervin-Tripp 1967), and the universe (Werner & Begishe 1975). Landar's lexical studies cover terms for classificatory verbs (1963, 1965) and pain (1967c). All of the foregoing are discussed in Krauss 1973a.

More recently there has been a tremendous output of linguistic and pedagogical work on Navajo, too extensive to cover here. There have been studies, many major, on phonological and morphological structure (Saville 1968, Stanley 1969, Kari 1973, 1975, 1989a, Wright 1984, 1987, Hargus 1986, 1987b, McDonough 1990, 1996, Rice 1993a, Faltz 1998), aspect (Hardy 1979, Midgette 1995, 1996, Smith 1996), modality (Willie 1996), classificatory verbs (Garrison 1974), argument structure, reference, and obviation (Akmajian & Anderson 1970, Hale 1973, Creamer 1974, Frishberg 1972, Perkins 1978, Platero 1978, 1982, Woolford 1986, Sandoval & Jelinek 1989, Thompson 1989c, Willie 1992, Hale & Platero 1996, Jelinek & Willie 1996, Uyechi 1996, Kibrik 1993, 1996), word order (Perkins 1978), questions (Schauber (Kaufman) 1979), relativization (Platero 1974, Perkins 1982, Willie 1989), quantifiers (Speas & Yazzie 1996), various other syntactic topics (Elgin 1973, Kaufman 1974, Barss et al. 1989), discourse (McCreedy 1983, 1989), ritual language (Murray 1987, 1989), the lexicon (Iris 1984, Slate 1989, Young 1989, Young, Morgan, & Midgette 1992), world view (Witherspoon 1977, 1983), acquisition (Holm et al 1973, Saville-Troike 1996), and language shift (Canfield 1980, Fuller 1982). The *Analytical lexicon* of Young, Morgan, & Midgette 1992 provides a useful stem counterpart to Young & Morgan's 1987 dictionary, which is based on fully inflected words, at the request of speakers.

Western Apache is spoken in Arizona on the San Carlos and Fort Apache reservations. Five dialects are distinguished: San Carlos, White Mountain, Cibecue, Southern Tonto, and Northern Tonto. It is considered the most viable of the Apachean languages, with 12,000 speakers of all ages reported in 1982 (Young 1983: 400). The San Carlos and White Mountain dialects are compared in Hill 1964. Earlier records of the language include texts in San Carlos (Goddard 1919) and White Mountain (Goddard 1920). Grammatical descriptions of San Carlos are in Edgerton 1963 (a tagmemic analysis) and Durbin 1964 (a componential analysis). Shayne 1982 discusses the *yi-/bi-* alternation and Potter 1997 clause structure. Perry et al. published a dictionary with brief grammatical sketch in 1972. White Mountain phonology is treated in Greenfeld 1972, 1978, and 1984. Greenfeld 1973 presents an interesting case of a sound change in progress ($*w > *^{m}b > b/m$), in which the shift is slowed in words with special cultural significance. Playing card names are in Greenfeld 1971. A major dictionary is in Bray 1998. Basso has taken up various themes at Cibecue, with essays on body part terms (1967), classificatory verbs (1968), the role of silence (1970), a special writing system (1973), metaphor and figurative speech (1976), and placenames as cultural symbols (1984, 1988) all reprinted in 1990, and essays on landscape (1996).

Chiricahua and Mescalero, both now spoken on the Mescalero reservation in

southeastern New Mexico, are mutually intelligible. Chiricahua territory once covered large areas of Arizona, New Mexico, and Mexico, but after being forced to surrender to the U.S. Army in 1886, the Chiricahua were taken to Florida, then Alabama, and finally Oklahoma. In 1913, two-thirds of them chose to join the Mescalero, while the other third accepted allotments in Oklahoma and became known as the Fort Sill Apache. The BIA counted 5 speakers at Fort Sill in 1981, all over 50 (Young 1983: 400), and about 1800 Chiricahua and Mescalero speakers combined, of all ages, at Mescalero. Three-quarters of the children entering school at that time knew the language. Both Chiricahua and Mescalero texts, with grammatical sketches, are in Hoijer 1938b. Classificatory verbs are described in Hoijer 1945b and Rushforth 1991. A full grammatical sketch of Chiricahua is in Hoijer 1946d. Pinnow published a Chiricahua grammar in German, with a text and appendices on kinship terms and warpath language, in 1988. Loans from Spanish are discussed in Hoijer 1939 and warpath language is described in Opler & Hoijer 1940.

The Jicarilla occupy a reservation in northwestern New Mexico. There are about 300 fluent adults and perhaps another 500 who know some of the language (Dagmar Jung p.c. 1994). Texts are in Goddard 1911b. Landar 1976 explores classificatory verb categories with verbs of eating. Sandoval 1984 examines the famous *yi-/bi-* distinction.

Lipan is a Plains language, but was spoken in 1981 by only 2-3 elderly women at Mescalero (Scott Rushforth cited in Young 1983: 400). A Lipan text appears in Hoijer 1975, but little else has been published on the language.

Plains or Kiowa-Apache, by far the most divergent of the Apachean languages, is spoken in Caddo County in western Oklahoma. Only 3-4 speakers remain (de Reuse 1998). Grammatical descriptions are in Bittle 1956 and 1963. Discussion of the *yi-/bi-* distinction is in Liebe-Harkort 1985.

Related to the Athapaskan group as a whole is the Eyak language, earlier spoken on the south coast of Alaska around the Copper River from modern Yakutat to Cordova. Only one speaker remains, who was born in 1918. The language was known early to the Russians, who collected 6 vocabularies in the 19th century. About 500 words were recorded by anthropologists Reynolds and de Laguna (Birket-Smith & de Laguna 1938). Vocabulary, grammatical material, and texts were collected by several others, principally Harrington in 1940, Li in 1952 (which yielded 'A type of noun formation in Athapaskan and Eyak' (1956)), and Austerlitz in 1961. But the main documentation was done by Krauss during the 1960s. It has appeared in published form in a preliminary description (1965a), a set of texts (1982b), and as part of comparative work on Proto-Athabaskan-Eyak-Tlingit (1964, 1965b, 1968, 1969), and in Leer 1991a. A 4000-page dictionary and 912-page text collection remain essentially unpublished, reproduced in 1970 at MIT.

Athabaskan-Eyak is related in turn to the Tlingit language, spoken by about 500

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adults in southeastern Alaska from Yakutat to Dixon Entrance, and another 75 in interior British Columbia and the Yukon. Major dialects are Northern Tlingit (with subdialects Greater Northern, Far Northern in Haines, Yakutat and Hoona, and Interior in Atlin, Teslin, and Carcross), Transitional Southern Tlingit (in Kake, Wrangell, and Petersburg), Sanya-Henya Tlingit (from Ketchikan to Klawock), and Tongass. Transitional, Sanya-Henya, and Tongass together comprise Southern Tlingit (Leer 1991). The earliest extensive record of the language is in vocabularies collected by Russians during the 19th century and a grammatical sketch by Veniaminov (1846). The consonant inventory and verb paradigms are in Kelley & Willard 1905. Swanton published a volume of texts in 1909b and a preliminary grammatical sketch in 1911a. Boas, working with his student Louis Shotridge, produced the first adequate description of any Tlingit phonology and much of the verb morphology (1917). Early acoustic analysis, with text, is in Miller 1931. Velten published texts (1939, 1944). In 1966 Story completed a more complete analysis of morphology and Naish of syntax. Together they compiled a noun dictionary (1963, revised 1976) and a verb dictionary (1973). Pinnow, working chiefly from published sources, has produced a number of works, including historical studies of sound change (1966) and verb-stem variation (1968a). More recently, Leer has done considerable work, including treatments of stem variation and tonogenesis (Williams, Williams, & Leer 1978, Leer 1979), and tense, aspect and mood (Leer 1978 and especially 1991b, which contains extensive grammatical description). Dryer 1985 considers word order. A beginning pedagogical grammar is in Dauenhauer & Dauenhauer 1994a. Texts are in Williams, Williams, & Leer 1978 and Nyman & Leer 1993. Dauenhauer & Dauenhauer have also published important text collections with facing page translations and extensive annotation, as well as rich discussions of oral style and the social, cultural, historical, and linguistic context. The first (1987) contains 15 stories, the second (1990) 32 formal speeches, and the third (1994b) more than 50 life stories. Additional texts are in Dauenhauer & Dauenhauer 1995, Story 1995. Tlingit oral tradition is described in Dauenhauer 1975. The genetic position of Tlingit is discussed in Goddard 1920b, Pinnow 1962, 1964, and Hamp 1979b. Leer 1990 hypothesizes that it may represent a mixture of related varieties of pre-Tlingit.

The earliest European contact with Athabaskan speakers was at York Factory 1686, when Hudson's Bay Company men encountered some Chipewyan. In 1826 Gallatin (1836) recognized the relationships of the Northern Athabaskan languages and named them after Lake Athabasca. In 1841 Hale linked them to the Oregon group, and in 1852 Turner added the Southwestern languages (Krauss 1993). There has been good progress on reconstruction, including particularly Hoijer 1963, 1971b, described in some detail in Krauss 1973a, 1979, 1986, and summarized in Cook & Rice 1989a. (Krauss 1973a also contains an extensive bibliography of works on Na-

Dene lexicostatistics.) Hoijer did major work within Pacific Coast Athabaskan (1960) and Apachean (1938a, 1945a,b, 1946a,b, 1948a,b, 1949c, 1971). As early as 1914 and 1915 Sapir had noted regular sound correspondences and in 1931 set out tables of stem consonants in 4 languages representing the Northern, Pacific, and Apachean groups. Hoijer extended this work in 1938, and Krauss revised the system substantially in 1964. The reconstructed sound system appears in Leer 1979 and Krauss & Leer 1981, and is discussed in Cook & Rice 1989a, and Cook 1992. Proto-Athabaskan-Eyak has been treated by Krauss (1964, 1965b, 1968). Cook surveys Proto-Athabaskan phonology (1981) and examines approximants (1993b), and nasalization and syllable structure (1995b). Rice considers laryngeal features (1994) and the perfective (1995), Story 1989c first person plural, Saxon & Rice 1993 constituency, and Rice & Saxon 1993 syntactic change. Leer (1989) reconstructs directionals.

The family offers a number of features of special interest. Within phonology, especially intriguing is the development of tone from constricted syllables, syllables originally closed with glottalization. Tone is not reconstructed for Proto-Athabaskan-Eyak: Eyak, some of the Northern languages (Ahtna, Tanaina, Ingalik, Kolchan, Carrier, Babine), and the Pacific languages lack tone altogether. Other Northern languages and the Apachean languages show distinctive tone. Those with tone fall into two groups, whose tone patterns are often mirror-images of each other: where one language shows high tone, another shows low tone. Marked low tone appears among the Northern languages Lower Tanana, Upper Tanana, Han, Kutchin, Sekani, Dogrib, and Sarcee, and in Apachean; high tone appears in the Northern languages Tanacross, Slavey-Hare, Chipewyan, Beaver, and Chilcotin. The division is not purely areal: Sekani shows low tone, unlike all of its neighbors except Tahltan; Tanacross shows high tone, in contrast with all of its neighbors. There is even divergence within languages: the Southern Tutchone dialect shows low tone while Northern Tutchone shows high; the Tagish and Tahltan dialects show low tone, while Kaska shows high. Some of the languages have preserved the original triggering final glottalization and/or vowel constriction, while others have not.

There is also sibiliant harmony, whereby sibilants within a word match in point of articulation apical or palatal, in fluent speech. Thus Chiricahua *čé-má·s* 'he rolls out' is usually [ˈčémá·s]; *ʔìł-čéš-dǫ·* 'I straighten it' is usually [ʔìł čéšdǫʔ] (Hoijer 1946d: 61). Tahltan harmony all coronals (Shaw 1991).

The templatic structure of the verb morphology has attracted considerable attention. The languages are primarily prefixing. Rather than being built up hierarchically in layers, the verb consists of a string of prefix slots or positions followed by a stem. Non-contiguous morphemes within the template frequently interact semantically to yield functions that would not be predictable from the sum of their parts. The prefixes fall into two sets phonologically. Those closest to the

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stem, termed the conjunct prefixes, are tightly bound, subject to complex phonological processes. Those further from the stem, the disjunct prefixes, are more loosely bound. Special studies of the template and this division include Hymes 1956, Kari 1973, 1975c, 1989a, 1993, Speas 1984, 1987, Rice 1985b, 1991c, and Hargus 1991, 1994, 1997.

A topic that has long been of interest within Athabaskan are the classificatory verbs. The languages contain extensive inventories of verb roots, many meaning 'be located', 'move', or 'handle', that alternate according to the nature of the object located, moved, or handled. Thus Davidson et al. point out (1963: 30) that the Navajo verb stems *-ʔą́*, *-nìl*, and *-tsòòz* can all be used for the English 'money (lies) there': *béésò sìʔą́*, *béésò sìnìl*, or *béésò sìłtsòòz*. The stem *-ʔą́* is used for a single round solid object (a single coin), the stem *-nìl* for several discrete objects, such as a handful of coins, and the stem *-tsòòz* for clothlike objects, such as a dollar bill. Other studies on the classificatory systems of different languages include Hoijer 1945b, Haas 1967b, Henry & Henry 1965, Landar 1964, 1965, 1967a, Berlin 1967, Basso 1968, Krauss 1968, Witherspoon 1971, 1977, 1980, Lawson 1972, Garrison 1974, Carter 1976, Cook 1986b, and Rushforth 1991. Cook & Rice (1989a) note further the alternation of roots according to the degree of control or force involved, citing for example the Ahtna *-chu* 'handle cloth-like object' and *-ʔah* 'handle cloth-like object violently' from Kari. (A set of prefixes that appear immediately before the root, unfortunately termed 'classifiers', comprise a different system, marking causatives, passives, reciprocals, reflexives, etc. (Krauss 1969, Kibrik 1996).)

Aspectual distinctions are elaborate in the Athabaskan languages. Both the aspectual systems in the languages and the terminology used to describe them (often under the category 'mode') vary considerably. Sapir and Hoijer, for example, include under aspect momentaneous, continuative, repetitive, semelfactive, diversative, reversative, distributive, conative, and transitional, and under mode imperfective, perfective, progressive, iterative, and optative. Treatments of aspect are in Hardy 1979, Kari 1979 (Ahtna), Smith 1991, 1996, Midgette 1987, 1996 (Navajo), and Axelrod 1993 (Koyukon).

The syntactic status and function of pronominal prefixes within the verb has also excited considerable discussion. First singular and second person singular and plural subjects are specified by prefixes close to the verb stem, and objects somewhat further. Third persons are indicated with a variety of prefixes, among them two of the general shape *yi-* and *bi-*. The nature of the distinction between these two has been discussed in terms of active versus passive voice, animacy hierarchies, and discourse topicality. Contributions include Akmajian & Anderson 1970, Frishberg 1972, Hale 1973, Shayne 1982, Sandoval 1984, Sandoval & Jelinek 1989, Saxon 1984, 1986, 1989b, Liebe-Harcourt 1985, Hale & Platero 1986, Thompson 1989a,b,c, 1991, 1993, 1994, Willie 1992, Arces-Arenales et al. 1994, Jelinek & Willie 1996, and Uyechi 1996. Further discussion has centered on the syntactic status of pronominal prefixes and nouns in the languages, as syntactic arguments or as agreement (for prefixes) or adjuncts (for nouns). Work includes Plater 1978, Sandoval 1984, Speas 1986, 1990, Sandoval & Jelinek 1989, Saxon 1989, 1993, Willie 1989, Thompson 1993, Rice & Saxon 1994a,b, and others. Pertinent to the question of argument structure is the set of four 'classifier' prefixes that immediately precede the verb root and affect transitivity and voice among other things. Their phonological effects are discussed in Howren 1971 and Lamontagne & Rice 1995, and their semantic and syntactic effects in Saxon 1985, McDonough 1989, Rice 1991, and Kibrik 1993, 1996, as well as in the grammars.

Some of these structures can be seen in material from the Northern language Tanaina, drawn from Tenenbaum 1978 and cited in the practical orthography. The language has the usual large consonant inventory: plain obstruents *p* (spelled *b*), *t(d)*, *ƛ(dl)*, *c(dz)*, *č(j)*, *k(g)*, *q(gg)*, *ʔ(')*; aspirates *tʰ(t)*, *ƛʰ(tl)*, *cʰ(ch)*, *čʰ (ch)*, *kʰ(k)*, *qʰ(q)*; ejectives *t'(t')*, *ƛ'(tl')*, *c' (ts')*, *č'(ch')*, *k'(k')*, *q'(q')*; voiceless fricatives *ł(ł)*, *s(s)*, *š(sh)*, *x(x)*, *χ(h)*, *h(hh)*; voiced fricatives *v(v)*, *l(l)*, *z(z)*, *ž(zh)*, *γ(y)*, *ʁ(gh)*; and sonorants *m(m)*, *n(n)*, *y(y)*. Vowels are *ɪ(i)*, *ə(e)*, *a(a)*, and *ʊ(u)*. Tone is not distinctive.

Kinds of words include particles, postpositions, nouns, and verbs. Particles have no internal structure. Postpositions contain a pronominal prefix referring to their object. Noun morphology is relatively simple, often consisting of only a stem. The stem may be a simple root, a compound, or a nominalized verb. Possession is indicated by a prefix referring to the possessor. Alienably possessed nouns also have the suffix *-a*: *gech'* 'mittens', *sh-gech'-a* 'my mittens'. Plurality can be marked by collective suffixes: *łik'a* 'dog', *łik'a-qa* 'dog-s; *du* 'Yupik', *du-tna* 'Yupiks'. Verbs, by contrast, show elaborate internal structure, and may serve alone as clauses.

The verbal morphology consists of a stem preceded by nearly 20 prefix positions. The basic shape of stems is CV(C). Each stem has imperfective, perfective, and future/progressive forms, which may vary in their vowel and/or final consonant: *dał/datł'/deł* 'handle plural objects'. These alternants combine in various ways with prefixes to yield a large inventory of aspects, including momentaneous (action at a single moment), durative (prolonged action), semelfactive (single act of possible series), seriative (series of discrete actions), repetitive (action consisting of unanalyzable repeated actions: 'dance'), stative (object at rest in certain place or position), neuter (qualities: 'be red'), transitional (becoming), progressive, continuative (serial, completed, punctual actions), metamorphic-reversative (transfer to another state or stage: 'wash', 'go and return'), and customary. Especially for verbs of position (sitting, lying) motion (falling, dropping), or handling (giving, carrying) different verb stems are chosen according to the shape, texture, and number

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of objects involved. Eight categories can be seen: single compact objects (ball, trap, cap, cache, sun), long rigid objects or empty containers (bow, needle, boat), enclosed objects (knife, full sack, rolled sleeping bag), fabric-like objects (blanket, paper, open sleeping bag), objects in an open container (full bucket, sugar, water), mushy or sticky objects (mud, fish, meat), single animate objects (person, dog, doll), plural objects or rope (boots, dogs, balls). This system is crosscut by the qualifiers described below.

Immediately before the stem is one of the four (traditionally but infelicitously named) classifiers: *∅, d, ł, l*. Their precise functions are complex, but changes in classifier often affect transitivity, yielding causatives, benefactives, reflexives, reciprocals, middles, and passives. To the left of the classifiers are first and second person subject pronouns: *esh-* 'I' (*esh-chegh* 'I'm crying'), *n-* 'you' (*n-chegh* 'you're crying'), and *eh-* 'you all' (*eh-chegh* 'you all are crying'). Moving leftward again we find aspect markers, and again to the left, the semelfactive, also used for the perfective negative. Next are the qualifiers (thematic prefixes), which contribute important meaning to the verb, often interacting with stem selection in classifying entities. Among these are several of the shape *de-*, indicating the involvement of water (movement of water, travel on water, actions involving water such as making coffee); fire, light, or the sun; hand or tool; the foot or hand; the head or eye; the mouth or voice; sound; stiff objects (egg, plate, gossip), paper or fabric-like objects or hide (caribou skin mattress), or grass objects, tactile perceptions and color, taste, or cold; awareness or knowledge. Several others have the shape *ne-*: and indicate the involvement of the face or surface of the head; rope-like objects; birds or airplanes; small, round objects (eating berries, fish eggs, dentalium necklace, beads) or those made of flour (bread); feelings or judgments; travel by boat or vehicle; internal qualities. The negative *z-* appears with imperfectives, futures, and customaries. It cooccurs with the negative particle *nch'u* 'not' or *n'ugh* 'not yet' and a negative suffix *-l*: *nch'u zgheshyul* 'I'm not walking'. Preceding the negative is the inceptive *te-* ('begin'), which combines with progressive verbs to form the future. It can also indicate spatial extension: *h-te-nghalggux* 'it (rope) stretched'. To the left of the inceptive is the conative (or semitransitive) *i-*: *sh-i-dełqet* 'he asks me'.

Moving leftward again we find more pronouns, termed deictics. The indefinite subject *ch'e-* 'someone' is also used for 'we': *ch'e-chegh* 'someone is crying', 'we (2) are crying'. The indefinite *k'e-* 'something' serves as subject or object: *k'e-chegh* 'something is crying', *chi-k'-dałyuq* 'he killed something'. It can also indicate an unidentified agent in verbs with passive-like effect: *chi-k'-dałyuq* 'he got killed by something'('something killed him'). The prefix *qe-* 'it' indicates a spatial, temporal, or abstract subject or object: *qenq'a q-iz'un* 'it (a house) is located . . .'. A homophonous prefix specifies third person plural subjects: *tu-qe-zdatl'* 'they went up the mountain', *sh-q-izteł* 'they kicked me once'. Otherwise third person singular humans acting alone, or in combination with first or second persons, are unmarked. To the left of these pronouns are the direct object pronouns *she-* 'me' (*sh-ghi'an* 'he saw me'), *ne-* 'you' (*n-qizteł* 'they kicked you once'), *dna-* 'us' (*nu-dna-qizgget* 'they stabbed us again'), and *nh-* 'you all' (*nh-iyeshteł* 'I kicked you all once'). The same position can be occupied by the reflexive *hu-* (*hu-stgget* 'he stabbed himself') or reciprocal *nił-* (*nił-ch'ut'an* 'we saw each other'). When third persons act on other third persons, special fused prefixes are used. The prefix *ye-* (termed disjoint anaphor by Saxon) indicates one person acting on another person or object: *ye-nazghet* 'he filled it', *ye-łni* 'she told him'. If a secondary participant like an animal or object acts on a person, the sequence *ve-ye-* is used: *vey-izteł* 'it kicked him'. The form *qey-* is used if the subject is third person plural: *chi-qey-dałyuq* 'they killed him'. If the object is plural, *qe-* is used: *qe-łni* 'he tells them', *chi-qe-hdałyuq* 'they killed them'. For plural objects with non-human or non-third person subjects, the prefix is *qev*: *qev-ch'ghi'an* 'we saw them'. These inner prefixes, termed conjunct prefixes, are more tightly bound to the stem phonologically than the next set, and show a smaller range of consonants and vowels.

Prefixes to the left of the conjunct prefixes, termed disjunct prefixes, are more loosely bound to the verb. The first disjunct prefix, immediately to the left of the pronouns, is the distributive *n-*. To its left may be an incorporated noun or verb stem. Most incorporated stems are nouns, many referring to body parts: *nu-nchix-gheyił* 'he's nosing around' (*nchix* 'nose'). Moving leftward again we find the iterative *nu-* which indicates repetition of an action or reversal of motion: *nu-yiłjeh* 'he hit her again'. To the left again is a set of over 65 adverbial prefixes. Among them are 51 directionals, such as *da-* 'into an open container' (*da-ghelgguk* 'I got into the boat'), *t'e-* 'partially underneath an outer layer' (*t'e-dughel'u* 'he had his nose under his arm', *diqi-* 'up through the smokehole' (*diqi-dnulen* 'he flew through the smokehole'), and *q'a-* 'mentally or psychologically penetrating' (*q'a-shdaniset* 'he looked at me and really figured me out, he saw right through me'). Other adverbials modify qualities, such as *ch'-* 'abnormally and culturally disvalued' (*ch'-qidednik'* 'he's lazy'). A few indicate manner, such as *chi-* 'playfully' (*chi-qel'ul* 'they're playing'). To the left of these adverbials is a set of around 100 prefixes traditionally termed postpositions because they function locatively or relationally much like English prepositions and must follow a noun or pronoun. Tenenbaum notes that while many are firmly attached to the verb and participate in regular phonological processes, such as *ghu* 'near' (*sh-ghu-nl'an* 'keep up with me') others may be separated, such as *-eghdeq* 'above' (*q-eghdeq hjengheltlet* 'he jumped over them'). Finally, position 19, at the beginning of the verb, contains pronominal objects of the prepositions, like the *sh-* 'me' in *sh-ghu-nl'an* 'keep up with me'. These pronouns are generally similar in form to the object pronouns of position 13 and the possessive prefixes on nouns.

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The verb may be followed by desiderative or nominalizing enclitics. There are positive and negative desideratives: *ch'uqat=ni* 'let's eat!', *coffee tuch'k'delay=a* 'Don't make coffee.' Nominalizers include *=en* 'the person that' (*dghishin=en* 'the pretty one'), *=na* 'the people that' (*tusdatl'=na* 'those that went up the mountain'), *=i* 'the thing(s) that' (*nunejeh=i* 'the thing that flies' = 'airplane'), *=t* 'the place/time that' (*nushdultan=t* 'the place I was born'), and *=ch'* 'the way that' (*t'ech'qulah=ch' hqisen* 'there's no way to fix it').

Some of these structures can be seen in the excerpt below from a text recorded and analyzed by Tenenbaum (1984): Stories of the wars they had before our time. Like other languages of the family, Tanaina shows basic verb-final order (SOV), with postpositions.

Ts'anhdghulayał	*hyegh*	*nuqulnix*	*htsast'a.*
Ts'anhdghulyał	*qey-egh*	*nu-qe-ghe-l-nix*	*qe-tsas-t'a*
name	him-about	ITERATIVE-it-PRF-CLASSIFIER-tell.stories	it-about-be

'A long time ago they used to tell stories about Ts'anhdghulyał.

Dutna	*eła*	*la'u*	*k'ughun*	*nił*	*t'qul'an*	*ghu.*
du-tna	*eła*	*la'u*	*k'ughun*	*nił-ł*	*t'e-qe-ghe-i-l-'an*	*ghu*
Yupik-PL	with	always	war	RECIP-with	thus-PL-PRF-PRF-CL-do	then

The Indians and the Eskimos always used to wage war with each other.

Ts'anhdghulyał	*gun*	*Dena'ina*	*ezhge'a*	*gheli*	*ghila'.*
Tsanhdghulyał	*gu-n*	*Dena-'ina*	*ezhge-'a*	*gheli*	*ghe-i-∅-la'*
name	this-NOM	person-PL.HU	hero-POSS	really	PRF-CL-be

Ts'anhdghulyał was the greatest Tanaina hero.

Ey	*ki*	*yun'e*	*Qizhjeh*	*gu*	*ey*	*hdalts'i*
ey	*ki*	*yun'e*	*Qishjeh*	*gu*	*ey*	*qe-de-z-l-ts'i*
then	again	up.the.lake	name	this	there	PL-GENDER-PRF-CL-PL.sit

At one time they were living up Lake Clark at Kijik.

ki	*q'u*	*hva*	*itałqun*	*idi*	*eła*
ki	*q'u*	*qev-a*	*i-te-z-ł-qun*	*idi*	*eła*
again	now	3.PL-on	SEMELFACTIVE-INCEPTIVE-PRF-CL-dawn	when	with

At dawn one morning

k'ughun	*eła*	*Dutna*	*guna*	*qegh*	*hnidatl'.*
k'ughun	*eła*	*Du-tna*	*gu-na*	*qe-egh*	*qe-ne-i-∅-datl'*
war	with	Yupik-PL.HU	that-PL.HU	PL-to	PL-PRF-CL-PL.go

the Eskimos came there to attack them.

T'anch'q'u	*n'ushna*	*ghuna*	*t'anch'q'u*	*ts'ilten*	*qevteh*	*hnudilt'a'.*
T'anch'q'u	*n'ush-na*	*ghu-na*	*t'anch'q'u*	*ts'ilten*	*qev-teh*	*qe-nu-de-i-l-t'a'.*
all	man-PL.HU	that-PL.HU	all	bow.&.arrow	PL-among	PL-on-G-PRF-CL-be

All the men were armed with bows and arrows.

Nił'iqu	*k'ehteldex*	*ghu*
nił-iqu	*k'e-qe-te-l-dex*	*ghu*
RECIPROCAL-pointed.at	INDEF-PL-extension.in.space-CL-shoot.arrow	at.that.time

They were shooting arrows at each other.

T'qet'an	*t'qet'an*	*ch'q'u.*
t'e-qe-d-'an	*t'e-qe-d-'an*	*ch'q'u*
thus-PL-CL-do.DURATIVE.IMPRF	thus-PL-CL-do.DURATIVE.IMPRF	and

They kept on and kept on.

Ts'anhdghulyał	*ghunhdi*	*yuyeh*	*ztan.*
Ts'anhdghulyał	*ghu-n-hdi*	*yuyeh*	*z-∅-tan*
proper name	DEM-HU.SG-as.for	inside	STATIVE.IMPRF-CL-handle.anim.obj-STATIVE

As for Ts'anhdghulyał, he was lying down inside.

Idi	*eła*	*hyegh*	*ndunu'iltlet*	*łu.*	*"Qil.*
idi	*eła*	*qey-egh*	*ndu-nu-ne-i-l-tlet*	*łu*	*qil*
and	then	they/him-to	into.house-ITER-PRF-PRF-CL-jump.MOM.PRF	HEARSAY	bad

They ran back to him. "It's no good!

Nach'	*gheli*	*q'u*	*qudeł.*
dna-ch'	*gheli*	*q'u*	*qe-ghe-∅-deł*
us-towards	really	now	PL.DEICTIC-PROG-CL-PL.subjects.go.PROG.IMPRF

They're heading right for us!

Nen	*kitsa*	*qeveł*	*tiniyux",*	*qeyłni*	*łu.*
nen	*kitsa*	*qev-ł*	*ti-ne-n-∅-yux*	*qey-ł-ni*	*łu*
you	next	them-to	out-PRF-2SG-CL-SG.go-MOM-IMPRF	3SG.DAT-CL-say.DUR	

You go out there and challenge them", they said to him.'

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