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Word classes

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Abstract

This chapter is an introduction to word classes (parts of speech) in indigenous North American languages. It explains theoretical approaches to the study of word classes (language-particular vs. typological) as well as how word classes are classified (lexical vs. functional classes and open vs. closed classes). The core of the chapter is a survey of the word classes commonly found in North American languages. It covers the lexical categories of noun, verb, adjective, and adverb, and the functional categories of adposition, article, auxiliary, particle, and pronoun. There are however many outstanding questions in word-class research. Two of the most prominent ones—locus of categoriality and the noun-verb distinction—are discussed in detail in the latter half of this chapter. The diversity of North American languages continues to challenge our understanding of the nature of word classes.

1. Introduction

Word classes (traditionally called *parts of speech*) are groups of words in a language that fill similar slots in an utterance (Croft 2001: 11) and share some linguistic properties, whether those properties are semantic, syntactic, or morphological (Anward, Moravcsik & Stassen 1997: 171–172; Anward 2001: 726; Rijkhoff 2007: 709; Schachter & Shopen 2007: 1–2; van der Auwera & Gast 2011: 166).[1] For example, the class of words that can fill the slot in the utterance *the big* _____ are typically called "nouns" in English. Noun, verb, and adjective are the best-known classes, but linguists argue for the existence of many others. Languages vary in the number of word classes they have, the characteristics that define those classes, and the number of words that fall into each class (Schachter & Shopen 2007: 1; Velupillai 2012: 122; Smith 2015).

Native North American languages have a unique part to play in research on word classes. These languages challenge traditional conceptions of word classes because they do not cleanly map onto the categories of Greek and Latin, which were thought to be universal (Anward, Moravcsik & Stassen 1997: 167; Vogel & Comrie 2000: xiii). As a result, early Americanist linguists sought to analyze languages on language-internal evidence alone, rather than impose grammatical models from other languages and traditions (Sapir 1921: 125). The subsequent quest to accurately describe Native American languages in their own terms motivated—and continues to motivate—a large portion of the research into the nature of linguistic categories.

An understanding of word classes is useful to speakers and language learners because knowing the category of a word provides speakers with information about how that word is *used*. The part of speech of a word can indicate which affixes that word is allowed to take, how that

[1] This definition is intentionally broad, because linguists disagree—often fundamentally—on what word classes are, and how to define them in particular languages (see §2). Bernard Comrie (p.c.) points out that the present definition could include inflectional classes or valence classes, which are not traditionally considered distinct parts of speech. The tradition in linguistics is that the term *word class* refers to categories like noun, verb, pronoun, etc. (Haspelmath 2001: 16538). However, some linguists, particularly those that adopt the perspective of construction grammar (see especially Croft 2001), happily accept different inflectional classes or valence classes as types of word classes. See §2 for more detail.

word combines with other words or affixes to create new words, and what roles that word can play in a sentence, among other information.

This chapter has two primary goals:

1) to introduce the study of word classes with a focus on current approaches
2) to highlight the unique place and contribution of native North American languages in this research

Section 2 presents two competing theories of word classes. Section 3 explains the main types of word classes: lexical vs. functional and open vs. closed. Section 4 is a brief survey of some common word classes. Section 5 summarizes two central issues in word class research in North American languages specifically. Section 6 concludes by summarizing the distinct contribution of North American languages to the study of word classes.

2. Theories of word classes

Today, there are two diametrically opposed perspectives on the nature of word classes (Croft 2001: 63). The first, more traditional approach, argues that individual languages have large, cohesive word classes such as noun, verb, and adjective, but that these categories vary considerably across languages, with perhaps some languages lacking certain categories entirely. Researchers that adopt this perspective differ as to whether they view word classes as clearly defined or fuzzy and prototypal, but they agree that it is possible to define and describe major categories for every language. This is the *particularist* (that is, language-particular) approach to word classes.

The second approach argues that the behaviors of individual words in a language are so diverse that it is impossible to formulate broad definitions for word classes. In this approach, languages do not have major word classes like noun, verb, and adjective. Instead they have a proliferation of tiny categories or *constructions*. The major word classes are emergent / epiphenomenal (Croft 1991: 30; Croft 2005: 436), arising from the human propensity to view the world through the cognitive prototypes of objects, actions, and properties, and the fact that discourse is fundamentally a sequence of referents and predicates (Sapir 1921: 119; Croft 1991: 124). This cognitive propensity is reflected in various subtle ways in the grammars of all languages. This is the *typological* (that is, crosslinguistic), *constructional*, or *functional prototype* approach to word classes (Croft 2001: 102–104).

It is impossible to discuss word classes without at least implicitly committing to one of these two perspectives. Nearly all the studies referenced in this chapter adopt the particularist approach to word classes. The typological approach to word classes is still fairly recent, and little research has looked at North American languages from a constructional perspective (though see Hieber [2018] and Vigus [2018]). However, since this chapter is a crosslinguistic survey, I adopt the typological approach here. When I use terms like *noun* or *verb* in describing a language, I am referring to crosslinguistic prototypes or comparative concepts (Haspelmath 2010), rather than making a claim about the existence or nonexistence of that particular part of speech in that particular language.

3. Types of word classes

Word classes are typically described along two dimensions: they may contain lexical ("content") words or grammatical ("function") words, and they may be open to new members or closed to new members. This section describes each of these types.

3.1. Content words vs. function words

One way to describe word classes is in terms of the meanings of their words, dividing them into *lexical categories* or *functional categories* (Haspelmath 2001; Rijkhoff 2007). Lexical categories contain "content words" which prototypically refer to things, events, or properties in the world. Below are some lexical words in Arapaho (Algonquian). Section §4.1 discusses lexical categories in more depth.

(1)

Arapaho (Algonquian)	
hébes	'beaver'
hébesii	'beavers'
wóxhoox	'horse'
woxhóóxebii	'horses'
ho'óeet	'clay'
ho'óeetno	'(clay-based) ceremonial paints'
bes	'wood'
béxo	'sticks'
biixúút	'shirt'
nebiixúút	'my shirt'
níihooyóú'u	'they (inanimate) are yellow'
níihoonéíh(i)t	's/he (animate) is yellow)
nonóóhowó'	'I see him/her'
neihoownoohówoo	'I don't see him/her'

(Cowell & Moss 2008: 56, 61, 74–75)

In contrast, functional categories contain words which indicate grammatical relationships or specify features about content words. These are called "function words", and they typically have abstract meanings. Below are some function words in Creek (Muskogean).

(2)

Creek (Muskogean)	
leyk-	auxiliary verb, 'be (while sitting)'
hoył-	auxiliary verb, 'be (while standing)'
wa:kk-	auxiliary verb, 'be (while lying)'
=ta:t(i)	focus of attention
=a:t(i)	referential (definite / emphatic)

(Martin 2011: 304, 331–332, 357–359, 360–362)

The first three words in (2) are *auxiliary verbs*—words which provide additional information about a main verb (see §4.2.3). In Creek, auxiliary verbs express aspect, possibility, or strength of assertion (Martin 2011: 298). The last two words in the (2) are *enclitics*—morphemes which behave phonologically like suffixes, but syntactically like independent words, with scope over the entire phrase. While *=ta:t(i)* attaches to noun phrases and indicates that the noun is the focus of attention or topic of the discourse, *=a:t(i)* attaches to verb phrases to indicate definiteness or identifiability (Martin 2011: 357, 360). North American languages have a great diversity of functional categories like these. Section §4.2 describes several common ones in more detail.

The terms "lexical category" and "functional category" are not used the same way by all researchers. Both "lexical category" and "functional category" are sometimes used to refer to word classes as defined here (e.g. Payne 1997: 32). Sometimes "word class" is used to refer to lexical categories (Rijkhoff 2007: 710). It is also common to use the term *grammatical categories* for word classes, although this term more typically refers to formally marked features

of a word such as person, tense, or number (Crystal 2008: 68–69; 186–187; Trask 1993: 122). Another related term is *syntactic categories*; this is sometimes used in the equivalent sense of lexical categories, sometimes in the broader sense of word classes (see Rauh [2010] for an extended discussion). It is helpful to be aware of these terminological differences when reading linguistic research.

The distinction between lexical and functional categories is not always a clear one. *Adpositions* (prepositions and postpositions) often have both lexical and functional uses (Haspelmath 2001: 16539; Smith 2015: 178). Consider the two uses of the word *by* in English in (3).

English (Indo-European)

(3) a. Remember the last time you passed **by** your favorite park
b. If your life was destroyed **by** the money that paid for this thing
(Corpus of Contemporary American English; Davis 2020)

In example (a), *by* is lexical, meaning 'next to' or 'in proximity to'. In (b), *by* is functional, marking the agent of a passive clause. Adpositions in Chitimacha (isolate) also have both lexical and functional uses. In (4), the postposition *hix* may mean 'with; by means of' (its lexical sense, in (a)) or mark the agent of a transitive verb (its functional sense, in (b)).

(4) a. hus mahci kuh **hix** qapx nehpapuyna

hus	mahci	kuh	**hix**	qapx	neh-pa-puy-na
3SG	tail	feather	**with**	REFL	cover-CAUS-HAB-NF.PL

'they adorn themselves with his tail feathers' (Swadesh 1939a: A10k.2)

b. qix **hix** hi koomicukix

qix	**hix**	hi	kow-ma-cu(y)-ki-x
1SG	**ERG**	AND	call-PLACT-IRR-1SG.AGT-COND

'if I call them' (Swadesh 1939a: A11c.10)

The reason for this gradation between lexical and functional uses of the same word is that function words derive historically from lexical words, a process known as *grammaticalization* (Hopper & Traugott 2003). A language will often retain the older, lexical meaning alongside the newer, functional meaning.

Another example of the cline between lexical and functional uses of a word is the use of words meaning 'sit', 'stand', and 'lie' as auxiliary verbs indicating progressive or continuative aspect in Siouan (Mithun 1999: 115–116), some Muskogean languages (Munro 1984; Broadwell 2006: 209–211), and Chitimacha (Hieber 2019: 350–352), among others. Example (5) shows lexical and functional uses of 'sit', 'stand', and 'lie' in Mandan (Siouan).

Mandan (Siouan)

(5) a. wéɾɛx **nak**óc
wéɾɛx **nak**-oc
pot **sit**-PRES
'A pot was there (**sitting**).'

b. mah ísɛka**nak**eròmakoc
'he was (**sitting**) making an arrow'

c. múixtɛ̀na **tɛ́**romakoc
múi-xtɛ-na **tɛ**-romakoc
village-big-EMPH **stand**-NARR.PAST
'there was a big village'

d. ptá**hak**eka'
'he was running around (**upright**)'

e. má:ta **mak**ómakoc
má:ta **mak**-omakoc
river **lie**-NARR.PAST
'the river was there'

f. miníxa**mak**ɛka'
'he was playing (**prone**)' (Kennard 1936: 31)

3.2. Open classes vs. closed classes

Another way to describe word classes is by how open they are to new members. *Open classes* are typically large and have new words added to them frequently, whereas *closed classes* are typically small, limited to a fixed set of words, and add new members only slowly and infrequently (often through grammaticalization) (Robins 2014: 214–215; Schachter & Shopen 2007: 3; Velupillai 2012: 115). English articles, for example, are a closed class of just two words (*the* and *a/an*), while English nouns are in principle unlimited, adding more words all the time. There is gradation here as well: English prepositions are generally considered a closed class even though they constitute a large group of words (greater than 100 members), because new prepositions are not created easily. Nonetheless, new prepositions do occasionally arise. For example, prepositional uses of the word *absent* (as in the utterance ***absent*** *those ropes, we'd float to a new and faraway place* [COCA]) arose only in the 1940s (Harper 2020).

In North American languages, one somewhat common closed class of words is the *preverb* category, words which form a semantic unit with their verb, and often indicate things like direction or aspect (Los et al. 2012: Ch. 1).[2] Chitimacha has a closed set of 10 preverbs, shown below in (6) (Hieber 2018). By contrast, Menominee (Algic) has a large open class of preverbs (Bloomfield 1962: 214).

[2] In some language families, the term *preverb* is used for certain types of verbal prefixes with lexical meanings, rather than for syntactically distinct words. This is the case in many Dene languages, for example (Rice & de Reuse 2017: Sec. 23.2.2). Interestingly, the functions and meanings of these affixal preverbs are similar to those of syntactically free preverb classes in other languages, suggesting that preverb are a coherent typological class whose boundedness is a cline.

(6) Chitimacha (isolate)

hi	‘to, there’
his	‘back to, back there’
kap	‘up, beginning, becoming’
kaabs	‘back up’
ka	‘across’
kas	‘back across, apart, reverse’
ni	‘down’, INDEFINITE
qap	‘here, coming’
qapx	‘back here, coming back’, REFLEXIVE, RECIPROCAL

(Hieber 2018: 19)

While open classes tend to be lexical ones and closed classes tend to be functional ones, this is just a tendency (Velupillai 2012: 115). Some Australian languages (Dixon 1976: 615–768; Dixon 1980: 280–281) and Papuan languages (Foley 1986: 113–118) have small, closed classes of verbs (Anward 2001: 728). However, I know of no North American language which has a closed class of verbs like this. Closed adjective classes are likewise less common in North America. In a balanced sample of 27 languages in Mexico and northward, Velupillai (2012: 127–128) finds that 7 have a closed adjective class. Velupillai analyzes most languages in the sample as lacking an adjective class entirely (17 languages), and the few languages with an open adjective class are constrained to Mesoamerica (3 languages). Cupeño (Uto-Aztecan) has fewer than 100 adjectives (though Hill [2005: 202] notes that “the classes of adjectives and adverbs are not closed by structural principle but simply have relatively few members”). In Wichita (Caddoan), property concepts are expressed through verbs; however, a handful of words behave like inflected noun stems rather than inflected verb stems. The only words in this category are *Riwa·c* ‘big’, *Rikic* ‘little’, *riya·s* ‘old’, and colors such as *khac* ‘white’ and *k*^{w}*ah·c* ‘red’ (Rood 1996: 594–595).

4. Word classes in North American languages

This section describes the major lexical categories (§4.1) and a sample of functional categories (§4.2) in North American languages from a crosslinguistic perspective, in keeping with the functional-typological approach presented in §2.

4.1. Lexical classes

The four most widely-discussed lexical classes are nouns, verbs, adjectives, and adverbs. This section briefly defines each in turn.

4.1.1. Nouns

Nouns are words whose prototypical function is to *refer* to things (Croft 1991: 51–52; 2001: 66, 89). The best exemplars are “time-stable” entities such as people, places, and things (Givón 2001: 51), but nouns frequently refer to non-prototypical concepts as well, such as abstract ideas and feelings. Distributionally, the prototypical function of nouns is to serve as a participant in a clause, or as the head of a noun phrase that does so.

Typologically, nouns regularly have special forms or markers for the grammatical categories of *number*, *possession*, *definiteness* / *specificity*, *noun class* (“gender”), or *case* / *grammatical relations* (Croft 1991: 79; Haspelmath 2001: 16541; Dixon 2010: 54–55; Velupillai 2012: 125). However, every one of these features may be marked on verbs as well, meaning that the presence

of these grammatical categories is not a failproof diagnostic for distinguishing nouns from verbs. I demonstrate a few such cross-cutting examples in the remainder of this section.

NUMBER: On nouns, number marking indicates plurality of the referent; analogously, some languages have a kind of number marking on verbs called *pluractionality* (also *event number* or *verbal number*). Pluractionality indicates that the event happened multiple times, or that the action was distributed among multiple participants (Mithun 1988: 215–218; Mattiola 2020). Most North American languages surveyed by Mattiola (2020) have pluractional morphology.

POSSESSION: While many languages indicate a possessive relationship between two nouns by marking either the possessor noun or the possessed noun, Nuuchahnulth (a.k.a. Nootka; Wakashan) also allows possessive marking on verbs. When the possessive suffix *-ʔa·k* appears on nouns, it indicates that the noun is possessed by the subject of the clause. When the suffix appears on verbs, it indicates that the subject of the verb is the possessor of the noun phrase. The two examples in (7) illustrate this contrast. Possession is not an exclusively nominal category.

Nuuchahnulth (Wakashan)

(7) a. ʔaapḥiiʔiš łuucmaakqs
ʔaːp-ḥi·-ʔi·š łuːcma-**ʔa·k**-qs
kind-DUR-IND.3 wife-**POSS**-SUBJ.1SG
'My wife is kind.' (Nakayama 2001: 128)

b. ʔaapḥiiʔaks łuucma
ʔaːp-ḥi·-**ʔa·k**-s luːcma
kind-DUR-**POSS**-1SG wife
'My wife is kind.' (Nakayama 2001: 128)

DEFINITENESS: Verbs may have special morphology indicating that the speaker is referring to a definite (identifiable) action, or a definite / indefinite participant involved in the action. Chitimacha, for example, has a preverb *ni* which marks the verb as definite. The verb *gast-* 'plant' is transitive, usually taking an object, but with the preverb *ni* it becomes intransitive and means 'plant it', indicating that there is some definite thing being planted, whose identity can be understood from context. Definiteness is therefore also not criterial of a noun category.

NOUN CLASS: Nouns in many languages take affixes that signify some inherent property about the item, such as its animacy, spatial orientation, or shape (Mithun 1999: 95–103), separating nouns into classes. For example, the Iroquoian and Algonquian languages make a morphological distinction between animate and inanimate nouns, with different affixes for each. In Yurok (Algic), however, adjectives also make this distinction (see §4.1.3; Robins 1958: 93–95). Dene languages have an entire set of classificatory verbs whose stems change based on the countability, number, animacy, and shape / consistency of their absolutive argument (Jaker, Welch & Rice 2019: 497). Classification is therefore not a category unique to nouns.

4.1.2. Verbs

Verbs are words whose prototypical function is to *predicate*—that is, to state something about a referent (Searle 1969: 23–24; Croft 1999: 109–111; Croft 2001: 66, 89). The best exemplars of verbs are actions, events, and processes (Givón 1984: 52), but verbs frequently convey static meanings as well, such as location or knowledge. Distributionally, the prototypical function of verbs is to serve as the head of a clause.

Typologically, it is common for verbs to mark the grammatical categories of *tense*, *aspect*, *mood*, *polarity* (negative / positive), *evidentiality* (source of knowledge), *epistemic modality*

(attitude towards the statement), *event number*, *verb class*, or *grammatical relations* (information about the participants in the clause and their relations to one another) (Croft 1991: 79; Haspelmath 2001: 16541; Dixon 2010: 52-54). In §4.1.1, I noted that nouns also indicate grammatical relations; it is quite common for North American languages to indicate grammatical relations on both nouns and verbs. An important difference is that markers of grammatical relations on nouns indicate *their own* role in the clause, while markers of grammatical relations on verbs indicate the role of *its arguments* in the clause.

The grammatical categories most commonly associated with verbs may be found on other categories as well. Since the noun-verb distinction is treated at length in §5.2, I will mention just two cross-cutting cases here: Although tense is the most canonical grammatical category associated with verbs, Makah (Wakashan) nouns may also appear with tense markers. Compare the predicative and referential uses of the tense marker in the (8).

Makah (Wakashan)

(8) a. baʔasʔu
house-**PAST**-IND.3
'It was a house.' (Jacobsen 1979: 113)

b. baʔasʔuq
house-**PAST**-ART
'the former house' (Jacobsen 1979: 113)

Similarly, although aspect is also canonically associated with verbs, Nuuchahnulth (also Wakashan) allows aspect markers on nouns:

Nuuchahnulth (Wakashan)

(9) a. ḥaaḥuupačak
ḥa:ḥu:p-**(y)a**-čak
instructing-**CONT**-instrument
'This is a teaching.' (Nakayama 2001: 48)

b. ḥaaẇiłaƛ̓aƛ qaaḥma
ḥa:ẇiłaƛ-**'aƛ** qaaḥma
young.man-**TEL** name
'Qaahma was a young man.' (Nakayama 2001: 48)

When nouns are used in this non-prototypical way, they are inherently durative, and may only form existential, classifying, or identifying expressions (Nakayama 2001: 48).

4.1.3. Adjectives

Adjectives are words whose prototypical function is *modify*—that is, to specify additional features, qualities, or attributes of a referent (Searle 1969: 23–24; Croft 1991: 109–111; Croft 2001: 66, 89; Schachter & Shopen 2007: 13). Adjectives always modify nouns; words which modify other kinds of items are classified as *adverbs* (see §4.1.4). The best exemplars of adjectives are words which attribute properties having to do with value, dimension, age, speed, physical property, and color (Dixon 1977), but adjectives may convey a vast diversity of concepts depending on the language. Adjectives may have distinct forms for comparatives (*taller*), superlatives (*tallest*), and equatives (*as tall as*).

Adjectives are not the only way that languages can convey information about attributes and properties. They may have verbs meaning 'have quality X', or nouns meaning 'thing with quality

X'. Consequently, adjectives crosslinguistically tend to associate with either nouns or verbs (Croft 1991: 131; Wetzer 1996: 19; Croft 2000: 94). This is especially true for North American languages—there are few if any morphosyntactic devices dedicated to modification. However, words for property concepts usually exhibit behaviors which are different from other words in their class, often justifying the recognition of a subclass of verbs or nouns.

There are North American languages with a large, open class of adjectives such as Chitimacha (see discussion in §5.1) or Central Pomo (Pomoan) (Mithun 1999: 474), but this is rare. Slightly more common are languages with a small, closed class of adjectives. In a sample including 23 North American languages, Velupillai (Velupillai 2012: 128) finds only 6 of those languages have a distinct but closed class of adjectives. Southern Paiute (Uto-Aztecan) has only about a dozen adjectives, for the concepts LARGE, SMALL, LONG, SHORT, NEW, OLD, GOOD, HIGH, STRONG, HARD, and COLD (Sapir 1930: 77–79). We have already seen the small class of adjectives in Wichita (Rood 1996: 594–595). Tłı̨cho Yatıì (a.k.a. Dogrib, Na-Dene) likewise has a closed set of 20 adjectives which are distinguished by their lack of inflectional morphology (Welch 2016).

Most North American languages arguably lack an adjective class, such that property concepts are a subcategory of noun or verb or divided between both. Only a few North American languages encode property concepts as nouns; most languages code property concepts as a subclass of verbs. Rincón Luiseño (Uto-Aztecan) is one language which codes some property concepts like nouns. While most modifiers in Luiseño are derived from verbs, the most prototypical property concepts take noun endings, e.g. *yoot* 'large' and *kiháat* 'small' (Kroeber & Grace 1959: 59). The following examples illustrate the morphological similarity between nouns and adjectives. (Note that the "absolutive" suffix[3] in these examples has various realizations—here *-ch*, *-l*, or *-sh*—and that the plural of 'girl' is irregular / suppletive.)

Rincón Luiseño (Uto-Aztecan)

(10) a. nawítma-l **yawáywi**-sh
girl-ABS **pretty**-ABS
'pretty girl'

b. nánatma-l-um **yawáywi**-ch-um
girl-ABS-PL **pretty**-ABS-PL
'pretty girls'

c. Ya'á-sh tóow-q nawítma-l-i **yawáywi**-ch-i.
man-ABS see-PRES:SG girl-ABS-OBJ **pretty**-ABS-OBJ
'The man sees a pretty girl.'

d. péshli-chal **yawáywi**-chal
dish-INSTR **pretty**-INSTR
'with the pretty dish' (Elliott 1999: 27–28)

The Maidu (Maidun) and Cherokee (Iroquoian) languages are like the Chitimacha language mentioned above in that they contain an open class of adjectives, all of which are formed from verbs (Dixon [1911: 716–717] for Maidu; Lindsey & Scancarelli [1985], Chafe [2012], and

[3] In the North American tradition, the term *absolutive* sometimes refers to the default or unmarked form of a noun rather than the single argument of an intransitive verb (as most linguists use the term today). Grammatical descriptions of Luiseño often use this former, more traditional sense of the term. I retain that usage in the examples here.

Barrie & Uchihara [2019] for Cherokee). Unlike Chitimacha, however, these languages use nominal rather than adjectival affixes for modifiers. Adjectives in these languages are therefore a subclass of nouns which are all derived from verbs.

By far the most common way to encode property concepts in North American languages is as a subclass of verbs. The following examples illustrate the use of such property concepts in a selection of languages, comparing them to action verbs in the same language.

Navajo (Na-Dene)

(11) a. yi-sh-cha
IPFV-1SG-cry
'I am crying' (Young & Morgan 1980: 216)

b. ni-s-**neez**
NEUT.IPFV-1SG-**tall**
'I am tall' (Young & Morgan 1980: 290)

Quileute (Chimakuan)

(12) a. čaːč-a-ø
fly-DUR-3ABS
'it is/was flying' (Andrade 1933: 267)

b. **tsiʔda**-ʔa-ø
handsome-DUR-3ABS
'he is handsome' (Andrade 1933: 257)

West Greenlandic (Eskaleut)

(13) a. isir-puq ingil-luni-lu
come_in-3SG.IND sit_down-4SG.CTMP-and
'she came in and sat down' (Fortescue 1984: 120)

b. illu-at **kusanar**-puq **kial**-luni-li
house-3PL.POSS **pretty**-3SG.IND **warm**-4SG.CTMP-and
'their house is pretty and warm' (Fortescue 1984: 121)

Many North American languages make a distinction in their verbal person marking between *agents*—the argument in the clause that performs, effects, instigates, or controls the event—and *patients*—the argument in the clause which lacks one or more of these properties. In languages with property verbs that exhibit agent-patient marking, property verbs often use patient person markers, although this is just a typological tendency. Examples include Alabama (Muskogean; Wetzer [1996: 216–217]), Kiowa (Kiowa-Tanoan; Wetzer [1996: 187]), Lakota (Siouan; Pustet [2002: 388]), and Mojave (Yuman; Wetzer [1996: 187]), among many others. Central Pomo is one North American exception to this tendency: basic adjectives appear with agent markers unless they are inchoative ('becoming') (Mithun 1991: 521).

As mentioned, property verbs often exhibit slightly different behavior from prototypical event verbs within a language. The most common difference is that property verbs are limited in the range of inflectional possibilities they can take (what Croft [1991; 2000; 2001; 2003; 2010] calls their *behavioral potential*). They may be limited to the stative or durative aspects, for example. Another common difference is that property verbs may modify nouns directly, but event verbs require some type of additional nominalizing or relativizing morphology to modify nouns. For instance, in a thorough review of evidence for adjective classes in several Siouan

languages, Helmbrecht (2006; in progress) reports that in Hocank (a.k.a. Winnebago; Siouan) nouns may be modified using relative clauses. Relative clauses in Hocank are structurally nearly identical to noun phrases in the language. They typically require a determiner and person inflection, and they may take tense and aspect marking. However, when a property word is used to modify a noun, it does not require a determiner, is never inflected for person, and never takes tense or aspect marking.

In Choctaw (Muskogean), property words are morphological verbs, but there are clear semantic regularities which set them apart from other verbs. In Muskogean languages, verb stems undergo certain phonological changes such as nasalization, *h*-insertion, lengthening, etc. to indicate their aspect. These sets of phonological changes are called *grades* in the Muskogean literature. When applied to property words, however, these grades have the semantic effect of intensifiers or comparatives rather than aspect (Haag 1995, 1997). Secondly, when these property words appear after nouns, they optionally show nominal morphology, with a penultimate pitch accent and final glottal stop (Broadwell 2006: 223).

In the case of Nuuchahnulth, Nakayama (2001) argues that the adjective class is a discourse tendency rather than a clearly-defined set of properties that pick out a mutually exclusive set of words. He reports that adjectivals are words which do not take objects, and which may be combined with nominals to form a phrase (Nakayama 2001: 50). They may however sometimes also serve directly as arguments.

A more unusual pattern of behavioral differences for property concepts occurs in Yurok, where numbers and about eleven adjectival roots vary the form of their stem (that is, their stems are *suppletive*) based on the category of the noun they modify. The categories include HUMAN, ANIMAL, PLANT (non-tree), TREE, STRINGLIKE, FLAT, and others. Each adjective in Yurok potentially has a different form of the stem for each one of these categories. Example (14) shows the different stems for ‘big’ and ‘small’.

(14) Yurok (Algic)

Category	‘big’	‘small’
human beings	peloy	cey(kel)
animals and birds	plɪʔɪy	cɪykɪʔɪy
round things	ploy(keloy)	ceykoh
body parts, utensils, clothes	plep	cey(kel)
stringlike things	plep	cey(kel)
flat things	ploks	cey(kel)
houses	pleʔloy	ceykoh
boats	pleyteloy	cey(kel)

(Robins 1958: 93–95)

In other languages there seems to be no substantive behavioral differences between property words and event verbs. In Seneca (Iroquoian), words expressing property concepts do belong to a subclass of verbs that are limited to stative aspect, but there are numerous other, non-property verbs which also belong to this class (Chafe 2012). Example (15) lists representative sets of property words and event words in Seneca, both of which are restricted to the stative aspect.

(15) Seneca (Iroquoian)

a.	osde’	‘it’s heavy’
	otgi’	‘it’s dirty’
	odö:sgwi:h	‘it’s wrinkled’
	o:ni:yöh	‘it’s hard, tough’
	ojiwagëh	‘it’s sour, bitter’
	hohsë:h	‘he’s fat’
	hodí’gyö’	‘he’s shy’
b.	otga:h	‘it’s making a noise’
	owḗhde’	‘it has something added to it’
	hotö:de’	‘he hears it’
	honṓhdö’	‘he knows it’
	hóío’de’	‘he’s working’
	hohse’	‘he’s riding on its back’
	ho:wísdagá’de’	‘he has a lot of money’
	ho’áshägéhde’	‘he’s carrying a basket on his back’

(Chafe 2012: 13–14)

Chafe (2012) considers seven possible criteria that might identify a class of adjectives in Seneca (and by extension all of Northern Iroquoian), and finds that all the criteria are subject to the same problem in that they include non-property concepts as well.

Finally, some languages distribute property concepts across multiple word classes. In Chinook (Chinookan), words expressing speed, color, and a few words for human propensity are particles, while words expressing age are verbs, and words expressing dimension, value, and other human propensity concepts are nouns (Dixon 1977: 53–54).

In sum, the encoding of property concepts in North American languages shows tremendous diversity. Some languages have a large, open class of distinct adjectives, others have a small closed class, but in most North American languages property words are a subset of either nouns or verbs. And in a few cases, even the existence of such a subclass is difficult to motivate.

4.1.4. Adverbs

Adverbs, like adjectives, are words whose prototypical function is modify; however, they differ from adjectives in that adjectives only modify nouns, while adverbs may modify essentially anything else (Haspelmath 2001: 16543; Velupillai 2012: 130), including verbs (*run* ***quickly***), adjectives (***quite*** *happy*), other adverbs (***very*** *quickly*), prepositions (***right*** *out*), noun phrases (***quite*** *the party*), entire utterances (***unfortunately***), but not individual nouns (**dog* ***quickly***) (Velupillai 2012: 130). Semantically, adverbs prototypically convey meanings such as manner (*quickly*), degree (*extremely*), time (*now*), location (*there*), or evidential / epistemic attitude (*probably*, *frankly*) (Quirk et al. 1985; Velupillai 2012: 130). Like adjectives, adverbs may have distinct forms for comparatives (*faster*), superlatives (*fastest*), and equatives (*as fast as*).

Adverbial constructions are not strongly grammaticalized in North American languages. In a recent handbook of North American languages, discussions of adverbs appear only sparingly, and the term “adverb” does even not appear in the index (Siddiqi et al. 2020).[4] Languages use a

[4] This point is a comment on the structure of North American languages rather than a criticism of the volume’s coverage.

variety of other strategies for conveying prototypical manner concepts instead. In Dëne Sųłiné (Na-Dene), locative nouns may function as adverbs (Cook 2004: 303), and adverbs in most Dene languages are derived from relative clauses (Jaker, Welch & Rice 2019: 497). Chitimacha has a set of suffixes expressing manner, including *-di* 'doing horizontally', *-duwa* 'doing suddenly', *-kint* 'by pushing', and *-ti* 'by handling'. In Nuuchahnulth adverbial concepts like 'also', 'for two days', and 'still' are encoded with intransitive predicates (Nakayama 2001: 51–53). Nuuchahnulth also has a number of lexical suffixes expressing location, such as *-ʹis* 'being on the beach', *-ʼas* 'being on the ground', *-ʼa·* 'being on the rock', or *-ʹił* 'being in the house'. Otherwise, adverbial concepts are expressed through verb serialization. The examples below show serial verbs expressing manner, time, and location, respectively.

Nuuchahnulth (Wakashan)

(16) a. ƛawaʔiiʔaƛquuč — **kʷaačiƛ**
ƛawa-ʔiː-ʼaƛ-quː-č — **kʷaː-či(ƛ)**
near-reaching-TEL-COND.3-INFER — **move.backwards-MOM**
he.would.go.near — **move.backwards**
'[While he was dancing] he would go near [him] moving backwards.' (Nakayama 2001: 100)

b. **qiis** wałyuu
qiː-s wał-yu·
for.long-1SG go.home-done
I.for.long at.home
'For a long time I stayed at home.' (Nakayama 2001: 100)

c. yacaaqtuu — **ʔucačiƛ** — **ʔuuƛ̓aqči**
yac-a·qtu· — **ʔu-ca-či(ƛ)** — **ʔuuƛaqči**
step-going.over — **it-going.to-MOM** — **NAME**
walked.over.the.hill — **went.there** — **Odlaqutla**
'They went over [the high land] to Odlaqutla.' (Nakayama 2001: 100)

4.2. Functional classes

As mentioned in §3.1, North American languages exhibit a large variety of function words. This section covers just a few functional classes for which North American languages exhibit unique or interesting behaviors—adpositions, articles, auxiliaries, particles, and pronouns.

4.2.1. Adpositions

Adpositions are words that govern a noun phrase and signal a relationship between the noun phrase and another word in the clause (Hagège 2010: 1; Kurzon & Adler 2008: 2). It can be difficult to distinguish adpositions from case markers since they both signal relationships between elements of a clause, and there is often a diachronic and synchronic cline between them resulting from grammaticalization (Hagège 2010: Sec. 2.2). Adpositions may also be *clitics* (Hagège 2020: 18).

There are several types of adpositions: *prepositions* precede the noun phrase, *postpositions* follow the noun phrase, and *circumpositions* consist of two elements, one which precedes the noun phrase and one which follows it. Shoshone (Uto-Aztecan) has another type called an *inposition* which occurs inside the noun phrase (Dryer 2013c). Many second-position clitics could also be considered a type of inposition.

Perhaps because North American languages signal many of the relationships among participants using affixes (especially verbal affixes), adpositions are not a robust word class in most North American language families. Even when present in a language, they are sometimes a marginal class, only lightly grammaticalized. Creek (Muskogean), for example, has just a small set of nouns such as *nałkapá* 'middle' which have grammaticalized into postpositions indicating location (Martin 2011: 147–148). Not all languages have adpositions however (Croft 1991: 144). In Nuuchahnulth, relationships between referents are always communicated by predicates, as shown below.

Nuuchahnulth (Wakashan)

(17) a. šišaa **ʔuuʔatup** kʷakuucuk
šiš-(y)a· **ʔu-ʿatup** kʷaku:c-uk
clean-CONT **it-doing.for** grandchild-POSS
cleaning **doing.for.them** her.grandchildren
'She would peel them for her grandchildren.' (Nakayama 2001: 53)

4.2.2. Articles

As mentioned in §4.1.1, one of the categories that can be indicated on a noun is definiteness. One way languages do this is by using definite / indefinite *articles* (such as *the*, *a/an* in English). Lakota has a set of two definite articles and three indefinite articles with slightly different uses, exemplified in (18). Articles in Lakota follow their noun phrase rather than precede it.

Lakota (Siouan)

(18) a. ki 'the' DEFINITE
b. kʔũ 'the aforementioned' DEFINITE
c. wã 'a (specific)' INDEFINITE
d. wãẑi 'one (nonspecific)' INDEFINITE
e. cha 'a (contrastive)' INDEFINITE

(Van Valin 1977: 63)

Quileute (Chimakuan) only has an indefinite article (Andrade 1933: 246). Chitimacha uses a demonstrative adjective as a definite article, a common strategy in North America (Dryer 2013b).

4.2.3. Auxiliaries

Auxiliary verbs are verbs which provide grammatical information about the main verb they accompany (Velupillai 2012: 146). In example (19) from Southern Pomo (Pomoan), the future tense marker appears on the auxiliary verb *yo-* rather than the predicate *kac:i* 'cold'.

Southern Pomo (Pomoan)

(19) kac:i yo-kʰ:e
cold AUX-FUT
'it will be cold' (Walker 2013: 356)

While the grammatical features that auxiliary verbs carry typically include tense, aspect, person, number, etc., a prevalent feature of North American languages is that auxiliary verbs may also provide information regarding the spatial orientation of their subjects—usually sitting, standing, or lying position. This is especially common in the Siouan languages (Mithun 1999: 115–116) and the languages of the U.S. Southeast (Campbell 1997: 342). See §3.1 above for an illustration of positional auxiliary verbs in use in Siouan.

4.2.4. Particles

Language descriptions often include a word class called *particles*, but particles are not a coherent typological class. The term "particle" is a morphological term, typically referring to words which are invariable and/or do not have inflectional morphology (Crystal 2008: 352). However, the functions of uninflectable words are not consistent across languages. Particles in Algonquian cover a wide array of functions such as quantifiers, numerals, adjectives, adverbs, prepositions, and conjunctions (Oxford 2007; 2019: 511). Particles in Chitimacha, on the other hand, are used for preverbs, postpositions, negation, topic marking, discourse markers, and interjections. There is no typological prototypical core to particles as a word class.

4.2.5. Pronouns

Pronouns are words that either refer to discourse participants (*I*, *you*, *s/he*), refer anaphorically to referents that are activated in the discourse (Kibrik 2011: 73), or otherwise stand in for nouns. Pronouns referring to discourse participants are called *personal pronouns*, while the others are sometimes called *proforms* (Bhat 2004: 5). Personal pronouns may be syntactically free words (*free pronouns*), affixes on the verb (*bound pronouns*), or clitics (*clitic pronouns*). The following example from Mohawk (Iroquoian) includes both the free pronoun *í:se'* 'you' and the bound pronoun *sa-* 'you'.

Mohawk (Iroquoian)

(20)

Í:se'	tóka'	wà:kehre'	tóka'	thé:nen'
íse'	toka'	wa'-k-ehr-e'	toka'	thenen'
you	maybe	FACT-1SG.AGT-think-PFV	maybe	something
you	maybe	I thought	maybe	something

sarì:waien'	ne	ahsheri'wanón:tonhse'.	
sa-rihw-a-ien-'	ne	a-hshe-ri'wanonton-hs-e'	
2SG.PAT-matter-have-STAT	the	IRR-2SG/FI-ask-BEN.APPL-PFV	
you issue have	the	you would ask her	

'I thought that you might have some questions to ask her.' (Mithun 2013: 292)

Southern Pomo has clitic pronouns rather than affixes:

Southern Pomo (Pomoan)

(21)

mihyanak^{h}:eʔwamt̪aʔa	
mihyana-k^{h}:e=ʔwa=**mt̪a**=**ʔa**	
kill-FUT=COP.EVID=**2SG.PAT**=**1SG.AGT**	
'I'm going to kill you.'	(Walker 2013: 229)

All languages have free pronouns, irrespective of whether they also have bound or clitic pronouns. In North American languages, discourse participants are predominantly expressed using bound pronouns on the verb (Dryer 2013a). In these languages, the functions of the pronouns are divided between the bound and free forms. The bound pronouns are used to refer to and track referents in the discourse, while the free pronouns accomplish the various other functions, such as focus / emphasis, cleft constructions, topicalization, antitopicalization, etc. (Mithun 2003; 2013).

There are many types of proforms, including demonstrative (22), indefinite (23), interrogative (24), possessive (25), and relative (26), among others.

Demonstrative: Potawotami (Algic)

(22) Apte **ode** gminen.
apte **ode** gminen
half **DEM.near** I.give.you
'I'll give you half of this.' (Lockwood 2017: 58)

(23) Indefinite: Seneca (Iroquoian)
Ëké:owi' **sö:ga:'**.
I'll tell them **someone**
'I'll tell someone.' (Chafe 2015: 118)

Interrogative: Southern Pomo (Pomoan)

(24) ča**ʔ**:a**ʔ**kam:u ʔaṭʰ:a ʔahsoduy
ča**ʔ:a**=ʔka=m:u ʔaṭʰ:a ʔahso-duy-Ø
who=INTER=3SG gravel throw.many.small-DIR-PFV
'who threw the gravel?' (Walker 2013: 231)

Possessive: Creek (Muskogean)

(25) **ca-nâ**:**ki-t** ô:-s
1SG.PAT-thing-T be.FGR-IND
'It's mine.' (Martin 2011: 144)

Relative: Tuscarora (Iroquoian)

(26) Thwé:'n wa'kayę'na'nit'úthahs ha' **káhne'** kayę'nę'nę́nhyahr.
all he put them to sleep the **who** they are guarding him
'He put to sleep all those who were guarding him.' (Mithun 2012: 270)

5. Issues in word-class research

This section describes the most prominent themes in research on word classes in North America. The difficulties in determining word classes in North American languages are decidedly different from those presented by languages in other areas of the world. For North American languages, there are three recurring questions in the study of word classes and lexical categories in particular: 1) at what level a word is categorized (root, stem, or entire inflected word; §5.1), 2) whether a given language distinguishes noun and verb (§5.2), and 3) whether a given language has an adjective category (which has already been discussed in §4.1.3).

The widespread (but not ubiquitous) presence of (poly)synthesis in North American languages (Mithun 2017b: 235; Rice, this volume) means that a *morphological* distinction between nouns, verbs, and, when present, adjectives, is often quite clear. Words tend to have multiple affixes indicating their word class. In the following example from Nez Perce (Sahaptian), there are a tense marker and a perfective aspect marker—both categories typically associated with verbs.

Nez Perce (Sahaptian)

(27) hi-pe-nees-ex-n-e
3.SUBJ-PL$_{SUBJ}$-PL$_{OBJ}$-see-PFV-REM.PAST
'they saw us / you (pl.) / them' (Deal 2010: 57)

Similarly, nouns in Nez Perce are marked for *case* (their role in the sentence) (Deal 2010: 32), a feature which is typically associated with nouns.

Given these clear morphological distinctions, it may seem surprising that there could be any ambiguity regarding word classes in North American languages. Nonetheless, the potential for ambiguity in lexical categories can occur at the root, stem, or even whole word level, and words may be categorized differently at different levels (Jacobsen 1979: 100; Mithun 1999: 56; Haag 2006: 143; Lois et al. 2017: 102; Mithun 2017a: 155; Clemens 2019: 372). Section 5.1 shows how this ambiguity surfaces at these different levels in the languages of North America, and how categorization depends on the level of analysis (root, stem, or word).

5.1. Locus of categoriality

In morphologically complex languages, words have an internal structure, so that some morphemes are more central to the core meaning of the word than others. The morpheme that provides the core sense of a word is called the *root*. For example, in Chitimacha the root *ni-* 'water' is used as the base for a number of different words, including *nen-* 'go out of water', *nicwa-* 'approach water', *nitgext-* 'dump into water', *niduwa-* 'fall into water', and others (Swadesh 1939b: 44). Each of the forms just listed are called *stems*, defined as the part of the word which serves as the basis for all its inflected forms. The stem *nicwa-*, for example, serves as the base for the inflected forms *nicwi* 's/he approaches water', *nicwicuki* 'I will approach water', *nicwipuyna* 'they used to approach water', etc. Each of these inflectional possibilities is called a *wordform*.

Words may be categorized differently depending on whether one is analyzing the root, stem, or wordform. In the West Greenlandic (Eskaleut) language, the lexical category of a word is typically obvious at all three levels. In example (28) the nominal root *aamaruti-* 'coal' takes various suffixes which create new stems, changing the word at different points from a noun to a verb and back again. Affixes which change the class of a word are called *derivational affixes*. At each step of derivation in West Greenlandic, the category of the word is clear.

West Greenlandic (Eskaleut)

(28) aamaruti-ssar-siur-vi-tua-a-suq
coal-FUT-look.for-place-only-be-INTR.PTCP
N > N > V > N > N > V > N
'which is the only place for getting coal' (Fortescue 1984: 315)

In other North American languages, roots do not seem to be categorized for word class. In these languages, stems can be categorized but roots cannot. Haag (2006) argues that Cherokee is one such language. Cherokee has many words which are composed of multiple roots compounded together; however, it is impossible to determine what the category of the resulting compound will be based on the roots. The roots are simply put together in a way that makes sense for their meanings, and then a suffix is added that clarifies the lexical category (Haag 2006: 138). Example (29) shows two roots in Cherokee.

Cherokee (Iroquoian)

(29) a. -jaʔt- 'attach asymmetrically at an indentation'
b. -húú- 'stoma, opening' (allomorph *-ʔúú*)

(Haag 2006: 137)

Example (30) shows four compounds that can be formed using these roots.

Cherokee (Iroquoian)

(30) a. tii-**húú-jaʔt**-î
PL.OBJ-opening-attached-thing
'lunchbox (with two handles)'

b. a-**húú-jaʔt**-î
SG-opening-attached-thing
'pitcher'

c. jii-**ʔúú-jaʔt**-ívkâ
1SG-opening-attached-IMM.PAST
'I just now attached a handle to something (e.g. a bucket)'
'I just now caught something by the mouth with a hook or attachment.'

d. tee-jíí-**ʔúú-jaʔt**-ívkâ
PL.OBJ-1SG-opening-attached-IMM.PAST
'I just now attached something with more than one handle to something.'
(Haag 2006: 137–138)

Though in each case the stem is formed from the same combination of roots, in (a) and (b) the result is a noun, and in (c) and (d) the result is a verb. Haag takes this and other evidence to suggest that lexical categorization is not relevant to Cherokee roots, only stems.

A similar situation occurs in Algonquian languages, in which lexical stems are formed of a combination of up to three components, called *initial*, *medial*, and *final* in the Algonquian literature (Goddard 1990; Macaulay & Salmons 2017; Lockwood 2017: 63–64; Oxford, this volume). The initial is generally considered the root of the word, but it is the final component which determines the lexical category of the stem. Roots in Algonquian languages are therefore unspecified for lexical category. Examples (31) and (32) demonstrate how the same initial (shown in boldface) can be used to form either a noun or verb stem in Ojibwe and Menominee (both Algonquian languages).

Ojibwe (Algic)

(31) a. miskozi
miskw-izi
red-3SG.IND
'it is red' (Nichols 2020)

b. miskobag
miskw-bagw
red-leaf
'red leaf' (Nichols 2020)

Menominee (Algic)

(32) a. maehkuakom
maehkw-akom
red-skin/hide/covering/garment
'red blanket' (Monica Macaulay, p.c.)

b. maehkīhotaw
maehkw-hot-a-w
red-paint-THEME-3SG
's/he paints it red' (Monica Macaulay p.c.)

In the Ojibwe example in (31), the same initial *miskw-* 'red' is used to form both a noun 'red leaf' and a verb 'it is red', while in the Menominee example in (32) the initial *maehkw-* 'red' is likewise used to form both the noun 'red blanket' and the verb 's/he paints it red'. Thus, in Algonquian it is only stems which are categorized for lexical category, not the root / components.

In some languages, even the stem can be neutral or ambiguous with respect to lexical category. Frachtenberg (1922: 318) claims that any stem in Coos (Coosan) may be used either nominally or verbally as appropriate. This is illustrated in (33).

Coos (Coosan)

(33) a. **po**:^{w}**kw**-is
slave-NZR
'slave' (Frachtenberg 1922: 329)

b. ŋ-**po**:^{w}**kw**-its
1SG-enslave-TR
'I enslaved him' (Frachtenberg 1922: 329)

c. **hu**:^{w}**mis**
'woman' (Frachtenberg 1922: 330)

d. n̥-hu:^{w}mis-its
1SG-marry-TR
'I marry (her)' (Frachtenberg 1922: 330)

e. **tso**:**we**^{x}**tɬ**
'grease' (Frachtenberg 1922: 329)

f. n̥-**tso**:^{wx}**tɬ**-ts
1SG-grease-TR
'I greased it' (Frachtenberg 1922: 329)

g. **tɬ'kwi**:
'blanket' (Frachtenberg 1922: 328)

h. **tɬ'kwi**-t
cover-TR
'she covered (them) with blankets' (Frachtenberg 1922: 328)

For the Tonkawa (isolate) language, Hoijer (1933: 23–24) famously claimed, "To apply the classificatory notion of "parts of speech" to Tonkawa would do extreme violence to the spirit of the language." He provides the following example as evidence of his claim:

Tonkawa (isolate)

(34) a. **notox**-ʔa:-la
hoe-DEF-NOM.SG
'the hoe' (Hoijer 1946: 297)

b. **notx**-o-ʔ
hoe-DECL-3.PRES
'he hoes it' (Hoijer 1946: 297)

Andrade (1933: 179) likewise analyzes Quileute as a language where stems may be used as either noun or verb, assuming their function in context. In other languages, such as Hopi (Uto-Aztecan), most stems are specified for category, but a subset are ambivalent and may be used as either noun or verb (Whorf 1946: 163).

Even fully-inflected wordforms with clear morphological marking of their class may nonetheless blur the distinction between noun and verb. In many North American languages, fully-inflected morphological verbs may be used as nominals without any special affixes or other modification, as the following examples illustrate.

Chitimacha (isolate)

(35) a. dzampuyna
dza-m-puy-na
thrust-PLACT-HAB-NF.PL
'they usually thrust / spear (with it)'
'spear' (Swadesh 1939b: 56)

b. pamtuyna
pa-m-tuy-na
ford-PLACT-HAB-NF.PL
'they usually cross (it)'
'bridge' (Swanton 1920: 17)

Cayuga (Iroquoian)

(36) a. ǫtekhǫnyáʔthaʔ
ye-ate-khw-ǫni-aʔt-haʔ
INDEF.AGT-REFL-meal-make-INSTR-IPFV
'one makes a meal with it'
'restaurant'

b. kaǫtanéhkwi
ka-rǫt-a-nehkwi
NEUT.AGT-log-EP-haul.IPFV
'it hauls logs'
'horse' (Mithun 2000: 200)

Navajo (Na-Dene)

(37) a. tsinaa'eeł
tsi(n)-naa'eeł
wood-it.moves.about.floating
'ship, boat' (Young 1989: 316)

b. chahałheeł
it.is.dark
'darkness' (Young 1989: 316)

For Cayuga (and other Iroquoian languages), some morphological verbs have been so fully lexicalized as nouns that they may no longer be used with their verbal meanings. The default

meaning of *kaǫtanéhkwi* for Cayuga speakers is ‘horse’, not ‘it hauls logs’. Other verbs may retain both uses, while others lack any nominal meaning at all. Morphological verbs in Iroquoian therefore each sit on a cline from fully verbal to fully nominal, with many cases in between (Mithun 2000: 413).

In other languages, fully-inflected nouns and verbs can appear superficially similar, taking affixes of the exact same form, but nonetheless belong to clearly distinct word classes. In Central Alaskan Yup’ik, for example, the forms of noun inflections are a subset of the forms of verb inflections (Sadock 1999: 386). That is, noun endings all look like verb endings (but not vice versa), and even have similar functions, as the following examples illustrate:

Central Alaskan Yup’ik (Eskaleut)

(38)	a.	qaya-**q**	‘kayak’	SG
		kaigtu-**q**	‘he/she/it is hungry’	SG
	b.	qaya-**k**	‘two kayaks’	DU
		kaigtu-**k**	‘they two are hungry’	DU
	c.	qaya-**t**	‘three or more kayaks’	PL
		kaigtu-**t**	‘they all are hungry’	PL

(Mithun 2017a: 161)

Possessive suffixes on nouns likewise share their forms with transitive person suffixes on verbs:

Central Alaskan Yup’ik (Eskaleut)

(39)	a.	angya-**qa**	‘my boat’	1SG/3SG
		ner’a-**qa**	‘I am eating it’	1SG/3SG
	b.	angya-**gka**	‘my two boats’	1SG/3DU
		ner’a-**gka**	‘I am eating both of them’	1SG/3DU
	c.	angya-**nka**	‘my boats’	1SG/3PL
		ner’a-**nka**	‘I am eating them’	1SG/3PL
	d.	angya-**a**	‘his/her boat’	3SG/3SG
		nera-**a**	‘he/she/it is eating it’	3SG/3SG
	e.	angya-**k**	‘his/her two boats’	3SG/3DU
		ner’a-**k**	‘he/she/it is eating both of them’	3SG/3DU
	f.	angya-**i**	‘his/her boats’	3SG/3PL
		nera-**i**	‘he/she/it is eating them’	3SG/3PL

(Mithun 2017a: 161)

However, any transitive verb whose object is not a third person has suffixes which never appear in nominal inflections, such as the examples in (40).

(40)	takua-**anga**	‘s/he sees me’	3SG/1SG
	takua-**atigut**	‘s/he sees us’	3SG/1PL
	takua-**akkit**	‘I see you (sg.)’	1SG/2SG
	takua-**rma**	‘you (sg.) see me’	2SG/1SG

(Sadock 1999: 386)

The reason for these similarities is that many verbal inflections arose historically from nominalizations (Jacobson 1982; Woodbury 1985; Mithun 2008; Berge 2016). This is an

example of a process known as *insubordination*, where subordinate clauses or noun phrases are reanalyzed as main clauses (Mithun 2008; Evans 2007; Evans & Watanabe 2016). Despite having a common origin as noun suffixes, verbal and nominal endings in Yup'ik are now nonetheless two distinct sets of affixes belonging to different word classes.

Another case of superficial similarity between nouns and verbs comes from Menominee:

Menominee (Algic)

(41) a. askēhnen
askēhnen-w
be.fresh-3SG
'it is fresh / raw' (Monica Macaulay p.c.)

b. askēhnen
askēhnen-w
be.fresh-NZR
'raw thing' (Monica Macaulay p.c.)

While the words in (41) have the same surface and underlying forms,[5] this is merely a historical accident; the third person *-w* suffix and the nominalizing *-w* suffix are unrelated.

Not only the category label, but the size of the category can vary depending on the level of analysis. Lindsey & Scancarelli (1985), for example, argue that Cherokee has a large, open class of adjectives when considering the level of the inflected word, but a small, closed class of adjectives when considering the level of the root. More drastically, Chitimacha lacks adjective stems entirely, but nonetheless has an open class of adjectives at the word level. All adjectives in Chitimacha are formed by adding an adjectivizing suffix to a verb stem, as shown in the examples in (42).

Chitimacha (isolate)

(42)

bixtigi	'industrious'	<	bixte-	'be industrious'
dantigi	'cluttered'	<	dante-	'be cluttered'
deyktigi	'wet'	<	deykte-	'be wet'
dixigi	'bad-smelling'	<	dixe-	'smell' (intr.)
dzahtsigi	'tasty'	<	dzahtst-	'season' (tr.)
hedigi	'near'	<	hedi-	'move near (horizontally)' (intr.)

(Swadesh 1939b)

Adjectives may be formed from either intransitive or transitive verbs. In discourse, verb stems vary as to how frequently they appear with the adjective suffix *-gi*. Some verb stems have become completely lexicalized as adjectives and are never used with regular verbal inflection. By contrast, many verb stems are never used with *-gi*. Most verbs sit somewhere in the middle of this spectrum. The verb *huy-* 'be good', for example, appears 112 times in Swadesh's (1939a) Chitimacha corpus as the adjective *huygi* 'good', and 28 times as a verb.

In this section we have seen that categorization and level of analysis are crucially interrelated. Languages differ as to whether words at categorized at the level of the root, stem, or inflected word. We have also seen that, despite robust morphological marking on both nouns and verbs, North American languages can nonetheless exhibit ambiguities between the major lexical categories.

[5] Note that the final /w/ in both examples is lost due to a synchronic process of final consonant cluster reduction.

5.2. The noun-verb distinction

Perhaps the most famous claim that a language lacks a noun-verb distinction involves the Eskaleut family (Thalbitzer 1911: 1059). As mentioned above, nominal and verbal affixes in this family are identical thanks to a historical process whereby nominalized subordinate verbs were reanalyzed as main verbs (Mithun 2008), which led Thalbitzer to claim that Eskaleut has no noun-verb distinction. Sadock (1999) and Mithun (2017a) have strongly criticized this claim. They show that derivational affixes both select for and produce a specific category (noun or verb). For example, the *-aq* suffix shown in (a) below must attach to a verb root and always produces a noun, while the suffixes in (b) must attach to verb roots and always produce new verbs.

Central Alaskan Yup'ik (Eskaleut)

(43)					
	a.	ega-	'boil'	ega-aq	'boiled fish'
		mumigte-	'turn over'	mumigt-aq	'pancake'
	b.	piqertur-	'whack'	piqertu-ar-	'whack repeatedly'
		qavange-	'fall asleep'	qavang-caar-	'try to sleep'

(Mithun 2017a: 167)

This seemingly clear-cut picture is however complicated by two facts. First, while 35% of roots in Yup'ik are purely nominal and 53% are purely verbal, 12% of roots have both nominal and verbal senses (Mithun 2017a: 163), raising the possibility that these roots are polycategorial, or do not fall clearly into either the noun or verb class. If a root has both nominal and verbal senses this way, any derivational affixes it takes will utilize the meaning of the category that affix selects for (Mithun 2017a: 168–169). This is exemplified in (44).

Central Alaskan Yup'ik (Eskaleut)

(44)		
	equk	'thing carried on one's shoulder; wood'
	equg-	'carry on one's shoulder'
	-iaq	'made thing'
	equiaq	'chopped firewood'
	-iur-	'be occupied with'
	eqiur-	'chop wood'

(Mithun 2017a: 168)

The root *equk* / *equg-* has both a nominal meaning 'thing carried on one's shoulder; wood' and a verbal meaning 'carry on one's shoulder'. The suffix *-iaq* 'made thing' must attach to nouns and always produces a noun stem, while the suffix *-iur-* must attach to nouns and always produces a verb stem. In (44) the result of attaching either of these suffixes to *equk* are meanings based on the nominal sense of 'wood' rather than the verbal sense of 'carry on one's shoulder'. *equiaq* does not mean 'wood carried on one's shoulder' and *eqiur-* does not mean 'be occupied with carrying on one's shoulder'. This shows that derivational suffixes in Yup'ik select for roots from specific lexical categories, or at the very least specific nominal or verbal senses of a root. Mithun (2017a) uses data like these to argue that cases like *equk* / *equg-* are two separate homophonous forms, rather than a single polycategorial root.

The second complication in determining lexical categories in Yup'ik is that many derivational suffixes may attach to either nominal or verbal stems, and moreover about 10–20% of derivational suffixes create stems which themselves are ambiguous between noun and verb (Sadock 1999: 387). The examples in (45) demonstrate these problems.

Central Alaskan Yup'ik (Eskaleut)

(45)

ui	'husband'	ui-lkuk	'no-good husband' (n.)
yuk	'person'	yu-lkuk	'no-good person' (n.)
ayaq-	'leave'	aya-lkug-	'no-good one leave' (v.)
tupag-	'awaken'	tupa-lkug-	'no-good one awaken' (v.)
ii	'eye'	ii-ckegt-	'have well-formed eyes' (v.)
cingik	'point, tip'	cingi-ckegt-	'be sharply pointed' (v.)
tungu-	'be black'	tungu-ckegt-	'be very black' (v.)
nepete-	'stick'	nepe-ckegt-	'climb, balance well' (v.)

(Mithun 2017a: 167–168)

The suffix *-lkuk* / *-lkug-* attaches to either nouns or verbs and retains the original category of the root. The suffix *-ckegt-* attaches to either nouns or verbs and always produces a verb. What does *not* appear to be attested, however, are suffixes which attach to either nouns or verbs and produce stems which themselves may be either noun or verb. In other words, derivational suffixes are either category-preserving or specify the category of the resulting stem. There are no truly ambiguous cases.

An even stronger challenge to the universality of the noun-verb distinction comes from the languages of the Pacific Northwest. Though comprising multiple unrelated families (Salishan, Wakashan, Chimakuan, Tsimshianic, Chinookan, and the isolate Kutenai), all the languages of this region blur the noun-verb distinction in similar ways, a situation which arose out of an extended period of contact between these language families (see Thomason, this volume). In these languages, it is often claimed that any lexical stem may function indiscriminately as either noun or verb. The following data from Lillooet (Salishan) are exemplary of the kind of phenomena which have led linguists to these claims.

Lillooet (Salishan)

(46)

a. **šmúłač** ta=kʷúkʷpiʔ=a
woman DET=chief=EXIST
'The chief is a woman.'

b. kʷúkʷpiʔ ta=**šmúłač**=a
chief DET=**woman**=EXIST
'The woman is a chief.'

c. **ləχləχ** ta=kʷúkʷpiʔ=a
smart DET=chief=EXIST
'The chief is smart.'

d. kʷúkʷpiʔ ta=**ləχləχ**=a
chief DET=**smart**=EXIST
'The smart one is a chief.'

e. **ƛ'iq** ta=kʷúkʷpiʔ=a
arrive DET=chief=EXIST
'The chief arrived.'

f. kʷúkʷpiʔ ta=**ƛ̓’íq**=a
chief DET=**arrive**=EXIST
‘The one who arrived is a chief.’

g. **ʔác’χ**-ən-č-aš ta=kʷúkʷpiʔ=a
see-DIR-1SG.OBJ-3ERG DET=chief=EXIST
‘The chief saw me.’

h. kʷúkʷpiʔ ta=**ʔac’χ**-ən-č-áš=a
chief DET=**see**-DIR-1SG.OBJ-3ERG=EXIST
‘The one who saw me is a chief.’ (Davis, Gillon & Matthewson 2014: e196)

While the data in (46) would appear to support an analysis of Lillooet stems as polycategorial or unspecified for lexical category, Davis, Gillon, & Matthewson (2014) present additional evidence that this noun-verb flexibility has its limits. While it is true that any stem in Lillooet may function as a verb, there are other areas of the grammar where it is necessary to maintain a distinction between noun and verb stems. First, only nominal stems may function as the head of a relative clause. Second, only nominal stems may have modifiers when functioning as either an argument or nominal predicate.

Similar categorial restrictions on relativization have been described for Gitksan (Tsimshianic; [Davis, Gillon & Matthewson 2014]) and Lushootseed (Salishan; [Beck 2013]). Though earlier work on Salishan languages argued for the lack of a noun-verb distinction (Kuipers 1968; Kinkade 1983), subsequent research has found a growing body of criteria—albeit subtle—for distinguishing noun from verb (Hébert 1983; van Eijk & Hess 1986; Jelinek & Demers 1994; Mattina 1996; Haag 1998; Beck 1999: 135–169; Montler 2003). The most prominent criteria distinguishing noun and verb is the exclusive ability of nominal stems to take possessive affixes. While the current consensus among Salishanists is therefore that the languages do in fact have a noun-verb distinction, it should be appreciated that the realization of these categories is drastically different from most languages of the world. The categories noun and verb are at most only lightly grammaticalized in these languages, and vanishingly few parts of the grammar depend on this distinction.

The noun-verb distinction is even less strongly grammaticalized in the neighboring Wakashan languages. Swadesh (1938: 78) provides the following examples—much discussed over the last century—as evidence of noun-verb flexibility in the Wakashan language Nuuchahnulth.

Nuuchahnulth (Wakashan)

(47) a. qoːʔas-ma **ʔi**ːḫ-ʔiː
man-3SG.IND **large**-DEF
‘The large one is a man.’

b. **ʔi**ːḫ-maː qoːʔas-ʔi
large-3SG.IND man-DEF
‘The man is large.’

c. **mamo**ː**k**-ma qoːʔas-ʔi
work-3SG.IND man-DEF
‘The man is working.’

d. qoːʔas-ma **mamoː****k**-ʔi
man-3SG.IND **work**-DEF
'The working one is a man.' Swadesh (1938: 78)

Like with the Salishan languages, there are however subtle differences between the distribution of stems with nominal vs. verbal meanings. While any lexical stem can serve as a verb, when nominal stems do this they are limited to the durative aspect, and can only be used for existential, classifying, or identifying expressions (Nakayama 2001: 47). Conversely, when verbal stems function as arguments, they appear with the definite marker *-ʔi* (Nakayama 2001: 48). Only noun stems may take possessive affixes. Additionally, nouns may be modified by property concepts, quantity, or quantifiers, but may not be modified directly by qualifying expressions like 'almost' or 'barely'; the reverse holds true for verbs (Nakayama 2001: 49). Generally speaking, there is a strong discourse tendency for words from each group to be used for their preferred function (nominal stems as arguments, verbal stems as predicates), and when those stems are presented in isolation to speakers, the translation offered tends to represent their default category (Nakayama 2001: 47). However, all of the above criteria show exceptions: stems may have both nominal and verbal uses, or may occur sporadically in non-prototypical roles, and verbal stems may become lexicalized as nouns (similar to examples (35)–(36) above), in which case they do not require the definite suffix (Jacobsen 1979: 107).

Though languages of the Pacific Northwest have received much of the attention concerning the noun vs. verb distinction, the issue is prominent in many other language families as well. Sasse (1988; 1991; 1993a; 1993b) claims that Iroquoian languages do not distinguish noun and verb on the basis of superficial similarities between nominal and verbal affixes. Mithun (2000) shows that these similarities are indeed superficial, and that the two classes are clearly distinct. Mithun does however present the interesting case of morphological verbs that have been lexicalized as nouns, as discussed in §5.1 above. For Siouan, Helmbrecht (2002) investigates the noun-verb distinction in Hocank and finds that there is no morphological construction that specifically targets nouns. Any stem may function as either an argument or predicate. Helmbrecht goes on to argue for a noun-verb distinction on negative evidence: certain verbal inflectional categories do not occur with stems expressing nominal concepts.

Another interesting way in which the noun-verb distinction is blurred in some North American languages is through kinship verbs—that is, kinship relations which are expressed as verbs rather than nouns. Kinship verbs have been documented in Algonquian (Bloomfield 1946), Seneca (Iroquoian; Chafe [1967]), Tuscarora (Iroquoian; Mithun Williams [1974: 221–224]), Yuman (Yuman-Cochimí; Langdon [1978]), Cahuilla (Uto-Aztecan; Seiler [1977; 1980; 1982]), Cayuga (Iroquoian; Sasse [1993b]) and Mohawk (Iroquoian; Mithun [1996; in progress]). Example (48) shows a few examples of kinship verbs in Mohawk.

Mohawk (Iroquoian)

(48) a. rakhsótha
rak-hsot=ha
1SG>M.SG-be.grandparent.to=DIM
he is grandparent to me
'my grandfather'

b. riiaterè:'a
rii-atere'=a
1SG>M.SG-have.as.grandchild=DIM
I have him as grandchild
'my grandson'

c. iatate'kèn:'a
hi-atate-'ken'=a
M.DU.AGT-REFL-have.as.sibling=DIM
they two have each other as siblings
'those two siblings', 'his brother', 'her brother', 'his sister'

(Mithun in progress: Sec. 10.1)

Because kinship verbs have meanings that are rather atypical for both verbs and nouns (atypical as verbs because they refer, and atypical as nouns because they describe a relation), they often result in a class of words which have a mix of nominal and verbal characteristics (Evans 2000: 160).

One final issue in the study of flexible noun-verb categories is directionality: while it is common for North American languages to allow most or all of its words to function directly as verbs without any overt derivational morphology—a phenomenon called *omnipredicativity* (Launey 1994, 2004)—not all words may function directly as arguments. The most well-known case of omnipredicativity is Classical Nahuatl (Launey 1994, 2004), for which the term was originally proposed. We have also seen this phenomenon at work in Salishan and Wakashan languages above. The debate over the noun-verb distinction in languages of the Pacific Northwest is in large part a debate over directionality: any lexical item in these languages may function as a verb, but the debate hinges crucially on whether lexical items have special behavior or marking when functioning as nouns, which would providence evidence that some roots are truly verbal. Beck (2013), for example, analyzes Lushootseed as exhibiting unidirectional omnipredicativity. The examples in (49) show how a wide variety of words can function as verbs, including lexical pronouns (a), adverbs (b), numerals (c), interrogatives (d), and even prepositional phrases (e). (Note that Lushootseed sentences are generally verb-initial.)

Lushootseed (Salishan)

(49) a. **ʔəca** kʷi łuɬiɬič'id tiʔiɬ tatačulbixʷ

ʔəca	kʷi	łu=łi-łič'i-d	tiʔiɬ	tatačulbixʷ
I	REM	IRR=ATTN-cut-ICS	DIST	big.game

'the one who will cut up the big game animal is me'

b. **tudiʔ** tə dukʷibəɬ

tudiʔ	tə	dukʷibəɬ
over.there	NSPEC	Changer

'Changer is over there'

c. **saliʔ** kʷi łuʔəƛ'txʷ čəxʷ č'ƛ'aʔ

saliʔ	kʷi	łu=ʔəƛ'-txʷ	čəxʷ	č'ƛ'aʔ
two	REM	IRR=come-ECS	2SG.S	stone

'you will bring to stones' (lit. 'the stones that you will bring are two')

d. tu**čad**əxʷ čəxʷ
tu=**čad**=əxʷ čəxʷ
PAST=**where**=now 2SG.S
'**where** have you been?'

e. tul'**ʔal** čəd sqaǰət
tul'-**ʔal** čəd sqaǰət
CNTRFG-**at** 1SG.S Skagit
'I am from Skagit' (Beck 2013: 197–198)

However, the distinction between noun and verb in Lushootseed appears in other places, for example in negation contexts. When nominal stems occur with the negative predicate *xʷiʔ*, the resulting meaning is 'there is no', as shown in (50).

Lushootseed (Salishan)

(50) a. xʷiʔ gʷəstutubš
xʷiʔ gʷə=stu-tubš
NEG SBJ=ATTN-man
'there are no boys'

b. xʷiʔ gʷəstabəxʷ
xʷiʔ gʷə=stab=əxʷ
NEG SBJ=what=now
'there is nothing (left)' (Beck 2013: 211)

When verbal stems occur with the same negative predicate, the resulting meaning is to negate the verb. Additionally, the verb must be nominalized with the *s=* proclitic:

Lushootseed (Salishan)

(51) a. xʷiʔ uʔxʷ gʷə**s**łaʔ ʔə tiʔəʔ čaləs
xʷiʔ uʔxʷ gʷə=**s**=łaʔ ʔə tiʔəʔ čaləs-s
NEG PTCL SBJ=**NZR**=arrive PREP PROX hand-3.POSS
'his hand still cannot reach it' (lit. 'there is no his hand's reaching it')

b. xʷiʔəxʷ gʷə**s**x̌aabs dxʷʔal słčil ʔə tsiʔəʔ bədaʔs
xʷiʔ=əxʷ gʷə=**s**=x̌aab=s dxʷ-ʔal s=łčil ʔə tsiʔəʔ
NEG=now SBJ=**NZR**=cry=3.POSS CNTRPT-at NZR=arrive PREP PROX:F
bədaʔ-s
offspring-3.POSS
'(the baby) isn't crying (even) when her daughter arrives' (Beck 2013: 211)

Both this and the preceding section have demonstrated the ways that North American languages call into question even the most fundamental distinction between nouns and verbs. Though most linguists working on languages which are controversial in this regard share the consensus that the distinction is present but merely subtle, the diversity of ways in which languages blur this distinction is nonetheless remarkable. For such a seemingly fundamental distinction, there are many North American languages which have surprisingly few areas of the grammar that are sensitive to it.

6. Conclusion

This chapter has illustrated just some of the myriad ways that North American languages structure their words into classes. Most, perhaps all, North American languages present challenges to the definition or status of traditional word classes. As a general tendency, North American languages do not grammaticalize rigid distinctions between word classes to the same extent that Indo-European languages do. Sometimes this difference is drastic, as in the case of Nuuchahnulth—in which word classes are mere discourse tendencies—and sometimes less so, as in the case of Central Alaskan Yup'ik—in which the majority of roots and derivational affixes are strongly specified for lexical category, but where nonetheless a minority of roots and affixes show ambiguity. The extensive lack of sensitivity in different areas of the grammars of North American languages to the distinctions between reference (nouns), predication (verbs), and modification (adjectives) suggest that the development of lexical categories in a language is not necessarily a given. Certain historical processes are common, and frequently lead to the grammaticalization of the same or similar categories across languages, but never in all areas of the grammar, or for all words in the lexicon, or in exactly the same way (Hengeveld 1992a, 1992b, 2010). The data from North American languages, taken together, challenge our fundamental understanding of word classes.

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List of Abbreviations

1	first person
2	second person
3	third person
4	fourth person
ABS	absolutive
AGT	agent
AND	andative
APPL	applicative
ART	article

ATTN	attenuative
AUX	auxiliary
BEN	benefactive
CAUS	causative
CNTRFG	centrifugal
CNTRPT	centripetal
COND	conditional
CONT	continuative
COP	copula
CTMP	contemporative
DECL	declarative
DEF	definite
DEM	demonstrative
DET	determiner
DIM	diminutive
DIR	directive transitivizer (Lillooet) directional (Southern Pomo)
DIST	distal
DU	dual
DUR	durative
ECS	external causative
EMPH	emphatic
EP	epenthetic
ERG	ergative
EVID	evidential
EXIST	existential
F	feminine
FGR	falling grade
FI	feminine-indefinite
FACT	factual
FUT	future
HAB	habitual
ICS	internal causative
IMM	immediate
IND	indicative
INDEF	indefinite
INFER	inferential
INSTR	instrumental
INTER	interrogative
INTR	intransitive
IPFV	imperfective
IRR	irrealis
M	masculine
MOM	momentaneous
NAME	proper name

NARR	narrative
NEG	negative
NEUT	neuter / neutral position
NF	non-first person
NOM	nominative
NSPEC	non-specific
NZR	nominalizer
OBJ	object
PAST	past
PAT	patient
PFV	perfective
PL	plural
PLACT	pluractional
POSS	possessive
PREP	preposition
PRES	present
PROX	proximal
PTCL	particle
PTCP	participle
REFL	reflexive
REM	remote
S	subject
SBJ	subjunctive
SG	singular
STAT	stative
SUBJ	subject
T	thematic clitic (Creek)
TEL	telic
THEME	theme
TR	transitive