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Word classes

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1. Introduction

Word classes (traditionally called *parts of speech*) are groups of words in a language that 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 Noun, verb, and adjective are the most widely known word classes, but there are many possible others. Languages vary widely in terms of the number of word classes they have, the characteristics that define those classes, and the proportion of words in the language that fall into each class (Schachter & Shopen 2007: 1; Velupillai 2012: 122; Smith 2015). Moreover, while language researchers agree that all languages have word classes, they disagree over whether word classes are categories of individual *languages*, categories of *language* generally, categories of *human cognition*, categories of *language science*, or some combination of those possibilities (Haspelmath 2018). The scientific study of word classes is simultaneously one of the longest-standing and yet most active and exciting areas of language research today.

Native North American languages have a unique part to play in this research. Historically, the grammars of Native American languages challenged traditional conceptions of parts of speech because they did not cleanly align with the word classes of the classical European tradition that arose from the study of Latin and Greek and were once thought to be universal (Anward, Moravcsik & Stassen 1997: 167; Vogel & Comrie 2000: xiii). In one of the earliest surveys of North American languages, for example, Gallatin finds it noteworthy that most of these languages can convert practically any word into a verb (Gallatin 1836: 175–176). These deviations from the classical model of parts of speech became more evident after Franz Boas and then Edward Sapir encouraged their students to analyze languages on language-internal evidence alone, rather than impose grammatical models from other languages and traditions. Sapir put it most strongly:

A part of speech outside of the limitations of syntactic form is but a will o' the wisp. For this reason no logical scheme of the parts of speech—their number, nature, and necessary confines—is of the slightest interest to the linguist. Each language has its own scheme. Everything depends on the formal demarcations which it recognizes. (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 over the past century and a half. Early Americanists became interested in

¹ This definition is intentionally broad, because linguists disagree—often quite fundamentally—on both what word classes are, and how to define them in particular languages. 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 work in the Radical Construction Grammar framework (Croft 2001), happily accept different inflectional classes or valence classes as types of word classes.

word classes in North American languages largely due to languages which seemed to blur the distinction between noun and verb (Vapnarsky & Veneziano 2017: 1).

In addition to being an area of theoretical interest for language researchers, an understanding of word classes is useful to speakers and language learners for a variety of reasons. Knowing the category of a word provides speakers with a great deal of information about how that word is *used*. The part of speech for a word can indicate which affixes that word is allowed to take, how that word combines with other words or affixes to create new words, and what roles that word can play in a sentence, among other information. Knowledge of word classes is quite useful for both language learning and language instruction, and therefore this information is especially useful for speakers of Native American languages who are in the process of learning and/or revitalizing their language.

This chapter has two primary goals:

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

The remainder of this chapter proceeds as follows: Section 2 describes the major types of word classes, namely lexical vs. functional classes and open vs. closed classes. Section 3 surveys the major strands of research on parts of speech in North American languages specifically. Section 4 concludes by summarizing the distinct contribution of North American languages to the study of word classes.

2. Types of word classes

As mentioned in the introduction, the structure and purpose of word classes vary both within and across languages. Word classes may contain lexical (“content”) words or grammatical (“function”) words, and they may be large (“open”) classes or small (“closed”) classes. This section describes each of these types.

2.1. Content words vs. function words

The most fundamental division between word classes is whether they are *lexical categories* or *functional categories* (Haspelmath 2001; Rijkhoff 2007). Lexical categories are often described as containing “content words”, because they refer to things, events, or properties in the world. Example (1) shows a few lexical words in Arapaho (Algonquian).

	<u>Arapaho (Algonquian)</u>	
(1)	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’
	nihooyoo-	‘to be yellow’ (inanimate subject)
	nihooneihi-	‘to be yellow’ (animate subject)
	nonóóhowó’	‘I see him/her’
	neihoownoohówoo	‘I don’t see him/her’

(Cowell & Moss 2008: 56, 61, 74–75)

In contrast to lexical categories, functional categories contain words whose primary function is to indicate grammatical relationships between words, or to further specify details about content words. These are also called “function words”, and they typically have more abstract meanings. Example (2) shows a few function words in Creek (Muskogean).

	<u>Creek (Muskogean)</u>	
(2)	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: 147, 304, 331–332, 357–359, 360–362)

North American languages have a great diversity of functional categories.

It is important to note that the terms “lexical category” and “functional category” are not used the same way by all researchers. Both “lexical category” and “functional category” have been used to refer to what I am here calling word classes (e.g. Payne 1997: 32). Sometimes “word class” is used to refer to what I am here calling lexical categories (Rijkhoff 2007: 710). Another term that appears in the literature is *syntactic categories*; again, 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 also not always a clear one. *Adpositions* (prepositions and postpositions) are often difficult to categorize in this regard (Haspelmath 2001: 16539; Smith 2015: 178). Consider these two uses of the word *by* in English (both taken from the Corpus of Contemporary American English (Davies 2020)):

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

In example (3a), *by* is primarily lexical, meaning something like ‘next to’ or ‘in proximity to’. In (3b), *by*, by contrast, is primarily a functional marker of the agent of a passive clause and has very little lexical content.

Chitimacha (isolate) has this same mix of lexical and functional uses of adpositions. In (4), the postposition *hix* may mean either ‘with, by means of’ (its lexical sense) or mark the agent of a transitive verb (its functional sense).

- (4) a. 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 koo-mi-cu-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 typically derive historically from lexical words, a common process known as *grammaticalization* (Hopper & Traugott 2003). Oftentimes a language will retain the older, lexical meaning alongside the newer, functional meaning.

A similar example from North American languages of the cline between lexical and functional uses of the same word is the use of verbs 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 both lexical and functional uses of ‘sit’, ‘stand’, and ‘lie’ in Mandan (Siouan).

Mandan (Siouan)

- (5) a. wérex **nakóc**
 wérex **nak-oc**
 pot **sit-PRES**
 ‘A pot was there (**sitting**).’
- b. mah ísekan**akeròm**akoc
 ‘he was (**sitting**) making an arrow’
- c. múixtèna **téromakoc**
 múi-xtε-na **tε-romakoc**
 village-big-EMPH **stand-NARR.PAST**
 ‘There was a big village.’
- d. ptáh**akeka**’
 ‘he was running around (**upright**)’
- e. má:ta **makóm**akoc
 má:ta **mak-om**akoc
 river **lie-NARR.PAST**
 ‘The river was there’

- f. miníxamakēka’
 ‘he was playing (**prone**)’ (Kennard 1936: 31)

2.2. Open classes vs. closed classes

Another fundamental distinction in types of word classes is that of *open classes* vs. *closed classes*. Open classes are typically large and have new words added to them frequently, whereas closed classes are typically small and limited to a fixed set of words, and add new members only slowly and infrequently (often through that same process of 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, with speakers adding more nouns 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, which form a semantic unit with their verb, and often indicate things like direction or aspect.² Chitimacha, for example, has a closed set of 10 preverbs, shown below (Hieber 2018). By contrast, Menominee (Algic) has a large open class of preverbs (Bloomfield 1962: 214).

<u>Chitimacha (isolate)</u>	
(6)	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)

Preverbs in North American languages occasionally occur with nouns as well (and have been called *prenouns* in this case). Examples of this in Chitimacha and Potawatomi are shown below.

<u>Chitimacha (isolate)</u>	
(7)	a. hi nicw-iqi Verb
	to to.water-NF.SG
	‘he came to a body of water’ (Swadesh 1939a: A1a.2)
	b. hi kuti Noun
	to head
	‘end, endpoint’ (Swadesh 1939a: A22d.10)

² In some language families, the term *preverb* is used for certain types of verbal prefixes with more 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 similar to those of syntactically free preverb classes in other languages.

- Potawotami (Algic)
- (8) a. kche- ‘big, great, very’
 b. kche-bonimget ‘It’s really snowing.’ Verb
 c. kche-wigwam ‘a big house’ Noun

(Lockwood 2017: 62–63)

While open classes tend to be lexical ones and closed classes tend to be functional ones, this is just a tendency and not absolute (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, we know of no North American languages which have 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. Most languages in the sample lack an adjective class entirely (17 languages), and the few languages with an open adjective class are constrained to Mesoamerica (3 languages). Cupeño (Uto-Aztecan), for example, 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, and Rood (1996: 594–595) calls these “true adjectives”. The only words in this category are *Riwa·c* ‘big’, *Rikic* ‘little’, *riya·s* ‘old’, and colors such as *khac* ‘white’ and *k^wah·c* ‘red’.

3. Word classes in native North American languages

This section describes the most prominent themes in parts-of-speech research in North America. The difficulties in determining word classes in native 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; Section 3.1), 2) whether a given language distinguishes noun and verb (Section 3.2), and 3) whether a given language has an adjective category (Section 3.3).

Languages in other regions of the world present different challenges. In Southeast Asia and the neighboring regions, for example, a more common problem is determining whether a language has lexical categories at all (take for example Gil’s (1994; 2013) claim that Riau Indonesian (Austronesian) has no parts of speech). The ubiquitous presence of (poly)synthesis in North American languages (Rice, this volume), however, 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)
- (9) 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 function 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 parts of speech 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 2017: 155; Clemens 2019: 372). Section 3.1 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).

3.1. 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 (isolate) 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 many 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’, *nicwipuyuna* ‘they used to approach water’, etc. Each of these inflectional possibilities is called a *wordform*.

As mentioned above, words may be categorized differently depending on whether one is analyzing the root, stem, or wordform. In the West Greenlandic language (Inuit-Yupik-Unangan), the lexical category of a word is typically obvious at all three levels. In example (10), for instance, 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 (Inuit-Yupik-Unangan)
- (10) 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 (Iroquoian) 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 (11) shows two roots in Cherokee.

- Cherokee (Iroquoian)
- (11) a. -jaʔt- ‘attach asymmetrically at an indentation’
 b. -húú- ‘stoma, opening’ (Haag 2006: 137)

Example (12) shows four compounds that can be formed using these roots.

Cherokee (Iroquoian)

- (12) 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-ívká**
 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-ívká**
 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 (13a) and (13b) the result is a noun, and in (13c) and (13d) 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 (13) and (14) 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 (Algonquian)

- (13) a. miskozi
miskw-izi
red-3SG.IND
 ‘it is red’ (Nichols 2020)
- b. miskobag
miskw-bagw
red-leaf
 ‘red leaf’ (Nichols 2020)

Menominee (Algonquian)

- (14) 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 (13), 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 (14) 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 (Frachtenberg 1922: 318) claims that any stem in Coos (Coosan) may be used either nominally or verbally as appropriate. This is demonstrated in (15).

- Coos (Coosan)
- (15) a. **po:^wkw**-is
 slave-NZR
 ‘slave’ (Frachtenberg 1922: 329)
- b. **ŋ-po:^wkw**-its
 1SG-enslave-TR
 ‘I enslaved him’ (Frachtenberg 1922: 329)
- c. **hu:^wmis**
 ‘woman’ (Frachtenberg 1922: 330)
- d. **ŋ-hu:^wmis**-its
 1SG-marry-TR
 ‘I marry (her)’ (Frachtenberg 1922: 330)
- e. **tso:we^xtl**
 ‘grease’ (Frachtenberg 1922: 329)
- f. **ŋ-tso:^wx^tl**-ts
 1SG-grease-TR
 ‘I greased it’ (Frachtenberg 1922: 329)
- g. **tl’kwi:**
 ‘blanket’ (Frachtenberg 1922: 328)
- h. **tl’kwi**-t
 cover-TR
 ‘she covered (them) with blankets’ (Frachtenberg 1922: 328)

For the Tonkawa (isolate) language, Hoijer (Hoijer 1933: 23–24) famously claimed that “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)
- (16) a. **notox-ʔa:-la**
 hoe-DEF-NOM.SG
 ‘the hoe’ (Hoijer 1946: 297)

b. **notx-o-ʔ**

hoe-DECL-3.PRES

'he hoes it'

(Hojjer 1946: 297)

Andrade (1933: 179) likewise analyzes Quileute (Chimakuan) 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).

Despite the extensive morphological marking so prevalent in North American languages, it is nonetheless possible for even fully inflected wordforms to blur the distinction between major lexical categories like noun and verb. In many North American languages, for example, fully inflected morphological verbs may be used as nominals without any special affixes or other modification. In these cases, what appear to be ordinary verbs are functioning as nouns, as the following examples illustrate.

Chitimacha (isolate)

- (17) a. dzampuyna
dza-m-puy-na
thrust-PLACT-HAB-NF.PL
'they usually thrust/spear (with it)'
'spear'

(Swadesh 1939b: 56)

- b. pamtuy-na
pa-m-tuy-na
ford-PLACT-HAB-NF.PL
'they usually cross (it)'
'bridge'

(Swanton 1920: 17)

Cayuga (Iroquoian)

- (18) a. ʔtekhonyáʔthaʔ
ye-ate-khw-ʔni-aʔt-haʔ
INDEF.AGT-REFL-meal-make-INSTR-IPFV
'one makes a meal with it'
'restaurant'
- b. kaʔtanéhkwi
ka-rʔt-a-nehkwi
NEUT.AGT-log-EP-haul.IPFV
'it hauls logs'
'horse'

(Mithun 2000: 200)

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 *kaʔtanéhkwi* 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.

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 parts of speech. 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:

<u>Central Alaskan Yup'ik (Inuit-Yupik-Unangan)</u>				
(19)	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 2017: 161)

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

<u>Central Alaskan Yup'ik (Inuit-Yupik-Unangan)</u>				
(20)	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 2017: 161)

However, any transitive verb whose object is not third person has suffixes which never appear in nominal inflections, such as the examples in (21).

(21)	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), a process known as insubordination (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 parts of speech.

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

- Menominee (Algonquian)
- (22) 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 (22) have the same surface and underlying forms,³ 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 (isolate) 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 (23).

<u>Chitimacha (isolate)</u>					
(23)	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 the 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 in terms of what level categorization applies to. 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. In the next section, we will examine languages where the noun-verb distinction seems to be especially weak.

3.2. The noun-verb distinction

One of the most controversial ideas in linguistics is that some languages do not distinguish nouns and verbs. This section discusses several cases where data from North American languages have contributed to this debate.

³ Note that the final /w/ in both examples is lost due to a synchronic process of final consonant cluster reduction.

Perhaps the most famous claim that a language lacks a noun-verb distinction involves the Inuit-Yupik-Unangan 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 Inuit-Yupik-Unangan has no noun-verb distinction. Sadock (1999) and Mithun (2017) 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 (24a) must attach to a verb root and always produces a noun, while the suffixes in (24b) must attach to verb roots and always produce new verbs.

<u>Central Alaskan Yup'ik (Inuit-Yupik-Unangan)</u>					
(24)	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 2017: 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 2017: 163), raising the possibility that these roots are polycategorical, 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 2017: 168–169). This is exemplified in (25).

<u>Central Alaskan Yup'ik (Inuit-Yupik-Unangan)</u>	
(25)	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 2017: 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 (25) 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 parts of speech, or at the very least specific nominal or verbal senses of a root. Mithun (2017) uses data like these to argue that cases like *equk / equg-* are two separate homophonous forms, rather than a single polycategorical root.

The second complication for 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 (26) demonstrate these problems.

<u>Central Alaskan Yup'ik (Inuit-Yupik-Unangan)</u>				
(26)	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 2017: 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, and one equally as famous as Inuit-Yupik-Unangan, 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 Chapter 30 of this volume on Language Contact and Language Areas.) 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.

<u>Lillooet (Salishan)</u>		
(27)	a. šmúlač	ta=k ^w úk ^w pi? [?] =a
	woman	DET=chief=EXIST
		'The chief is a woman.'
	b. k ^w úk ^w pi?	ta=šmúlač=a
	chief	DET= woman =EXIST
		'The woman is a chief.'
	c. lóləχ	ta=k ^w úk ^w pi? [?] =a
	smart	DET=chief=EXIST
		'The chief is smart.'
	d. k ^w úk ^w pi?	ta= lóləχ =a
	chief	DET= smart =EXIST
		'The smart one is a chief.'
	e. λ'iq	ta=k ^w úk ^w pi? [?] =a
	arrive	DET=chief=EXIST
		'The chief arrived.'

- f. $k^wúk^wpi?$ $ta=\lambda'íq=a$
 chief DET=**arrive**=EXIST
 ‘The one who arrived is a chief.’
- g. $\lambda'ac'χ-ən-č-aš$ $ta=k^wúk^wpi?=a$
see-DIR-1SG.OBJ-3ERG DET=**chief**=EXIST
 ‘The chief saw me.’
- h. $k^wúk^wpi?$ $ta=\lambda'ac'χ-ən-č-áš=a$
 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 (27) would appear to support an analysis of Lillooet stems as polycategorical 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 (a.k.a. Nootka).

- Nuuchahnulth (a.k.a. Nootka; Wakashan)
- (28) a. $qo:\lambda'as-ma$ $\lambda'i:\eta-\lambda'i:$
 man-3SG.IND **large**-DEF
 ‘The large one is a man.’
- b. $\lambda'i:\eta-ma:$ $qo:\lambda'as-\lambda'i$
large-3SG.IND man-DEF
 ‘The man is large.’
- c. **mamo:k**-ma $qo:\lambda'as-\lambda'i$
work-3SG.IND man-DEF
 ‘The man is working.’

- d. qo:ʔas-ma **mamo: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, in which case they do not require the definite suffix (Jacobsen 1979: 107).

While linguists generally agree over these descriptive facts about Wakashan languages, they disagree over how these facts should be interpreted (Jacobsen 1979: 103). Davidson (2002), describing Makah (Wakashan), states:

I claim that the essential difference between Southern Wakashan and a language like Latin is one of degree, not of kind: it is not that Latin has nouns and verbs and Southern Wakashan does not, but that the degree of grammaticalization of the classes is much greater in Latin than in Southern Wakashan. (Davidson 2002: 325)

By contrast, Nakayama (2001) defines word classes in Nuuchahnulth as discourse tendencies rather than clearly-delineated categories:

In sum, word classes in Nuuchahnulth are not so much structural categories as behavioral categories: they represent groups of words defined by a set of regularities that are formed and maintained through repeated use in discourse rather than purely structural properties. (Nakayama 2001: 57)

Despite the permeability in these categories, Nakayama nonetheless considers the nominal vs. verbal distinction in Nuuchahnulth “to be fairly solid and of far-reaching structural relevance” (Nakayama 2001: 47).

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 Section 3.1 above. For Siouan, Helmbrecht (2002) investigates the noun-verb distinction in Hocank (Winnebago), and finds that there is no morphology 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 (29) shows a few examples of kinship verbs in Mohawk.

Mohawk (Iroquoian)

- (29) a. rakhsótha
rak-hsot=ha
1SG>M.SG-be.grandparent.to=DIM
he is grandparent to me
'my grandfather'
- b. riiaterè:'a
rii-aterè='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, but 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 provide evidence that some roots are truly verbal. Beck (2013), for example, analyzes Lushootseed (Salishan) as exhibiting unidirectional omnipredicativity. The examples in (30) show how a wide variety of words can function as verbs, including lexical pronouns (29a), adverbs (29b), numerals (29c), interrogatives (29d), and even prepositional phrases (29e). (Note that Lushootseed sentences are generally verb initial.)

Lushootseed (Salishan)

- (30) a. **ʔəca** k^{wi} lʉhilič' id tiʔil tatačulbix^w
ʔəca k^{wi} lʉ=li-hič'i-d tiʔil tatačulbix^w
I REM IRR=ATTN-cut-ICS DIST big.game
 'the one who will cut up the big game animal is me'
- b. **tudiʔ** tə duk^wibəł
tudiʔ tə duk^wibəł
 over.there NSPEC Changer
 'Changer is over there'
- c. **saliʔ** k^{wi} lʉʔəł'tx^w čəx^w č'ł'aʔ
saliʔ k^{wi} lʉ=ʔəł'-tx^w čəx^w č'ł'aʔ
two REM IRR=come-ECS 2SG.S stone
 'you will bring to stones' (lit. 'the stones that you will bring are two')
- d. **tučadəx^w čəx^w**
 tu=čad=əx^w čəx^w
 PAST=**where**=now 2SG.S
 '**where** have you been?'
- e. **tul'ʔal** čəd sqajət
 tul'-**ʔal** čəd sqajət
 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 *x^{wi}ʔ*, the resulting meaning is 'there is no', as shown in (31).

Lushootseed (Salishan)

- (31) a. **x^{wi}ʔ** g^{wə}stutubš
 x^{wi}ʔ g^{wə}=stu-tubš
 NEG SBJ=ATTN-man
 'there are no boys'
- b. **x^{wi}ʔ** g^{wə}stabəx^w
 x^{wi}ʔ g^{wə}=stab=əx^w
 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)

- (32) a. **x^{wi}ʔ** uʔx^w g^{wə}słəʔ ʔə tiʔəʔ čələs
 x^{wi}ʔ uʔx^w g^{wə}=s=łəʔ ʔə tiʔəʔ čələs-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. x^wiʔəx^w g^wəsx̄aabs dx^wʔal sl̄çil ʔə tsiʔəʔ bədaʔs

x ^w iʔ=əx ^w	g ^w ə=s=x̄aab=s	dx ^w -ʔal	s=l̄çil	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 lexical category 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.

3.3. The adjective category

Given the uncertainty over the categories noun and verb in North American languages, it should be no surprise that the existence of an adjective category in many languages is equally if not more uncertain. The main reason for this is that in most North American languages, words denoting prototypical adjective concepts such as value, dimension, age, speed, physical property, and color (Dixon 1977) are either morphological verbs or nouns. There are few if any morphosyntactic constructions dedicated to adjectives. However, in most of these languages, words for prototypical property concepts exhibit behaviors which are different from other words in their class, often justifying the recognition of an adjectival subclass of verbs or nouns.

There are North American languages with a large, open class of adjectives such as Chitimacha (isolate, noted above) or Central Pomo (Pomoan) (Mithun 1999: 474), but this is rare on the continent. 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 also already seen the small class of adjectives in Wichita (Caddoan) (Rood 1996: 594–595).

Most North American languages arguably lack an adjective class, such that property concepts are a subcategory of noun, verb, or divided between both. There are only a few North American languages in which property concepts are grammaticalized as nouns; the great majority of languages code property concepts as a subclass of verbs. Rincón Luiseño (Uto-Aztecan) is one language which codes prototypical property concepts like nouns. While most modifiers are derived from verbs, there are a handful which take noun endings. These include the property concepts that Dixon (1977) finds to be the most prototypical of adjective classes crosslinguistically, 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 “absolute” suffix⁴ in these examples has various realizations—here *-ch*, *-l*, or *-sh*—and that the plural of ‘girl’ is irregular / suppletive.)

⁴ In the North American tradition, the term *absolute* 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

- Rincón Luiseño (Uto-Aztecan)
- (33) 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 (isolate) 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 & Scancarrelli (1985), Chafe (2012), and 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 coding of 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)
- (34) 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)
- (35) a. *ča:č-a-ø*
 fly-DUR-3ABS
 ‘it is/was flying’
- (Andrade 1933: 267)
- b. *tsi?da-?a-ø*
 handsome-DUR-3ABS
 ‘he is handsome’
- (Andrade 1933: 257)

descriptions of Luiseño often use this former, more traditional sense of the term. I retain that usage in the examples here.

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 (37) shows the different stems for ‘big’ and ‘small’.

(37) Yurok (Algie)

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 seem to be no substantive behavioral differences between property words and normal verbs that identify property words alone. In Seneca (Iroquoian), for instance, words expressing property concepts do belong to a subclass of verbs that are limited to stative aspect, but there are numerous other, non-adjectival words which belong to this class as well (Chafe 2012). Example (38) lists representative sets of property words and event words in Seneca, both of which are restricted to the stative aspect.

Seneca (Iroquoian)

- (38) 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’
 owëhde’ ‘it has something added to it’
 hotö:de’ ‘he hears it’
 honóhdö’ ‘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-adjectival concepts as well.

Finally, some languages distribute adjectival concepts across multiple word classes. In Chinook, 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. Conclusion

This chapter has illustrated just some of the myriad ways that North American languages structure their words into classes. The discussion in Section 3 has focused on just the major categories of nouns, verbs, and adjectives. For the other, minor categories, the diversity of word classes and the difficulties in identifying them only multiplies. Most, perhaps all, North American languages present challenges to the definition or status of 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 parts of speech.

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List of Languages

Alabama (Muskogean)
 Arapaho (Algic)
 Cahuilla (a.k.a. Ivilyuat; Uto-Aztecan)
 Cayuga (Iroquoian)
 Central Alaskan Yup'ik (a.k.a. Yupik; Inuit-Yupik-Unangan)
 Central Pomo (Pomoan)
 Cherokee (Iroquoian)
 Chinook (a.k.a. Coastal Chinook; Chinookan)
 Chitimacha (isolate)
 Choctaw (Muskogean)
 Coos (Coosan)
 Creek (a.k.a. Muskogee, Seminole; Muskogean)

Cupeño (Uto-Aztecan)
 English (Indo-European)
 Gitksan (Tsimshianic)
 Greek, Classical (Indo-European)
 Hocank (a.k.a. Ho-Chunk; Winnebago; Siouan)
 Hopi (Uto-Aztecan)
 Kiowa (Kiowa-Tanoan)
 Kutenai (a.k.a. Ksanka, Ktunaxa; isolate)
 Lakota (a.k.a. Teton Sioux; Siouan)
 Latin (Indo-European)
 Lillooet (Salishan)
 Luiseño (Uto-Aztecan)
 Lushootseed (a.k.a. Puget Sound Salish, Skagit-Nisqually; Salishan)
 Maidu (Maidun)
 Makah (Wakashan)
 Mandan (Siouan)
 Menominee (a.k.a. Menomini; Algic)
 Mohawk (Iroquoian)
 Mojave (a.k.a. Mohave; Yuman-Cochimí)
 Nahuatl, Classical (a.k.a. Aztec; Uto-Aztecan)
 Navajo (a.k.a. Navaho; Na-Dene)
 Nez Perce (a.k.a. Nimipuutímt; Sahaptian)
 Nuuchahnulth (a.k.a. Nootka, Nuu-chah-nulth; Wakashan)
 Ojibwe (a.k.a. Ojibwa, Otchipwe; Algic)
 Potawatomi (a.k.a. Pottawatomic, Nishnaabemwin; Algic)
 Quileute (a.k.a. Quillayute; Chimakuan)
 Riau Indonesian (a.k.a. Bahasa; Austronesian)
 Seneca (Iroquoian)
 Southern Paiute (a.k.a. Colorado River Numic, Ute-Chemehuevi; Uto-Aztecan)
 Takelma (isolate)
 Tuscarora (Iroquoian)
 West Greenlandic (a.k.a. Kalaallisut; Inuit-Yupik-Unangan)
 Wichita (Caddoan)
 Yuman (a.k.a. Kwtsaan, Quechan, Yuma; Yuman-Cochimí)
 Yurok (a.k.a. Chillula, Mita, Pekwan, Rikwa, Sugon, Weitspek, Weitspekan; Algic)

List of Terminology

adposition
 affix
 agent
 argument
 article
 aspect
 behavioral potential
 case
 clitic
 closed class
 compound
 continuative
 derivation
 enclitic
 final (component; Algonquian)
 glottal stop
 grammatical category
 grammaticalization
 imperfective

inflection
 initial (component; Algonquian)
 intransitive
 isolate
 lexical category
 medial (component; Algonquian)
 morphology
 nominal
 object
 omnipredicativity
 open class
 part of speech
 patient
 perfective
 postposition
 predicate
 prefix
 prenoun
 preposition
 preverb
 proclitic
 progressive
 relativization
 root
 stative (aspect)
 stem
 subject
 subordination
 suffix
 suppletion
 syntactic category
 tense
 transitive
 typology
 word class
 wordform

List of Abbreviations

1	first person
2	second person
3	third person
4	fourth person
ABS	absolute
AGT	agent
AND	andative
ATTN	attenuative
CAUS	causative
CNTRFG	centrifugal
CNTRPT	centripetal
COND	conditional
CTMP	contemporative
DECL	declarative

DEF	definite
DET	determiner
DIM	diminutive
DIR	directive transitivizer
DIST	distal
DU	dual
DUR	durative
ECS	external causative
EMPH	emphatic
EP	epenthetic
ERG	ergative
EXIST	existential
F	feminine
FUT	future
HAB	habitual
ICS	internal causative
IMM	immediate
IND	indicative
INDEF	indefinite
INSTR	instrumental
INTR	intransitive
IPFV	imperfective
IRR	irrealis
M	masculine
NARR	narrative
NEG	negative
NEUT	neuter / neutral position
NF	non-first person
NOM	nominative
NSPEC	non-specific
NZR	nominalizer
OBJ	object
PAST	past
PFV	perfective
PL	plural
PLACT	pluractional
POSS	possessive
PREP	preposition
PRES	present
PROX	proximal
PTCL	particle
PTCP	participle
REFL	reflexive
REM	remote
SBJ	subjunctive

SG	singular
SUBJ	subject
TR	transitive
THEME	theme