Language Typology, Types of Languages

Linguistic typology attempts to classify languages on the basis of superficial similarities in grammatical structure as opposed to the genetic classification of languages based on their shared linguistic history. Interest in linguistic typology grew out of attempts to identify universal features that occur in unrelated languages (Greenberg 2005). True language universals remain elusive, and typologists often substitute claims about universal tendencies for actual universals. Universal tendencies could provide evidence about the nature of human language, but they may also reflect accidents of history. The superficial nature of typological classifications raise significant questions about the basis of many typological claims. A survey of different lingusitic features provides an appreciation for the diversity that exists in human languages.

Phonology

Phonological comparisons across languages are based on superficial descriptions of the actual sounds that occur in the individual languages. Although an /a/ or /p/ may be used to contrast one phoneme with another, there is no guarantee that the phonetic realization of an /a/ or /p/ is the same in different languages (Port and Leary 2005). Observations about the vowel and consonant inventories in languages assume that vowels can be distinguished from consonants. This distinction is not always clear as shown by the use of syllabic nasals and liquids in phonetic transcriptions.

Observations about universal tendencies for vowels and consonants provide an example of this problem. Languages with contrasting long vowels also have contrasting short vowels, but languages may have more long vowels than short vowels. The Algonquian language Cree has three short vowels and four long vowels. The Cree /a/ is phonetically realized as a schwa.

Cree Vowel Phonemes

			short			long	
	high		i	o		i:	o:
	low		a			e:	a:

While most languages have the stops /p, t, k/, not all do. The Iroquoian languages, including Mohawk, the Salish language Tillamook, and Tlingit lack labial consonants including /p/ and /m/. Kwakwala (Wakashan), the Coast Salishan languages and the Athabaskan language Hupa lack the velar consonant /k/. Some languages on the Northwest Coast lack nasal consonants including Lushootseed (Salish), Quileute (Chimakuan) and Makah and Nitinat (Wakasan). The original nasal consonants in these languages became voiced stops in the nineteenth century (Thompson and Thompson 1972).

The Salish languages pose interesting questions for statements about syllable structure. The Bella Coola sentence xɬp'xʷɬtɬpɬɬs kʷc' 'Then he had had in his possession a bunchberry plant' does not contain any vowels or even any epenthetic phonetic vowels (Bagemihl 1991:16). The words c'ktskʷc' 'he arrived' or ɬχʷtɬcxʷ 'you spat on me' could be analyzed as having one syllable or 6 syllables depending on which consonants are assumed to be syllabic. The nature of syllable structure remains a matter for debate in Salish linguistics.

Lexical Categories

The only universal lexical categories may be verbs and particles. One would think that all languages would at least contain the lexical categories of noun and verb. The Salish languages of the Northwest challenge this assumption Kinkade (1983).

Upper Chehalis only has two lexical classes: predicates and particles

s-q'ʷət'-w-n continuative-burn-intrans-3sing	'fire' or 'it is burning'
s-χəp-w-n continuative-dry-intrans-3sing	'it is drying'
s-Ł?aláš	'deer' or 'it is a deer'
?it-q'ʷalán'-č completive-ear-2sing	'you are all ears'

Columbian Salish

s-q'á?-xn continuative-wedge_in-foot	'shoe' or 'it is a shoe'

The category of adjectives also varies across languages. Quechua does not distinguish between adjectives and nouns:

chay runa hatun (kaykan) that man big is 'That man is big'	chay runa alkalde (kaykan) that man mayor is 'That man is mayor'
chay hatun runa 'That big man'	chay alkalde runa 'That mayor man' (that man who is mayor)

K'iche' expresses some adjectival notions as verbs:

x-in-war-ik	x-in-kos-ik
comp-1sing-sleep-status	comp-1sing-tire-status
'I slept'	'I was tired'
x-in-noj-ik	x-in-kikot-ik
comp-1sing-full-status	comp-1sing-happy-status
'I was full'	'I was happy'

Some languages (Jakaltek) lack prepositions.

Some languages have lexical categories that are not found in English.
Mayan languages distinguish a category of positionals from other lexical types:

k-in-tak'-eʔ-ik	k-in-paq-eʔ-ik
incomp-1sing-stand-POSITIONAL-status	incomp-1sing-climb-POSITIONAL-status
'I am standing'	'I am climbing'

We have the following categories in languages

Nootka (N, V)	Jakaltek (N, V, A)
Korean (N, V, P)	English (N, V, A, P)

Morphology

Linguists make rough distinctions between languages based on their type of morphology. You can classify languages along a scale of **synthesis**, e.g.,

Analytic or **isolating** languages have few if any bound inflectional morphemes

Vietnamese

khi tôi đên nhà bạn tôi, chúng tôi băt dâù làm bài

when I come house friend I, PLURAL I begin do lesson
'When I came to my friend's house, we began to do lessons.'

Synthetic languages have bound inflectional morphemes. There are two types of synthesis:

Agglutinating languages are synthetic languages with clear boundaries between bound morphemes

Beja

tam-y-aa-n-ee-t
eat-3sing-past-plural-relative_clause-feminine_object
‘(food) which they ate’

rih-y-aa-n-hook
see-3sing-past-plural-2per_object
‘They saw you’

Fusional languages are synthetic languages in which a single morpheme encodes several functions

Russian

	stol ‘table’		lipa ‘lime tree’	
Declension	Ia		II	
	Singular	Plural	Singular	Plural
Nominative	stol	stol-y	lip-a	lip-y
Accusative	stol	stol-y	lip-u	lip-y
Genitive	stol-a	stol-ov	lip-y	lip
Dative	stol-u	stol-am	lip-e	lip-am

Polysynthetic languages combine nouns, verbs, etc. into a single word

Siberian Yupik

angya-ghlla-ng-yuq-tuq
boat-augmentative-acquire-desiderative-3sing
‘He wants to acquire a big boat’

N.B., Languages do not exhibit a single type of synthesis. English is mostly analytic, but has some fusional affixes, and even some polysynthesis!

e.g., We went bird-watching yesterday.

Languages also have different types of case systems. Case markers on subjects or objects indicate the syntactic role of the noun phrase. These are examples of **Dependant-Marked** languages.

Accusative (Turkish)

TV Adam-0/ ev-i Ahmed-e göster-di
man-Nom house-Acc Ahmed-Dat show-past
'The man showed the house to Ahmed'

IV Adam-0/ ev-de kal-di
man-Nom house-Loc stay-past
'The man stayed in the house'

Ergative (Yidiny)

TV Wagudya-ngu dyugi-0/ gundal
man-Erg tree-Abs is cutting
'The man is cutting the tree'

IV Wagudya-0/ gundal
man-Abs is cutting
'The man is cutting'

Accusative Languages		Ergative Languages	
Nominative	**Accusative**	**Ergative**	Absolutive
Subject of TV	Object of TV	Subject of TV	Object of TV
Subject of IV			Subject of IV

Agent-Patient languages use the same marker for the subjects of transitive verbs and active intransitive verbs. These languages mark the subjects of stative, inactive intransitive verbs like the objects of transitive verbs.

Eastern Pomo (Sally McLendon 1978)

mí:p' mí:pal šá:k'a
he-A him-O killed
'He killed him.'

mí:p' káluhuya	mí:pal xá: ba:kú:ma
he-A went-home	he-O in_water fell
'He went home.'	'He fell in the water'

há: c'e:xélka	wí c'e:xélka
I-A slide	I-O slide
'I'm sliding (on purpose)'	'I'm slipping (accidentally)'

Some languages mark the syntactic relations of noun phrases on the verb in the form of agreement markers. These languages are **Head-Marked** languages. In English, the subjects of both transitive and intransitive verbs are marked for agreement with the verb so English could be considered to be a Head-Marked language with an accusative agreement system.

The Mayan language K'iche' is an example of a Head-Marked language with an ergative agreement system.

K'iche'

TV k-0-u-paq'i:j le: che:' le: achih
Asp-Abs-Erg-split the board the man
'The man is splitting the board'

IV k-0-paq'i:n le: che:'
Asp-Abs-split the board
'The board is splitting'

The Algonquian languages use an agreement system on verbs based on **animacy**. The agreement prefix on Algonquian verbs marks the argument with the greatest degree of animacy. The animacy hierarchy is:

second person	ki-
first person	ni-
third person	o-

ke:kiše:p ki:-wa:pamitin	ka-ki:-awihin na: alapiy
this a.m. you-see	you-lend fish net
'I saw you this morning.'	'Can you lend me a fish net?'

The verb form in the first example contains the **inverse** suffix *-it* since the subject is lower on the animacy hierarchy. With a second person subject, the **direct** form of the verb would be:

ke:kiše:p ki:-wa:pamin
this a.m. you-see
'You saw me this morning.'

Nouns in Algonquian languages are grouped into animate and inanimate classes. The following table provides examples of animate and inanimate nouns in Cree.

Animate Nouns		Inanimate Nouns	
atihkamēk	‘whitefish’	asiskiy	‘mud, clay’
cīpay	‘ghost’	iskotēw	‘fire’
iskwēw	‘woman’	kīsikaw	‘day’
ililiw	‘person, Indian, Cree’	maskēk	‘swamp, muskeg’
maskwa	‘bear’	mēskanaw	‘road’
mistik	‘tree’	mistik	‘stick, pole’
mōs	‘moose’	nipiy	‘water’
-tōtēm	‘friend, guardian spirit’	pihkotēw	‘ashes’
-ōkom	‘grandmother’	pīwāpisk	‘metal’
sīsīp	‘duck’	sākahikan	‘lake’
asām	‘snowshoe’	ācimōwin	‘story’
asiniy	‘stone, rock’	astotin	‘hat’
askihk	‘kettle, pail’	maskisin	‘shoe, moccasin’
āsokan	‘wharf, jetty’	mīcim	‘food’
cīstēmāw	‘tobacco’	mīnis	‘berry’
kōna	‘snow’	-spiton	‘arm’
ospwākan	‘(tobacco) pipe’	-tēhi	‘heart’
palacīs	‘trousers’	pīskākan	‘jacket’
pīsim	‘sun’	wāskāhikan	‘house’
siklētk	‘cigarette’	wāwi	‘egg’

Athabaskan languages have a set of classificatory verbs. These verbs have a stem form that depends on the type of object involved in the action. Hoijer lists the following classificatory verb stems for Navajo.

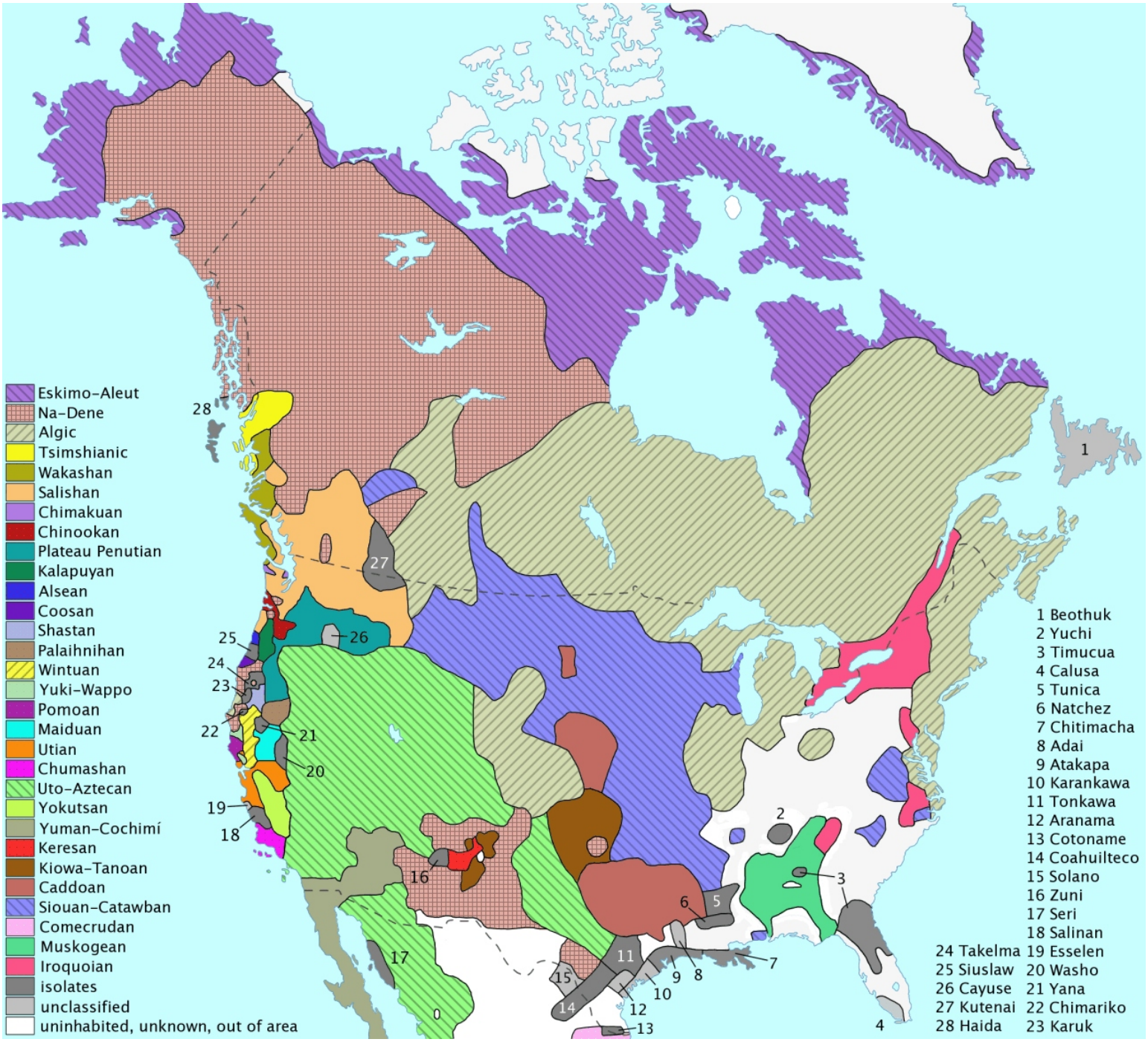
Object Class	Sitting	Lying	Example objects
1. round object	sì-’ą	ń-’ą	rock, box
2. long object	sì-tą	ń-tą	log, cigarette
3. living being	sì-tį	ń-tį	baby, grandmother
4. set of objects	sì-nìl	ń-nìl	dishes, children
5. in open container	sì-ką	ń-ką	bowl of soup, fire in a pit
6. fabric-like object	sì-łtsò:z	ń-łtsò:z	sheet of paper, shirt
7. bulky object	sì-žó:d	ń-žó:d	
8. parallel objects	sì-žò:ž	ń-žò:ž	logs
9. a mass	sì-jà:’	ń-jà:’	seeds, dirt, pile of grass
10. wool-like mass	sì-jò:l	ń-jò:l	wool, wig
11. rope-like object	sì-lá	ń-lá	string of beads, snake
12. mud-like mass	sì-tłé:’	ń-tłé:’	dough, pitch

Hoijer provides the following examples:

tsé sì’ą ‘a stone lies (there)
tsé ń’ą ‘a row of stones extend off in a horizontal line’

Indigenous Languages of North America

Many of the examples that I used common from Native American languages. These language families have many unusual features. These languages are shown on the following map.



Large sections of the map have white or grey areas indicating that we do not know who once lived in these areas or have enough information about the languages to classify them properly. The early history of European contact with Native Americans suggests why so little is known about these languages.

Jacques Cartier encountered a group of 300 people fishing in the Bay of Gaspé in 1534. They came from Stadacona near present day Quebec City. Two of the chief's sons returned to France

with Cartier and 58 words in their language were recorded in the account of Cartier's expedition. On Cartier's return trip in 1535 he captured the chief, Donnacona, his two sons and eight other people from Stadacona and took them back to France. A vocabulary list of 170 words was recorded from this group. Sometime between 1542 and Champlain's visit in 1603 the Stadaconans disappeared. The Nottoways lived in at least two settlements on the Nottoway River near the coast of Virginia. The Nottoway referred to themselves as the Cherohaka. Their tribe had 300 members in 1669, 200 in 1729 and only 9 in 1853. Two lists of Nottoway words were independently recorded in the early 1800s. Gallatin published a composite of these two lists in 1836. This is the only linguistic information ever recorded for Nottoway.

The Timucua inhabited the region in central and northern Florida. They vanished in the eighteenth century. A grammar of the language was written in 1614 by Francisco Pareja.

The Pilgrims landed in New England in 1620. During their early explorations on Cape Cod they encountered deserted villages and appropriated the stocks of corn and beans that the natives had collected for the winter. William Bradford, a Governor of the Colony, noted that

> They also found two of the Indian's houses covered with mats, and some of their implements in them; but the people had run away and could not be seen. They also found more corn, and beans of various colours. These they brought away, intending to give them full satisfaction (repayment) when they should meet with any of them, - as about six months afterwards they did.
>
> And it is to be noted as a special providence of God, and a great mercy to this poor people, that they thus got seed to plant corn the next year, or they might have starved; for they had none, nor any likelihood of getting any, till too late for the planting season.

By December, most of the passengers and crew had become ill, coughing violently. Many were also suffering from the effects of scurvy. During the first winter, 47% of them died.

The Natchez had developed a complex chiefdom state that practiced agriculture and lived near Natchez, Mississippi. They were practically wiped out in the eighteenth century in wars with the French and with other tribes. A few took refuge with the Cherokee and the Creeks and accompanied them on the Trail of Tears when they were removed to Indian Territory (eastern Oklahoma).

Grimes (1996) provides the following statistics on the number of speakers for Native American languages.

Number of Speakers	Language	Location
148,530	Navajo	Arizona; Utah; New Mexico; Utah
35,000	Ojibwa, Western	Montana; Lake Superior; North Dakota

20,355	Dakota	Nebraska; Minnesota; North Dakota; South Dakota; Montana
17,890	Choctaw	Oklahoma
12,693	Apache, Western	Arizona
11,905	Cherokee	Oklahoma; North Carolina
11,819	Papago-Pima	Arizona
10,000	Yupik, Central	Alaska
8,000	Ojibwa, Eastern	Michigan
6,413	Zuni	New Mexico
6,213	Muskogee	Oklahoma; Alabama; Florida
6,000	Lakota	Nebraska; Minnesota; North Dakota; South Dakota; Montana
5,264	Hopi	Arizona; Utah; New Mexico
4,580	Keres, Eastern	New Mexico
4,280	Crow	Montana
4,000	Inuktitut, Northwest Alaska	Alaska
3,500	Inuktitut, North Alaskan	Alaska
3,390	Keres, Western	New Mexico
3,000	Yakima	Washington
2,284	Shoshoni	Nevada; Idaho; Wyoming
2,100	Micmac	Boston; New York City
2,017	Mohawk	New York
2,000	Paiute, Northern	Nevada; Oregon; California; Idaho
1,984	Ute-Southern Paiute	Colorado; Utah; Arizona; Nevada; California
1,800	Apache, Mescalero-Chiricahua	New Mexico
1,721	Cheyenne	Montana
1,631	Tiwa, Southern	New Mexico
1,301	Jemez	New Mexico
1,300	Tewa	New Mexico; Arizona
1,100	Yupik, Central Siberian	Alaska
1,092	Kiowa	Oklahoma
1,070	Cree, Western	Montana
1,062	Blackfoot	Montana
1,038	Arapaho	Wyoming; Oklahoma
1,007	Havasupai-Walapai-Yavapai	Arizona
1,000	Chickasaw	Oklahoma
1,000	Hawaiian	Hawaii
927	Tiwa, Northern	New Mexico
887	Malecite-Passamaquoddy	Maine
854	Comanche	Oklahoma
812	Apache, Jicarilla	New Mexico
800	Mesquakie	Iowa; Oklahoma; Kansas; Nebraska
775	Tlingit	Alaska
697	Nez Perce	Idaho
600	Koasati	Louisiana; Texas
539	Kikapoo	Kansas; Oklahoma; Texas
496	Mikasuki	Florida

406	Yaqui	Arizona
400	Yupik, Pacific Gulf	Alaska
365	Gwich'in	Alaska
343	Quechan	California
321	Cocopa	Arizona
300	Koyukon	Alaska
256	Alabama	Texas
250	Hocak/Winnebago	Nebraska
234	Mohave	Arizona
234	Shawnee	Oklahoma
200	Kalispel-Pend Dóreille	Montana
200	Seneca	New York; Oklahoma
200	Tenino	Oregon
181	Maricopa	Arizona
150	Assiniboine	Montana
141	Caddo	Oklahoma
138	Haida	Alaska
126	Karok	California
115	Tanana, Upper	Alaska
113	Tsimshian	Alaska
112	Okangan	Washington
107	Salish, Southern Puget Sound	Washington
102	Kutenai	Idaho; Montana
100	Hidatsa	North Dakota
100	Skagit	Washington
100	Walla Walla	Oregon
97	Kumiai	California
90	Aleut	Alaska
90	Arikara	North Dakota
88	Klamath-Modoc	Oregon
85	Omaha-Ponca	Nebraska; Oklahoma
78	Yokuts	California
75	Tanaina	Alaska
69	Wasco-Wishram	Oregon; Washington
65	Tanacross	Alaska
60	Lushootseed	Washington
50	Kashaya	California
50	Oneida	New York; Wisconsin
50	Potawatomi	Michigan; Wisconsin; Kansas; Oklahoma
50	Spokane	Washington
50	Umatilla	Oregon
43	Luiseno	California
40	Coeur D'Alene	Idaho
40	Degexit'an	Alaska
40	Kuskokwim, Upper	Alaska

40	Pomo, Central	California
40	Pomo, Southern	California
39	Columbia-Wenatchi	Washington
39	Menomini	Wisconsin
35	Cahuilla	California
34	Quapaw	Oklahoma
30	Salish, Straits	Washington
30	Tanana, Lower	Alaska
21	Ahtena	Alaska
20	Abnaki-Penobscot	Maine
20	Mono	California
20	Panamint	California
19	Kansa	Oklahoma
18	Apache, Kiowa	Oklahoma
17	Chinook Wawa	Oregon
15	Onondaga	New York
12	Holikachuk	Alaska
12	Nisenan	California
12	Shasta	California
12	Yuchi	Oklahoma
10	Achumawi	California
10	Apache, Lipan	New Mexico
10	Gros Ventre	Montana
10	Kato	California
10	Kawaiisu	California
10	Maidu, Northwest	California
10	Makah	Washington
10	Miwok, Northern Sierra	California
10	Miwok, Southern Sierra	California
10	Pomo, Southeastern	California
10	Snohomish	Washington
10	Tututni	Oregon
10	Washo	California; Nevada
10	Wichita	Oklahoma
10	Wintu	California
10	Yurok	California
9	Cupeno	California
8	Hupa	California
8	Miwok, Lake	California
7	Han	Alaska
6	Mandan	North Dakota
6	Quinault	Washington
6	Tubatulabal	California
6	Yuki	California
5	Chehalis, Lower	Washington

5	Chetco	Oregon
5	Clallam	Washington
5	Miwok, Central Sierra	California
5	Osage	Oklahoma
5	Tolowa	Oregon
5	Unami	Oklahoma; New Jersey; Delaware
4	Atsugewi	California
4	Pawnee	Oklahoma
2	Chehalis, Upper	Washington
2	Cowlitz	Washington
1	Coos	Oregon
1	Eyak	Alaska
1	Kalapuya	Oregon
1	Miwok, Coast	California
1	Miwok, Plains	California
1	Pomo, Northeastern	California
1	Serrano	California
363,995	TOTAL	

Table 2: Indigenous Languages Spoken in the United States (by Number of Speakers)

Source: Adapted from B. Grimes (1996). Ethnologue: Languages of the world. Dallas: SIL International. Updated February 1999 at www.sil.org/ethnologue.

Unfortunately, this list is still being updated.

2008: Marie Smith Jones, a chief of the Eyak Indian tribe in Alaska, dies. With her dies the Eyak language.

Chief Marie, 89, was the last person to speak this tribal tongue, which she learned from her parents as a little girl. She was also the last full-blooded Eyak. Following her elder sister's death in the 1990s, Chief Marie, now the lone native Eyak speaker, kept the language alive with the help of linguist Michael Krauss. He'd begun working with Chief Marie in 1962.

The word Kansa first appears on a map drawn by Father Marquette in 1683. The following Kansa Text was transcribed by Robert Rankin.

Síkka wachį́wąkhíya-be ską e.
Turkey dance-causative dubit

Hąįdą mįǫba-dą níkka-šįga unážį-khá na ǰéɣe ttą́ga aláyį hüǰétta
at_night moon in_stand kettle big one's base_toward

áchi-be ską e. Síkka hį žü ǰe, síkka hók'a-híga, síkka hüléže
arrive_here dubit Turkey feather red turkey bitty little turkey leg_spotted

idábe, síkka ttą́ga idábe, wayáche-tta-be, "ištá yüp'į́za-bá-na-
also turkey big also them_eat-patient eye close-pl-imperative

hau!" a-be ską. Síkka wábąba-dą, síkka wachį́-be ską. Gayó,
male say dubit Turkey them_call and turkey dance dubit Then

"ištá yüp'į́za-bá-dą ǫ́yąže wablǫ́ eyáu," á-be ską́. "T(h)é wadą́be
Eye close and smthg_I_sing say dubit ? them_watch

ištá yü'ppoppe yané!" á-be dą́, mį oyį́ga-be ską́. Ttáhü yüxǫ́-ba-dą
eye blink say when one grab dubit Neck by_hand_break-when

ǰéɣe ché-ǰi olą́-be ską́. Hüléže-(a) ba ištá-ɣüje žį́ga gáɣa-be ską́.
pot the-in into-put dubit leg_spotted-anim the_pl eye-reddish? little make dubit

Gagóǰe-dá, yį́wayá-be ską́. "Ą-háze ttá-be au" á-be ską́.
just_then-when nothing_pl_obj_came dubit we-flee optat male say dubit

Gagóǰedą, xowé gáɣabe ską́. Gagóǰedą, ǫhǫ́-be che yachá-be ską́.
just_then-when roar they_make dubit just_then-when boil that eat dubit

Gagóǰedą, mį́ǫba éǰi akhá-na síkka ínąǰe akhá au.
just_then-when moon there_in the-anim turkey full contin male

What made the turkeys dance

Told by Ppahą́legaxli

At night, the man (who was standing) in the moon, bringing his large kettle, came down here (dubitative assertion). The red-feathered turkeys, the little-bitty turkeys, also the spotty-legged turkeys (and) the big turkeys too – in order to eat them, he said "close (your) eyes (male speaker)". He called to the turkeys and the turkeys danced. "Close (your) eyes and I will sing something (male assertion)," he said. When he said "The (buffalo?) watched them blinking its eyes," he seized one. And he wrung its neck and put it into his kettle. The spotty-legged ones gave (made) a little squint (=they peeked a little). Just then he was wasting them. "Let us flee (male optative)!" they said. At that, they made a whirring noise. At that, he ate the ones that he had boiled. Then the man-in-the-moon felt full of turkey.

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