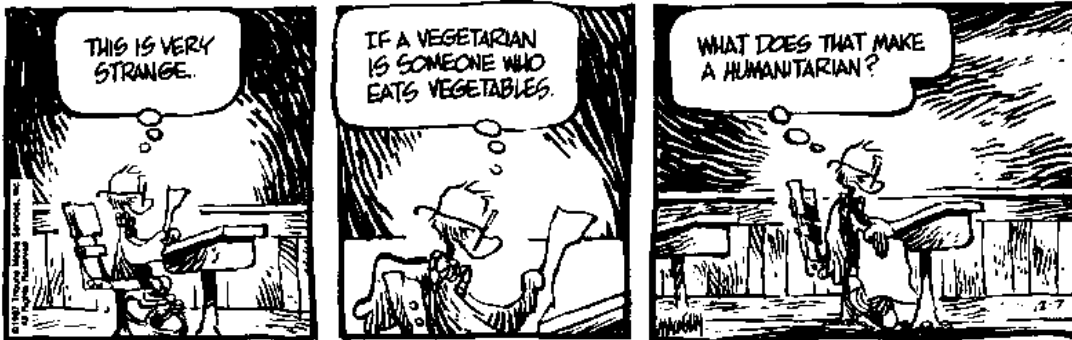


because they would know the meaning of its individual parts—the root *ugly* and the affixes *-ify* and *-cation*.

We said earlier that knowledge of morphology includes knowledge of individual morphemes, their pronunciation, and their meaning, and knowledge of the rules for combining morphemes into complex words. The Mock Turtle added *-ify* to the adjective *ugly* and formed a verb. Many verbs in English have been formed in this way: *purify*, *amplify*, *simplify*, *falsify*. The suffix *-ify* conjoined with nouns also forms verbs: *objectify*, *glorify*, *personify*. Notice that the Mock Turtle went even further: he added the suffix *-cation* to *uglify* and formed a noun, *uglification*, as in *glorification*, *simplification*, *falsification*, and *purification*. By using the **morphological rules** of English, he created a new word. The rules that he used are as follows:

Adjective + <i>ify</i>	→	Verb	‘to make Adjective’
Verb + <i>cation</i>	→	Noun	‘the process of making Adjective’

Derivational Morphology



Macnelly/King Features Syndicate

Bound morphemes like *-ify*, *-cation* and *-arian* are called derivational morphemes. When they are added to a base, a new word with a new meaning is derived. The addition of *-ify* to *pure*—*purify*—means ‘to make pure,’ and the addition of *-cation*—*purification*—means ‘the process of making pure.’ If we invent an adjective, *pouzy*, to describe the effect of static electricity on hair, you will immediately understand the sentences “Walking on that carpet really pouzified my hair” and “The best method of pouzification is to rub a balloon on your head.” This means that we must have a list of the derivational morphemes in our mental dictionaries as well as the rules that determine how they are added to a root or stem. The form that results from the addition of a derivational morpheme is called a **derived word**.

Derivational morphemes have clear semantic content. In this sense they are like content words, except that they are not words. As we have seen, when a derivational morpheme is added to a base, it adds meaning. The derived word may also be of a different grammatical class than the original word, as shown by suffixes such as *-able* and *-ly*. When a verb is suffixed with *-able*, the result is an adjective, as in *desire* + *able*. When the suffix *-en* is added to an adjective, a

verb is derived, as in *dark* + *en*. One may form a noun from an adjective, as in *sweet* + *ie*. Other examples are:

Noun to Adjective	Verb to Noun	Adjective to Adverb
boy + -ish	acquitt + -al	exact + -ly
virtu + -ous	clear + -ance	
Elizabeth + -an	accus + -ation	
pictur + -esque	sing + -er	
affection + -ate	conform + -ist	
health + -ful	predict + -ion	
alcohol + -ic		
Noun to Verb	Adjective to Noun	Verb to Adjective
moral + -ize	tall + -ness	read + -able
vaccin + -ate	specific + -ity	creat + -ive
hast + -en	feudal + -ism	migrat + -ory
im- + prison	free + -dom	run(n) + -y
be- + friend		
en- + joy		
in- + habit		
Adjective to Verb		
en + large		
en + dear		
en + rich		

Some derivational affixes do not cause a change in grammatical class.

Noun to Noun	Verb to Verb	Adjective to Adjective
friend + -ship	un- + do	pink + -ish
human + -ity	re- + cover	red + -like
king + -dom	dis- + believe	a- + moral
New Jersey + -ite	auto- + destruct	il- + legal
vicar + -age		in- + accurate
Paul + -ine		un- + happy
America + -n		semi- + annual
libr(ary) + -arian		dis- + agreeable
mono- + theism		sub- + minimal
dis- + advantage		
ex- + wife		
auto- + biography		
un- + employment		

When a new word enters the lexicon by the application of morphological rules, other complex derivations may be **blocked**. For example, when *Commun* + *ist* entered the language, words such as *Commun* + *ite* (as in *Trotsky* + *ite*) or *Commun* + *ian* (as in *grammar* + *ian*) were not needed; their formation was blocked. Sometimes, however, alternative forms do coexist: for example, *Chomskyan* and *Chomskyst* and perhaps even *Chomskyite* (all meaning ‘follower of Chomsky’s

views of linguistics'). *Semanticist* and *semantician* are both used for linguists who study meaning in language, but the possible word *semantite* is not.

Finally, derivational affixes appear to come in two classes. In one class, the addition of a suffix triggers subtle changes in pronunciation. For example, when we affix *-ity* to *specific* (pronounced “specifik” with a *k* sound), we get *specificity* (pronounced “specifisity” with an *s* sound). When deriving *Elizabeth* + *-an* from *Elizabeth*, the fourth vowel sound changes from the vowel in *Beth* to the vowel in *Pete*. Other suffixes such as *-y*, *-ive*, and *-ize* may induce similar changes: *sane/sanity*, *deduce/deductive*, *critic/criticize*.

On the other hand, suffixes such as *-er*, *-ful*, *-ish*, *-less*, *-ly*, and *-ness* may be tacked onto a base word without affecting the pronunciation, as in *baker*, *wishful*, *boyish*, *needless*, *sanely*, and *fullness*. Moreover, affixes from the first class cannot be attached to a base containing an affix from the second class: **need + less + ity*, **moral + ize + ive*; but affixes from the second class may attach to bases with either kind of affix: *moral + iz(e) + er*, *need + less + ness*.

Inflectional Morphology



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Function words like *to*, *it*, and *be* are free morphemes. Many languages, including English, also have bound morphemes that have a strictly grammatical function. They mark properties such as tense, number, person, and so forth. Such bound morphemes are called **inflectional morphemes**. Unlike derivational morphemes, they never change the grammatical category of the stems to which they are attached. Consider the forms of the verb in the following sentences:

1. I sail the ocean blue.
2. He sails the ocean blue.
3. John sailed the ocean blue.
4. John has sailed the ocean blue.
5. John is sailing the ocean blue.

In sentence (2) the *-s* at the end of the verb is an agreement marker; it signifies that the subject of the verb is third-person and is singular, and that the verb is in the present tense. It doesn't add lexical meaning. The suffix *-ed* indicates past tense, and is also required by the syntactic rules of the language when verbs are used with *have*, just as *-ing* is required when verbs are used with forms of *be*.

Inflectional morphemes represent relationships between different parts of a sentence. For example, *-s* expresses the relationship between the verb and the third-person singular subject; *-ed* expresses the relationship between the time the utterance is spoken (e.g., now) and the time of the event (past). If you say “John danced,” the *-ed* affix places the activity before the utterance time. Inflectional morphology is closely connected to the syntax and semantics of the sentence.

English also has other inflectional endings, such as the plural suffix, which is attached to certain singular nouns, as in *boy/boys* and *cat/cats*. In contrast to Old and Middle English, which were more richly inflected languages, as we discuss in chapter 8, Modern English has only eight bound inflectional affixes:

English Inflectional Morphemes		Examples
-s	third-person singular present	She wait-s at home.
-ed	past tense	She wait-ed at home.
-ing	progressive	She is eat-ing the donut.
-en	past participle	Mary has eat-en the donuts.
-s	plural	She ate the donut-s.
-’s	possessive	Disa’s hair is short.
-er	comparative	Disa has short-er hair than Karin.
-est	superlative	Disa has the short-est hair.

Inflectional morphemes in English follow the derivational morphemes in a word. Thus, to the derivationally complex word *commit + ment* one can add a plural ending to form *commit + ment + s*, but the order of affixes may not be reversed to derive the impossible *commit + s + ment = *commitment*.

Yet another distinction between inflectional and derivational morphemes is that inflectional morphemes are **productive**: they apply freely to nearly every appropriate base (except “irregular” forms such as *feet*, not **foots*). Most nouns take an *-s* inflectional suffix to form a plural, but only some nouns take the derivational suffix *-ize* to form a verb: *idolize*, but not **picturize*.

Compared to many languages of the world, English has relatively little inflectional morphology. Some languages are highly inflected. In Swahili, which is widely spoken in eastern Africa, verbs can be inflected with multiple morphemes, as in *kimeanguka* (*ki + me + anguka*), meaning ‘it has fallen.’ Here the verb root *anguka* meaning ‘fall’ has two inflectional prefixes: *ki-* meaning ‘it’ and *me* meaning ‘completed action.’

Even the more familiar European languages have many more inflectional endings than English. In the Romance languages (languages descended from Latin), the verb has different inflectional endings depending on the subject of the sentence. The verb is inflected to agree in person and number with the subject, as illustrated by the Italian verb *parlare* meaning ‘to speak’:

Io parlo	‘I speak’	Noi parliamo	‘We speak’
Tu parli	‘You (singular) speak’	Voi parlate	‘You (plural) speak’
Lui/Lei parla	‘He/she speaks’	Loro parlano	‘They speak’

Russian has a system of inflectional suffixes for nouns that indicates the nouns grammatical relation—whether a subject, object, possessor, and so on—something English does with word order. For example, in English, the sentence

Maxim defends Victor means something different from *Victor defends Maxim*. The order of the words is critical. But in Russian, all of the following sentences mean ‘Maxim defends Victor’ (the *č* is pronounced like the *ch* in cheese; the *š* like the *sh* in shoe; the *j* like the *y* in yet):

Maksim zašiščajt Viktora.
 Maksim Viktora zašiščajet.
 Viktora Maksim zašiščajet.
 Viktora zašiščajet Maksim.

The inflectional suffix *-a* added to the name *Viktor* to derive *Viktora* shows that Victor, not Maxim, is defended. The suffix designates the object of the verb, irrespective of word order.

The grammatical relation of a noun in a sentence is called the **case** of the noun. When case is marked by inflectional morphemes, the process is referred to as **case morphology**. Russian has a rich case morphology, whereas English case morphology is limited to the one possessive *-s* and to its system of pronouns. Many of the grammatical relations that Russian expresses with its case morphology are expressed in English with prepositions.

Among the world’s languages is a richness and variety of inflectional processes. Earlier we saw how German uses circumfixes to inflect a verb stem to produce a past participle: *lieb* to *geliebt*, similar to the *-ed* ending of English. Arabic infixes vowels for inflectional purposes: *kitáab* ‘book’ but *kútub* ‘books.’ Samoan (see exercise 10) uses a process of **reduplication**—inflecting a word through the repetition of part or all of the word: *savali* ‘he travels,’ but *savavali* ‘they travel.’ Malay does the same with whole words: *orang* ‘person,’ but *orang orang* ‘people.’ Languages such as Finnish have an extraordinarily complex case morphology, whereas Mandarin Chinese lacks case morphology entirely.

Inflection achieves a variety of purposes. In English verbs are inflected with *-s* to show third-person singular agreement. Languages like Finnish and Japanese have a dazzling array of inflectional processes for conveying everything from ‘temporary state of being’ (Finnish nouns) to ‘strong negative intention’ (Japanese verbs). English spoken 1,000 years ago had considerably more inflectional morphology than Modern English, as we shall discuss in chapter 8.

In distinguishing inflectional from derivational morphemes in Modern English we may summarize in the table below and the Figure (2.1) that follows it:

Inflectional	Derivational
Grammatical function	Lexical function
No word class change	May cause word class change
Small or no meaning change	Some meaning change
Often required by rules of grammar	Never required by rules of grammar
Follow derivational morphemes in a word	Precede inflectional morphemes in a word
Productive	Some productive, many nonproductive

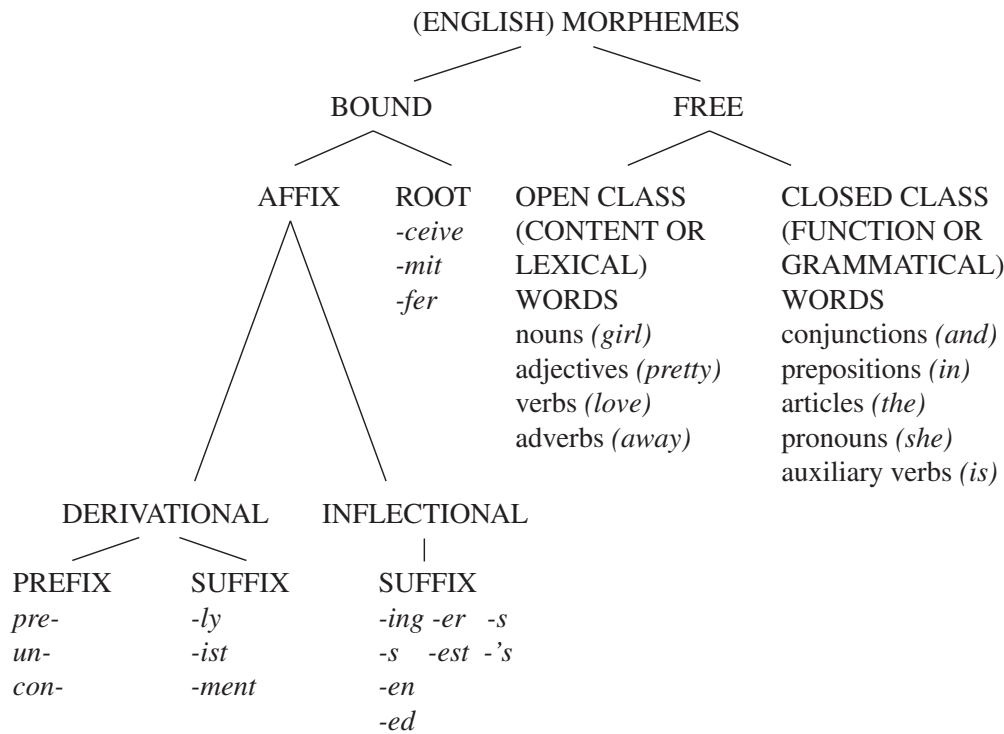
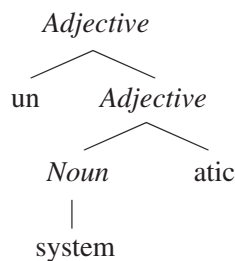


FIGURE 2.1 | Classification of English morphemes.

The Hierarchical Structure of Words

We saw earlier that morphemes are added in a fixed order. This order reflects the *hierarchical structure* of the word. A word is not a simple sequence of morphemes. It has an internal structure. For example, the word *unsystematic* is composed of three morphemes: *un-*, *system*, and *-atic*. The root is *system*, a noun, to which we add the suffix *-atic*, resulting in an adjective, *systematic*. To this adjective, we add the prefix *un-*, forming a new adjective, *unsystematic*.

In order to represent the hierarchical organization of words (and sentences), linguists use **tree diagrams**. The tree diagram for *unsystematic* is as follows:



This tree represents the application of two morphological rules:

1. Noun + atic → Adjective
2. un + Adjective → Adjective