

Data Set A

synópsis
veránda
agénda
consénsus
amálgam
uténsil

Data Set B

cábinet
América
cínema
aspáragus
metrópolis
jávelin

It will be useful to divide the words into syllables. Then examine the structure of the syllables that receive primary stress. Write a rule that describes which syllable receives primary stress.

RPE 4.15 Da DUM da DUM da DUM da DUM da DUM

Do you recognize iambic pentameter? Recall that an iambic foot (one iamb) is an unstressed syllable followed by a stressed syllable, such as in the words *today* and *undo*. Shakespeare, among many other poets, used a lot of *iambic pentameter*, in which a poetic line consists of five iambic feet. Find or invent some examples of iambic trimeter (three sets of iambs), tetrameter (four sets of iambs), and pentameter (five sets of iambs).

Other terms from poetry of varied stress patterns are the following:

- Trochee** two syllables, stressed–unstressed, as in the words *lamppost* and *standard*
- Anapest** three syllables, unstressed–unstressed–stressed, as in the words *unperturbed* and *disengage*
- Dactyl** three syllables, stressed–unstressed–unstressed, as in the words *probably* and *imbecile*

Find examples of each of these in poetry as well.

RPE 4.16 Watch Your Tone!

Place the intonation nucleus in at least two places in the following sentences, then describe the way the meaning changes when the intonation changes.

- I don't remember his name.
- Did you forget to lock the door?
- I hope she isn't too disappointed.
- I think we've run out of pullover sweaters.
- How can we persuade them to help?
- Her secretary wouldn't say where the client was.

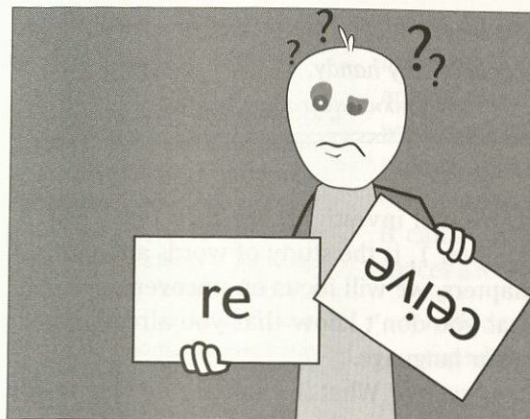
RPE 4.17 Rules of a Language Game

Here's an English-speaking children's language game called Pet. Using your knowledge of syllable structure, figure out and explain the rules of this language game.

/betpetəpər letpet ðænpæn nəvpɛv əpər/

Betpetterper latepate thanpan nevpeverper.

Chapter at a Glance



Morphology: Words and Their Parts

Key Concepts

- We all have unconscious knowledge of word structure.
- Words can be divided into two basic classes: content words and function words.
- Morphemes are pieces of words that express their own meanings.
- Morphology helps us recognize words and possible words.
- Morphemes come in a variety of types; some can stand alone as words themselves, and others can't.
- *Affixes* attach to other morphemes according to specific rules.

Did You Know . . . ?

Pooh on Pronouns
Linguists in Hollywood

Language Alive!

Embiggen His Soul!
What about *Cranapple*?
Word-orama!
The Battle over *Whom*
Ain't Ain't Had It Easy!

Linguistics in the News Arkansas's Apostrophe

Accent on Field Linguistics

Morphemes and Meaning

Morphemes and Syllables
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Word Classes

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Function Words
Word Classes and Our Mental Lexicon

Free and Bound Morphemes

Affixes
Roots

Derivational Affixation

Affixation and Our Mental Lexicon

Drawing Word Trees
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Inflectional Affixation

Inflectional Affixation of English
Nouns
Inflectional Affixation of English
Verbs
Suppletive Verbs and Adjectives

Summary

Sources and Resources

Review, Practice, and Explore

When ideas fail, words come in very handy.

—JOHANN WOLFGANG VON GOETHE

morphology study of the system of rules underlying our knowledge of the structure of words

In this chapter and the next, we will investigate **morphology**, which, you might remember from Chapter 1, is the study of words and parts of words. As in the previous chapters, we will focus on uncovering unconscious knowledge, revealing what you don't know that you already know about the structure of words in your language.

What exactly do we know about words? What is a word? Knowing words includes knowing the meanings attached to combinations of sounds, but it is much more. Speakers share some kind of common knowledge that allows us to recognize words as English even when we don't all use the same vocabulary. We recognize nonsense words as English, and we recognize a child's words as English even though these words do not conform to those we use as adults. We even recognize words from earlier varieties of English that are no longer spoken. This understanding of "what is a word" comes from a vast amount of unconscious knowledge about the structure of words in our language. Morphology includes the study of the system of rules underlying our knowledge of the structure of words; the word *morphology* is from the Greek words *morph-* 'form/structure' and *-logy* (study). Morphology is closely linked to the study of our mental dictionary, or **lexicon**. The operations and systems we use to form words are called *word formation rules* or *lexical rules*.

As we discussed in Chapter 1, the pieces or elements of any communication system are called signs. Signs can be iconic or non-iconic, where the relation between the form and the meaning of the sign is arbitrary. For example, English speakers call a domesticated feline *cat*; a Spanish speaker calls it *gato*; a Japanese speaker, *neko*; and a Witsuwit'en (spoken in northern British Columbia, Canada) speaker, *dus*. The words have the same meaning, but their forms are all distinct. Most words in a language, with the exception of **onomatopoeic** words, are non-iconic. The most obvious sign (in Saussure's sense, introduced in Chapter 1) in human language is the word, and though we all can recognize words, and we can certainly use them, it's actually rather difficult to come up with a definition of *word*. What would you say in response to the question, What is a word? You would probably find it much easier to simply provide examples—we all agree that *cat* is a word and that *eat*, *drive*, *xylophone*, and *flabbergasted* are, too. A working definition of *word* in oral language, then, might be

lexicon our mental dictionary; stores information about words and the lexical rules that we use to build them

onomatopoeia use of a word for which the connection between sound and meaning seems nonarbitrary because the word's sound echoes its meaning



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This iconic symbol indicates the location of an up escalator to people regardless of the language they speak.

hwæt!

The onomatopoeic words for a dog's barking aren't the same in all languages; English = *woof*, *arf*, *bow-wow*, *ruff*; Arabic = *haw haw*; Indonesian = *guk guk*; Catalan = *bup bup*; Estonian = *auh auh*; and Russian = *gav gav*. Hear children making onomatopoeic sounds in their language at <http://www.bzzzpeek.com>.

“a sound or combination of sounds to which speakers attach meaning.” It's a good definition as far as it goes—but we'll amend this definition in the next section. A similar definition of *word* applies in signed languages: a word is a sign or combination of signs to which meaning is attached. In English and many other languages, words in print are separated by spaces, and it can be difficult to visually distinguish the words when the spaces are not there.

I wonder if you can read this without spaces as easily as you can when there are spaces between the words.

And of course, there are no spaces when we speak, and some languages' writing systems do not consistently separate words (Old English, Old Russian). Many languages of the world have no written version at all, but they all have words.

So, one way to try to get at the definition of a word is by meaning. We all know that words have meaning—*peace*, *elephant*, *rancor*—but we also know that many pieces of words have meaning too: *un-*, *-s*, *non-*, *-ed*. Once again, although explaining what a word is might be difficult, it's pretty clear that we nevertheless can identify not only the words in our language but other units within words that also have meaning. We call these meaningful pieces **morphemes**. Let's explore this concept in more detail in order to come up with a clearer definition of *word*.

Morphemes and Meaning

morpheme smallest unit of meaning in a word

Consider the following nonsense sentence:

The minnly erks yodded both thunkish blonks.

Speakers of English immediately recognize *the* and *both* in this sentence as English words. Though we don't know what the other words in the sentence mean, we can nevertheless deduce quite a bit about them. We would recognize *minnly* and *thunkish* as words in the same category as *lovely* and *pinkish*—namely, as adjectives—because of their *-ly* and *-ish* endings and because of their position in the sentence preceding *erks* and *blonks*, respectively. We know that *erks* and *blonks* are plural nouns because of their positions and because of their *-s* endings. We know that *yodded* is a verb, again because of its position but also because it ends in the past-tense suffix *-ed*. The form of a word, its suffixes and prefixes, therefore helps us determine the **syntactic category**, or part of speech (noun, verb, adjective, adverb, preposition, etc.) of the word. We return to syntactic categories later in the chapter. (And we discuss syntactic categories in more detail in Chapter 7.)

syntactic category set of words that share a significant number of grammatical characteristics (nouns, verbs, etc.)

hwaet!

We love word games! *Scrabble*, for example, is now produced in thirty languages as well as in Braille; it's also available on a CD and online (free). Go to <http://www.mat-telscrabble.com> to read the fascinating story about the invention of *Scrabble* more than 50 years ago.

This nonsense sentence illustrates that we have knowledge of morphemes—of words and meaningful parts of words—and that we use this knowledge to determine a number of things: the syntactic category of the word, whether the word is plural or singular, or whether it is in the past or present tense.

A morpheme is often described as the smallest unit of meaning in a word. On this logic, there are two morphemes in the word *pancake*, namely, *pan* and *cake*, both of which have rather obvious, recognizable meanings, and both of which are words by themselves. Other morphemes have meaning, too, though perhaps not in the dictionary sense. English speakers would probably all agree that there are three morphemes in

waspishness (*wasp*, *-ish*, and *-ness*). We can say that the morphemes *-ish* and *-ness* have meaning because we recognize them as parts of words we easily combine with other parts to create words such as *pinkish* and *happiness*, and we also know that *-ish* and *-ness* can't be combined with *run* or *work* to create **runnish* or **workness*. So, although we might have difficulty defining the term *word*, we certainly know what a morpheme is, and we also know a complex set of rules that allow us to combine morphemes to create larger, meaningful units.

Morphemes and Syllables

Be sure not to confuse morphemes with syllables; *Mississippi* has more than one syllable but is only a single morpheme, at least to speakers who are unaware that its origin, or **etymology**, is that it comes from the Ojibwa *missipi* 'big river'. English speakers know that *miss* and *sip* in this word are not related to the English uses of those words.

Words can be **monomorphemic**, or made up of a single morpheme, such as *car* and *brown*, or **polymorphemic**, made up of more than one morpheme, such as *grammaticality*, *anthropomorphic*, *linguistics*, and *racehorse*.

Other examples of monomorphemic words (with more than one syllable) are *paper*, *pizza*, *Google*, *river*, and *catapult* (in this last word, *cat* is a syllable but not a morpheme—it is not related to the feline).

Recognizing Morphemes

We use a variety of clues to identify morphemes. English has borrowed many morphemes from Latin and Greek, but as we saw previously with the discussion of *Mississippi*, we don't need to speak the language a word comes from in order to analyze its morphology. Take, for example, the word *transmission*. We may know that *trans-* is a morpheme because it occurs in many other words: *translation*, *transport*, *translate*, and so on. We may also know that *mit-* (which ends up being spelled *mis-* in *transmission*) is a morpheme from its appearance in words like *transmit* and *permit*. And finally, we know that *-ion* is a morpheme because

etymology
historical origin of
a word

monomorphemic
consisting of a single
(free) morpheme

polymorphemic
consisting of more
than one morpheme

we find it in *nation* and *translation*. We may not, however, know that *trans-* means ‘through’ in Latin and that *mit* comes from the verb *mittere* ‘to send’.

It may come as no surprise, then, that although all languages have words, speakers of all languages do not share the same morphological rules. Though we can apply our own English rules to words that come from other languages, it is much more difficult to identify morphemes in a language one does not speak. For this reason, the following Lushootseed sentence is difficult for a non-Lushootseed speaker to break up into morphemes. (Lushootseed is a Salish language of the Pacific Northwest.)

ośuhlh čuhd t’uhbilhuhd

made I rope

‘I made rope’

Similarly, when we use the rules of one language to analyze a different language, the result can be a misanalysis. Consider, for example, the following place names in the Pacific Northwest, which are also the names of the Salish tribes in the region.

stuleg^wabš

(borrowed into English as *Stillaguamish*)

s-tuleg^w-abš

noun-making prefix—river—people of ‘river people’

sq’ix^wabš

(borrowed into English as *Skykomish*)

s-q’ix^w-abš

noun-making prefix—located upstream—people of ‘upstream people’

hwaet!

Keep your eye on the suffix *-ish*, which seems to be increasingly productive. *Suckish* is definitely a word now!

English speakers might think from the English spelling of these names that *-ish* is an adjectival suffix, the suffix that occurs in such words as *girlish* or *reddish* and also in such “nationality adjectives” as *Swedish* and *Spanish*. In Salish languages, however, *-abš* is completely different from English *-ish*; in Salish, it means ‘people of’.

We often *don’t* misanalyze words, even when we could. English speakers know that the *-s* at the end of *Massachusetts* is not the plural *-s* that occurs on English nouns because there is no singular *Massachusett*, nor do we treat *Massachusetts* as plural:

Massachusetts are beautiful in the fall.* (Recall that * indicates

that the sentence or word is ungrammatical, odd-sounding.)

We can now amend our definition of *word*. Previously, we said that a word was “a sound or combination of sounds to which speakers attach meaning.” We might now say, after this brief discussion of morphemes, that a word is “a morpheme (*cat*) or combination of morphemes (*waspishness*) to which we attach meaning.” In the following section, we’ll take a closer look at words and discuss how words can be broken down into two basic classes. We will then move on from there to discuss how words within those two classes can be broken down into morphemes in a variety of ways.

Word Classes

Traditional grammar identifies eight parts of speech: noun, verb, adjective, adverb, preposition, conjunction, article, and interjection. You may be familiar with these terms because they are often taught in school and are used in writing handbooks and dictionaries. However, there are actually more categories, and here, consistent with current grammatical theory and the approach to syntax we take in Chapter 7, we will divide words up into the following syntactic categories (parts of speech): noun, verb, adjective, adverb, preposition, auxiliary verb, modal, determiner, quantifier, numeral, pronoun, degree word, and conjunction. Syntactic categories can in turn be divided into two word classes: *content words* and *function words*.

content words
words with lexical meanings (nouns, verbs, adjectives, adverbs)

open class category of words that accepts new members (nouns, verbs, adjectives, and adverbs)

Content Words

Nouns, verbs, adjectives, and adverbs are all **content words**, words with meanings that we can look up in the dictionary (Table 5.1). Content words are **open class** words, meaning that they accept new members. For example, *textmessage*, *e-mail*, and *fax* are all verbs (with noun counterparts) that have been recently added to the language, and new(ish) nouns include *blog* and *tofurkey*. Recent adjectives include *crunk*, *fetch*, and *satellic*; and *awesome* has recently shifted from being only an adjective ("That band is awesome") to also being an adverb for many speakers ("That band plays awesome").

Table 5.1 Content Word Categories with Examples

Noun	Verb	Adjective	Adverb
river, intelligence, Washington, scissors, furniture, fax, blog, hashtag	discuss, remember, annoy, feel, gallop, seem, textmessage	unhappy, fortuitous, beautiful, mad, tiny, crunk, chill, satellic	hopefully, madly, deningly, fast, still, now, often

function words
words with functional meanings (determiners, auxiliary verbs, etc.)

closed class
category of words that does not accept new members (determiners, auxiliary verbs, and conjunctions, among others)

Function Words

In contrast to content words, **function words**, such as determiners and auxiliary verbs (which we discuss more in Chapter 7), do not have "contentful" meanings; rather, they are defined in terms of their use, or function (Table 5.2). For example, the meaning of the auxiliary verb *is* in *Leo is running* is difficult to define, but we can say that the function of the auxiliary verb *is* in this case is to express present tense (to see this, compare *Leo was running*). Function words are **closed class** words. Though we freely add new members to open classes of words, we don't coin new determiners or conjunctions, nor do we come up with new pronouns, modal verbs, or auxiliary verbs (*have*, *be*, and *do*).

Table 5.2 Function Word Categories with Examples

Determiner	the, a, this, that, these, those, his, my	Preposition	without, in, on, over, behind, above, around
Numeral	one, five, ten, second, eighth	Conjunction	and, or, yet, for, but, so, nor
Quantifier	all, each, every, both, some	Degree Word	very, so, quite, rather, too
Pronoun	they, he, she, her, theirs, mine, yours	Auxiliary Verb	have, be, do
		Modal	may, might, can, could, will, would, shall, should, must

Note that membership in a particular word class is not necessarily fixed. Just as words can belong to more than one syntactic category (such as a word that is both a verb and a noun—*e-mail*, for example—or an adjective and an adverb, like *fast*), some words share characteristics of both word classes. Prepositions are an example. We haven't added any new prepositions to the language in several hundred years, so in that sense prepositions form a closed class. And although their primary function seems to express information about the direction, location, and such of a following noun in English (*near/on* the table), many prepositions have quite complex, “contentful” meanings. Consider, for example, the meanings of the preposition *by*:

by the river by myself
by Mark Twain by mistake
by boat

Did You Know...?



Pooh on Pronouns

If the English language had been properly organized . . . then there would be a word which meant both “he” and “she,” and I could write, “If John or Mary comes heesh will want to play tennis,” which would save a lot of trouble.

— A. A. Milne, *The Christopher Robin Birthday Book*

Even though there have been attempts to introduce a gender-neutral pronoun (one example was *thon*) in order to avoid generic *he* (as in *Each child should read a book. Then he should discuss it. and The astronaut must be very dedicated. He must undergo hours of rigorous training*), such attempts have largely failed, not necessarily because of resistance to gender-neutral terms (though that is part of it) but simply because pronouns are a closed class. Note that an alternative strategy, namely, to use plural *they* instead of *he* or *she*, is widely accepted because it does not involve introducing a new pronoun.

So, although we will assume here that prepositions are function words, note that this distinction is not entirely clear and that prepositions present an interesting case of the possible overlap between function and content word classes.

Another example of words that don't fit neatly into one category or another is degree words. Degree words are traditionally classified as adverbs, but actually behave differently syntactically, always modifying adverbs or adjectives and expressing a degree: *very*, *rather*, *so*, *too*. This is a relatively fixed class and new members do not enter it frequently. But consider the word *hella*; like other degree words, it expresses degree and can be used to modify adverbs or adjectives: *She's very/hella/so tall*. *Wicked* is also used in some dialects as a degree word: *I am wicked hungry*!

RPE 5.2

Word Classes and Our Mental Lexicon

Though sometimes the difference between content and function word classes can be rather fuzzy, there is a great deal of evidence that this basic distinction exists and that this distinction among classes of words is part of our fundamental knowledge of language. The fact that content words can take affixes, primarily inflectional morphemes, but function words cannot (except, as Eric Hyman notes, metalinguistically as in *no ifs, ands, or buts*) demonstrates that they are distinct kinds of categories.¹ Also, as we discussed in Chapter 2, children go through a telegraphic stage of language acquisition in which they omit function words and morphemes, saying things such as *go store* and *baby cry*, omitting function words such as *to* and *the*. This omission of function words might be because they can only store so many whole words in their working memories, and therefore words with lexical content take priority because they allow children to convey the most meaning with limited vocabulary.

Aphasia provides additional evidence that we store function words in our mental lexicons differently from content words. Recall that sufferers of Broca's aphasia tend to have great difficulty speaking and omit function words such as determiners, prepositions, and the verb *be*. The following excerpt is from an interview between neuropsychologist Howard Gardner (1974: 60–61) and Mr. Ford, a Coast Guard radio operator who had suffered a stroke three months earlier.

Dr. Gardner: Why are you in the hospital, Mr. Ford?

Mr. Ford: Arm no good . . . speech . . . can't say . . . talk, you see.

Dr. Gardner: What happened to you to make you lose your speech?

Mr. Ford: Head, fall, Jesus Christ, me no good, str, str . . . oh Jesus . . . stroke.

And finally, recall that the earliest speakers of Nicaraguan Sign Language, or *Idioma de Señas de Nicaragua*, who developed language after puberty (and

1. Thanks to Eric Hyman for pointing this out.

thus after the critical period), created a form of language closer to a pidgin than signers who were exposed to a more developed version of ISN at an earlier age. One of the characteristics of pidgin ISN was the lack of classifiers, signs that can be regarded as functional rather than contentful.

We will discuss lexical and functional categories in Chapter 7 on syntax, where we'll explore some of the distinctions among them in more detail.

RPE 5.3

bound morpheme
morpheme that must attach to another morpheme

free morpheme
morpheme that can stand alone as a word

affix bound morphemes, including prefixes, suffixes, infixes, and circumfixes

Free and Bound Morphemes

Morphemes, like words, fall into different classes. Morphemes are either **bound** or **free**. The words *drink*, *cat*, and *butter* are all free morphemes; they are single morphemes (monomorphemic) and can stand alone as words. Bound morphemes, on the other hand, are morphemes that cannot stand alone and must be attached to another morpheme or word. Examples of bound morphemes include *trans-* and *-mit* in *transmit*, *-ize* in *materialize*, and *un-* in *unhappy*. Bound morphemes themselves come in different types: *-ize* is a suffix, and *un-* is a prefix. Suffixes and prefixes fall under the more general heading of **affixes**, morphemes that attach to other morphemes or words by a process called *affixation*.

Affixes

Let's take a look at affixes in more detail before we go on to discuss other types of bound morphemes. Some common examples of English prefixes and suffixes are the following:

prefixes: *dis-*, *un-*, *for-*, *anti-*, *semi-*, *hyper-*, *in-*, *en-*

suffixes: *-ment*, *-ion*, *-er*, *-ing*, *-s*, *-able*, *-ize*, *-ship*, *-ity*

Another type of affix is an *infix*, an affix that attaches within a word root. The Inuktitut language of Western Canada, a member of the Eskimo-Aleut language family, has an infix, *-pallia-*, which must be inserted into a verb root, resulting in a distinct form of the verb. The rough translation of this infix is *gradually*.

nungup + *pallia* + *jut* = *nunguppalliajut*

'They are gradually disappearing'

ilinniaq + *pallia* + *jugut* = *ilinniaqpalliajugut*

'We are gradually learning'

Although infixes occur in many other languages, there is only one basic type in English, **expletive infixation**. This infix has the effect of adding emphasis. The infix may only be inserted into words with more than two syllables, and it can range from the relatively tame *gosh darn* to the more powerful so-called F-word. In *My Fair Lady*, Eliza Doolittle sings about how nice it would be to sit *abso-bloomin'-lutely* still, where the infix is *bloomin'*. Native speakers of English have

expletive infixation
process by which a morpheme is inserted inside another morpheme:
abso-bloomin'-lutely

Language Alive!

Embiggen His Soul!

Though *em-/en-* + *-en* is not commonly used as a circumfix in English, we are still able to understand its two pieces and use them to create new—though perhaps surprising—words. An example comes from *The Simpsons* TV show, in which the founder of the fictional town of Springfield, Jebediah Springfield, uses the word *embiggen*, appropriately attaching the affix to an adjective base when he sings “that a man might embiggen his soul.”

Thanks to Jason Cuniff for this example.

And one coining leads to another. Here’s another bit of dialogue from the show:

EDNA: Embiggen? I never heard that word before I
moved to Springfield.

Ms. HOOVER: I don’t know why. It’s a perfectly *cromulent* word.

Thanks to Russell Hugo for this example.

intuitions about where in a word the infix is inserted. Consider where your favorite expletive infix goes in these words:

fantastic, education, Massachusetts, Philadelphia, Stillaguamish,
emancipation, absolutely, hydrangea

Most speakers agree on these patterns, though there are some dialectal variations as well. You likely found that the infix is inserted at the following points:

fan-***-tastic, edu-***-cation, Massa-***-chusetts,
Phila-***-delphia, Stilla-***-guamish, emanci-***-pation,
abso-***-lutely, hy-***-drangea

The infix gets inserted before the syllable that receives the most stress, and it cannot be inserted anywhere else in the word.

absolutely = abso-flippin’-lutely

but not *ab-flippin’-solutely, nor *absolute-flippin’-ly

hydrangea = hy-freakin’-drangea

but not *hydrang-freakin’-ea

Now, what happens when the first syllable in the word is the one that receives the most stress, as in the following?

basketball, underdog, Bellingham, institute, pickpocket

The rule is that when the first syllable is the one with the most stress, the infix is then inserted before the syllable that receives secondary stress in the word.

basket-***-ball, under-***-dog, Belling-***-ham,
insti-***-tute, pick-***-pocket

Now, nobody ever taught you this rule! It's a striking display of your unconscious knowledge of the rules of language and of how phonology and morphology interact.

Yet another type of affix is the *circumfix* (from Latin *circum-* 'around'); this type of affix surrounds another morpheme. German has a very common circumfix, *ge-* *-t*, which creates the perfective form of certain verbs.

kommen	'to come'
Er ist <u>ge</u> kommt.	'He has come.' (<i>ge</i> + <i>komm</i> + <i>t</i>)

And Samoan has a circumfix *fe-* + *-aʔi* which indicates reciprocity:

finau	'to quarrel'
fefinauaʔi	'to quarrel with each other'

English does not use circumfixes as these languages do. Some researchers suggest that because the prefix *em-/en-* occurs only in words with the suffix *-en*, such as *embolden/enlighten*, that *em-/en-* and *-en* are not a prefix and a suffix but rather a circumfix. (The prefix *en-* becomes *em-* before /b/ for phonological reasons—can you explain why? What phonological process is at work here?) That we don't have words like **embold* or **bolden* provides additional evidence that in *embolden*, *em-/en-* plus *-en* is a circumfix; each affix must occur with the other. However, as *-en* does exist separately from *em-/en-* as a verbal suffix (*sharpen*, *tighten*, *sweeten*), *em-/en-* + *-en* may not be a true circumfix.

We add here a note on what are called **clitics**. A clitic is a morpheme that is phonologically dependent on another word but is grammatically independent, so in that way clitics are distinct from regular affixes. They involve at least some phonological reduction, as in the *not* of *do not* becoming /ənt/, written *n't*; the *to* of *want to* becoming /tə/ (and often written *wanna*); the *have* of *could have*, *would have*, *should have* becoming /ə/ (and often written *coulda*, *woulda*, *shoulda*). Clitics occur in a variety of languages and are the subject of much interesting debate since they are an interesting kind of hybrid between affixes and free morphemes.

Roots

Let's take a look now at the types of morphemes that affixes can attach to. Affixes can attach to words: *-less* can attach to *friend* to derive *friendless*. In this case, the word to which *-less* attaches is a free morpheme, *friend*. We call *friend* in this case a **root**, a morpheme to which an affix attaches. If we attach *-ness* to *friendless*, on the other hand, *-ness* attaches to a word that is made up of two morphemes and is therefore not a single morpheme and thus not a root: *friend* + *less*. Let's take another example. If we attach *un-* to *cool*, the prefix *un-* attaches to a root, *cool*. If we attach *un-* to *forgiveable*, *un-* attaches to a word that is not a root but rather a word made up of three morphemes, *for* + *give* + *able*.

RPE 5.4

clitic morpheme that is grammatically independent but phonologically dependent on another word.

root morpheme morpheme to which an affix can attach

bound root morpheme a non-affix morpheme that cannot stand alone

productive rule rule that regularly applies in the formation of new words or forms of words

Many of the roots of English words cannot occur alone like *friend* and *cool* can. Instead, they can occur *only* with prefixes or suffixes attached to them. For example, *-ceive* is a **bound root** because it occurs in words like *receive*, *perceive*, *deceive*, and *conceive*, in which it is clearly distinct from the *re-*, *per-*, *de-*, and *con-*, which all show up in other words, such as *return*, *permit*, *denote*, and *convince*, but *-ceive* cannot stand alone as a word. There is no word *ceive*, so we call it a bound root morpheme that must occur with another bound morpheme in order to be a word.

Morphological rules that regularly combine certain morphemes are called **productive rules**. So attaching *-ion* to verbs (*transmit* + *ion*, *communicate* + *ion*, *deactivate* + *ion*) is a *productive* rule of English morphology. Some morphological rules, on the other hand, are *not* productive: indeed, in English some morphological rules apply to create *only* a single word! To illustrate, consider the words *lukewarm*, *cranberry*, *inept*, and *unkempt*. We certainly recognize *warm*, *berry*, *in-*, and *un-* as regularly occurring morphemes in English because they occur in many other words (*rewarm/warming*, *huckleberry/strawberry/blueberry*, *inoperable/incredible/invincible*, *unthinkable/unhappy/unsafe*). The morphemes *luke-*, *cran-*, *-ept*, and *-kempt*, on the other hand, appear only in *lukewarm*, *cranberry*, *inept*, and *unkempt*. We don't use the term *lukecold*, nor do we use *cran-* anywhere other than attached to *berry*, and we don't ever say "He is an inept writer, but she is very ept" or "Her hair looked kempt". So the rules that attach *un-* to *-kempt* or *luke-* to *warm* are not produc-

tive; they derive only these words. We will also define morphemes such as *cran-*, *luke-*, *-ept*, and *-kempt* as bound roots because they cannot stand alone as free morphemes and because they don't occur as affixes in other English words.

So, to summarize this section, morphemes can be bound or free, and they can be roots or affixes. Roots can be free morphemes or bound ones, but affixes are always, by definition, bound morphemes. Affixes can attach to words in various ways, as prefixes, suffixes, circumfixes, and infixes. In the following section, we turn our attention to affixation in more detail, discussing another way in which we can distinguish affixes: by dividing them into two different types, with different properties—derivational affixes and inflectional affixes.

hwæt!

The longest word in English is, purportedly, *pneumonoultramicroscopicsilicovolcanokoniosis*, a disease of the lungs.

RPE 5.5

Derivational Affixation

derivational affix affix that attaches to a morpheme or word to derive a new word

Most of the examples of affixes in English that we have discussed so far have been of **derivational affixes**, affixes that attach to other morphemes to form new words that are separate entries in our mental dictionary, or lexicon. The affix *-able* attaches to verbs, deriving adjectives. The affix *-able* is therefore a derivational affix—an affix that derives a new word, a new dictionary entry.

Language Alive!

What about Cranapple?

You might be thinking that affixation of *cran-* to roots is a productive rule because you are familiar with the word *cranapple* or *crangrape*, advertising names for drinks that contain cranberry juice. Note, however, that this is the *only* place we see *cran-* attached to another morpheme, and one way to analyze this use of *cran-* is not as an affix attached to *apple*, nor even as a bound root, but rather as a *blend*. Blends are words that are combinations of two or more reduced words; a classic example is *smoke* + *fog* = *smog*. *Cranapple* can therefore be analyzed as a blend of *cranberry* + *apple* rather than as evidence that *cran-* affixation is productive, allowing *cran-* to be attached to roots other than *berry*.

Derivational Affixes

verb

read

like

think

+ -able =

adjective

readable

likeable

thinkable

The affix *-ity* is another derivational affix. This affix attaches to adjectives to derive nouns, as illustrated in the following examples.

adjective

serene

divine

obscene

+ -ity =

noun

serenity

divinity

obscurity

Here are some other common derivational affixes and some of the words derived from them.

verb + ment = noun

excite

excitement

realign

realignment

deport

deportment

appease

appeasement

adjective + ness = noun

lonely

loneliness

happy

happiness

churlish

churlishness

bald

baldness

adjective + ize = verb

regular

regularize

sensational

sensationalize

legal

legalize

adjective + ly = adverb

fortunate

fortunately

possible

possibly

quick

quickly

In addition to derivational suffixes, English has a number of derivational prefixes, which productively combine with bound or free morphemes to derive new words.

un + happy

dis + enchant

semi + soft

Derivational prefixes and suffixes both derive new words, but the attachment of derivational prefixes usually results in a word of the same category as the word to which the prefix attaches. So, *happy* and *unhappy* are both adjectives; the prefix *un-* doesn't change the category of *happy*. The attachment of derivational suffixes, on the other hand, usually does result in a change in the category of the word; the adjective *happy* becomes the noun *happiness* with the addition of the suffix *-ness*. But notice that even though prefixes don't change the category of a word, they do create words with different meanings. *Happy* and *unhappy* are each listed separately in our mental lexicon (and in the dictionary). So, although prefixes in English do not change the category of a word (they do in many other languages), prefixes are nevertheless derivational affixes, changing the meaning of the words they attach to.

Like derivational suffixes, prefixes in English attach to words or roots of a particular category. For example, *ex-* attaches to nouns to derive nouns. *Ex-* cannot attach to verbs or adjectives:

ex + noun = noun

ex-president

ex-friend

ex + verb = *

*ex-mystify

*ex-activate

ex + adjective = *

*ex-modern

*ex-fixable

Here are a few more examples of prefixes in English and the words they can attach to:

anti + noun = noun

anti-depressant

anti-establishment

de + verb = verb

de-activate

de-nude

in + adjective = adjective

in-eligible

in-competent

Language Alive!

Word-orama!

In Present-Day English, we use *-(o)rama* as an affix (from the Greek root *horama* 'sight', *horan* 'to see'). The earliest example seems to be *panorama* (where Greek *pan-* means 'all'), 'a view at a glance', which was coined by painter Robert Barker in 1787. Today, we have words like *diorama*, *striporama*, and *audiorama*. This affix is also used to refer to something that is excessive or overdone. In either sense, we use it as a productive morpheme: "They gave you a trailer and all the donuts you wanted. It was a *donutorama*" (*Oxford English Dictionary*). For a Western Washington University student, "This week is *examorama*."



Courtesy of Rag-O-Rama

RPE 5.6

Because of the influence of other languages on English, derivational suffixes and prefixes in English typically fall into three basic etymological classes: Germanic, Latinate (including Latin and its descendants, primarily French), and Greek. Interestingly, although English is a Germanic language, Greek and Latin affixes are used far more productively than Germanic affixes to form new words. In fact, Present-Day English has more words with Latin and Greek roots and affixes than Latin and Greek had themselves! A few examples include *neo-Nazi*, *unibrow*, *pseudostudent*, *retrovirus*, *semisoft*, *autoimmune*, *Beatlemania*, *Ultrabrite*, *minivan*, *ex-boyfriend*, *megastar*, *metrosexual*, and *bootylicious*.

RPE 5.7

Affixation and Our Mental Lexicon

Though our intuitions as speakers usually serve us well, there is sometimes variation in how words and morphemes may be stored in our lexicons. This variation is due in part to our varying knowledge of the etymologies of English words and our varying vocabularies based on our education and experience. Although most, if not all, speakers of English will recognize *-ed* as a morpheme in *mommucked*, even if we are not familiar with the word (which means ‘to harass or bother’ in the English dialect spoken on Ocracoke Island, North Carolina), not all of us break up words the same way. For example, consider the words *panic* and *pandemonium*. These seem to have a common root meaning something to do with terror or fear. In fact, *panic* comes from the Greek *panikon*, ‘pertaining to Pan’, where Pan was a god who inspired fright. *Pandemonium* was coined in the seventeenth century by John Milton in *Paradise Lost* as the name of the palace built in the middle of Hell. The word is a blend of Greek *pan-* ‘all’ (as in *panorama*) and Greek and Latin *demonium* ‘demon’. Though a Milton scholar might be aware that the *pan-* in *pandemonium* is not the same *pan-* of *panic*, many people might assume they are the same *pan-*, given the meanings of the words.

Let’s take a somewhat different example: *obscure*. Would you divide that word into two morphemes, or would you analyze it as monomorphemic? The word comes from *ob-* ‘over’ and *scurus* ‘covered’, a root that shows up in many Indo-European languages (it is the root of Germanic *sky* and Latin *scutum* ‘shield’). But to divide this word up, we would expect to find other words with *ob-* and other words with *-scure*. Can you think of any? If you can’t, then for you the word is likely monomorphemic and cannot be broken down into component morphemes.

So although many words are quite easy to break into component morphemes and all speakers of the language would do so easily and in the same way, others are not so straightforward. How you go about breaking words into morphemes depends on your goals in doing so as well. If we are simply trying to recognize the pieces of the word that have meaning, we

can research the etymology of the words and break them into the smallest units possible (for example, breaking *obscure* into *ob-* and *-scure*), but psycholinguists also aim to discover how we naturally store free and bound morphemes in our heads, and we likely do not store a bound morpheme such as *-scure*. Research shows that there is evidence that we build words up in our heads according to their meaningful component parts; for example, psycholinguistic experiments indicate that it takes subjects longer to respond to words that are made up of more than one morpheme than to words made up of a single morpheme, even when the words are matched for length and frequency (factors that could affect reaction time). There is in fact evidence that we form words in steps, “building them” beginning with the root and then attaching the prefixes and suffixes. There is even evidence that we attach the prefix and suffix in a particular order, which we’ll explore in the next section.

hwaet!

If you like word games, check out <http://crickler.com> to find word puzzles for the computer age.

Also, consider words like *cupboard* and *breakfast*. These are each formed historically from two free morphemes: *cup* and *board*, *break* and *fast*. However, most speakers likely store these items as whole chunks. We don’t think of *breakfast* as “breaking a fast” nor a *cupboard* as a board for cups. Even our pronunciation, with both vowels of *breakfast* altered from their pronunciation in the separate words *break* and *fast*, further suggests that the word is likely stored for most people as a single word in its entirety.

Drawing Word Trees

Before we talk about how we can illustrate the ways in which we build words in our mental lexicons, let’s review some important information. As we have seen, when examining words made up of only two morphemes, we know two facts about the ways in which the affixes attach to other morphemes.

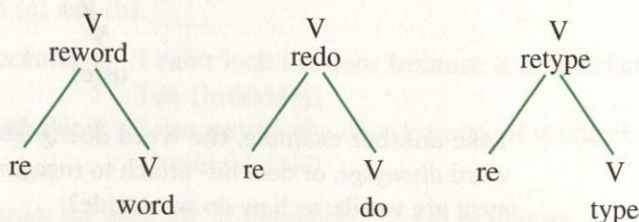
Affixes attach to certain syntactic categories: *-able* attaches to verbs (but not to nouns or adjectives), but *-ish* attaches to nouns (and some adjectives, but not to verbs):

readable, drivable, breakable but not **greenable* or **catable*
girlish, selfish, longish but not **readish, *breakish*

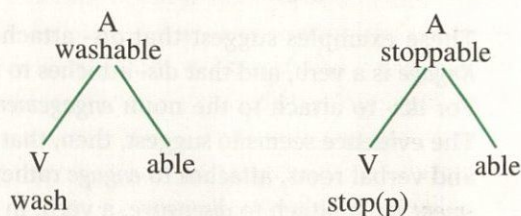
Affixes can determine the syntactic category of a word: Words that end in *-able* are adjectives, words that end in *-ish* are also adjectives, but words that end in *-ness* are nouns (*happiness, attractiveness, hopelessness*). These two facts are important for determining the steps by which words with more than one affix must be formed. Let’s look first at the word *reusable* and what we know about the affixes *re-* and *-able*. The prefix *re-* attaches to verbs and creates new verbs: *reword, redo, retype*. The affix *-able* attaches to verbs and forms

adjectives: *washable*, *stoppable*. Crucially, *re-* does not attach to adjectives: **rehappy*, **regreen*, **retall*.

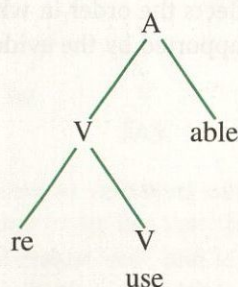
We can visually represent the way words are built with *word tree diagrams*. We know that *re-* attaches to verbs, and we can draw *reword*, *redo*, and *retype* in the following way:



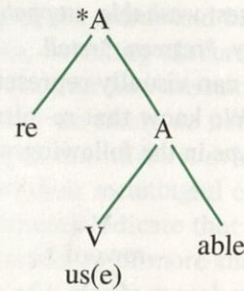
And we can draw *washable* and *stoppable*, too:



Now, let's consider how to draw a word formed in steps, such as *reusable*. The tree for this word requires different levels of structure if we are to represent how we store this word in our mental lexicon.



This is the only possible way to build this word; *re-* must attach first to *use* because *re-* attaches only to verbs. The suffix *-able* attaches to the verb *reuse* to form *reusable*. We know that this is the only one possible way to build this word, because *re-* cannot attach to adjectives (**rehappy*), and so we know that *re-* therefore cannot attach to *usable*. Thus, the following tree is not a possible structure that we build in our heads.



Take another example, the word *disengagement*. Does *-ment* attach to the word *disengage*, or does *dis-* attach to *engagement*? Both *disengage* and *engagement* are words, so how do we decide?

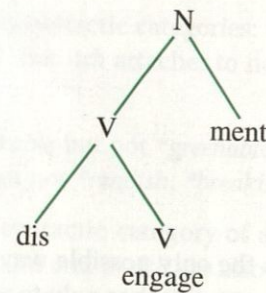
Evidence from other words with the affixes *dis-* and *-ment* can help clarify things. Consider, for example, the category of words that *dis-* attaches to.

dis- + *engage*, *trust*, *mount*

These examples suggest that *dis-* attaches to verbs, deriving other verbs. *Engage* is a verb, and that *dis-* attaches to it is exactly what we might expect. For *dis-* to attach to the noun *engagement*, however, violates this pattern. The evidence seems to suggest, then, that *dis-*, a prefix that attaches to verbs and verbal roots, attaches to *engage* rather than to *engagement*. On this logic, *-ment* must attach to *disengage*, a verb. In fact, the evidence supports the hypothesis that *-ment* attaches to verbs.

engage, *excite*, *entrap*, *enchant*, *discourage*, *contain* + *-ment*

The evidence from our analysis of *disengagement* suggests that complex words with more than one affix have internal, **hierarchical word structure** that reflects the order in which affixes attach. We illustrate with *disengagement*, supported by the evidence just discussed.



The morpheme *engage* in this example comes from the Latin morphemes *en* meaning 'make' and *gage* meaning 'pledge', so if your goal is to break the word into its smallest meaningful units, one could go this far; however, the word *engage* is an unanalyzable morpheme for most English speakers and so would be stored as such in our lexicons.

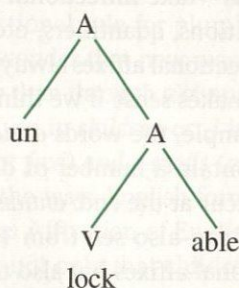
hierarchical word structure property of words whereby one morpheme is contained inside another.

Word Trees and Ambiguity

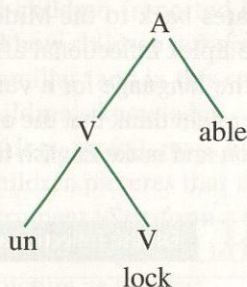
One final note on word tree diagrams is that they provide a way to express word ambiguities that would otherwise seem completely mysterious. Consider, for example, the word *unlockable*. This word is ambiguous because of the two possible meanings of *un-*. The two meanings of *unlockable* are explained in (a) and (b).

- a. *unlockable* 1: I can't lock the door because it is *unlockable*. = [un [lockable]]
- b. *unlockable* 2: I can unlock the door because it is *unlockable*. = [[unlock] able]

We can diagram the meaning of *unlockable* 1 in (a) as follows:



And a diagram of the meaning of *unlockable* 2 in (b) as follows:



This word is fairly unusual, however, in having two possible meanings and two possible structures, and it is due to the fact that there are actually two distinct *uns*. English has one *un-* that means 'not', and it attaches to adjectives. This is the *un-* that appears in *unlockable* 1. The other *un-* means 'to reverse some action', and it attaches to verbs. This is the *un-* that appears in *unlockable* 2.

RPE 5.9

Inflectional Affixation

We've seen that we attach derivational affixes to words or roots to derive new words. Most derivational suffixes have the effect of changing the syntactic category, or part of speech, of a word. For example, *-ity*, added to

inflectional affix
affix that adds
grammatical
information to an
existing word

an adjective such as *divine*, creates a noun, *divinity*. A different class of affixes, **inflectional affixes**, do not change the category of the word to which they attach, nor do they create new dictionary entries. Rather, these affixes express grammatical information—information about case, tense, aspect, number, person, and so on, rather than changing meaning.

English has what is sometimes called a “poor” or “weak” inflectional system. This means that English has relatively little inflectional morphology compared to languages that have morphologically “rich” systems, systems that morphologically express case, gender, number, tense, and other grammatical relationships in productive ways.

English has only eight inflectional affixes, as shown in Table 5.3. As you can see, only English nouns, verbs, adjectives, and adverbs—all open classes of words—take inflectional affixes. Closed classes of words—prepositions, conjunctions, quantifiers, etc.—take no inflectional affixes in English.

Inflectional affixes always follow derivational ones if both occur in a word, which makes sense if we think of inflections as affixes on fully formed words. For example, the words *antidisestablishmentarianism* and *uncompartmentalize* each contain a number of derivational affixes, and any inflectional affixes must occur at the end: *antidisestablishmentarianisms* and *uncompartmentalized*.

We can also see from Table 5.3 that not only does English have few inflectional affixes but also that possessive, plural, and third-person singular are identical in form; they are all -s. The past participle affix -ed is also sometimes identical in form to the past tense affix -ed. This lack of distinction in form dates back to the Middle English period (1100–1500 CE), when the more complex inflectional affixes found in Old English were slowly dropping out of the language for a variety of reasons, discussed more in Chapter 11.

We might think that the overlap in forms of inflectional affixes would cause confusion and make English harder to learn than languages with unambiguous

Table 5.3 English Inflectional Affixes

Nouns	Verbs	Adjectives
possessive -s Lee's book	3rd person, singular -s Lee walks	comparative -er Lee is taller.
plural -s six books	past tense -ed Lee walked	superlative -est Lee is tallest
	present participle -ing Lee is walking	
	past participle -ed/-en Lee has walked Lee has eaten	

inflectional endings. We might think, for example, that children would confuse verbs with nouns because both can be affixed with *-s*, but this is not the case. Children appear to have no problem mastering the English inflectional system. They also acquire inflectional affixes and function words in a particular order. For example, psychologist Roger Brown demonstrated that English-speaking children acquire inflectional affixes in the same general order; for example, the present progressive (aux + *-ing*, as in *is running*) is acquired before possessive inflections (*-s*, as in *the dog's ball*), which is acquired before regular third-person forms (*-s*, as in *She runs fast*) and so on (Brown 1973).

Also, children's acquisition of the plural inflection *-s* underscores the productivity of this affixation rule in English over other possible plural formation rules. Children typically overgeneralize *-s*, producing forms such as *gooses*, *deers*, and *childs*, before they master the adult irregular forms *geese*, *deer*, and *children*. The "regular" inflectional rule for plural in English thus appears to be *-s* affixation, and it is no wonder that new words in the language take this inflection in the plural rather than through a change in the vowel (*geese/mice*) by some affix other than *-s* (*-en* in *children* or *-i* in *foci*), or by nothing at all (*deer/elk*). We send *faxes* (not *faxi*) and *e-mails* (not *e-mailen*), and we create *blogs* (not *blog*). (We discuss the ways English forms plural nouns in more detail in the section "Inflectional Affixation of English Nouns.")

Other experiments show not only that children can keep the inflectional affixes straight but also that children use information from inflectional affixes as clues to the syntactic category (part of speech) of a word. In an experiment with 3-year-old children (reported in de Villiers & de Villiers 1978), Roger Brown showed how children use grammatical clues to identify the part of speech of an unfamiliar (and in this case nonsense) word. Brown was interested in testing children's knowledge of the grammatical distinctions between count nouns (*dogs*, *chairs*), mass nouns (*rice*, *mud*), and verbs (*kick*, *eat*). He showed the children pictures that illustrated three unknowns: a person using a strange instrument to perform a strange action on a strange substance (for example, a person using a tool to knead a spaghetti-like substance). He explained each picture as follows:

Here's a picture of a *sib*. (count noun)

Here's a picture of *sibbing*. (verb)

Here's a picture of *some sib*. (mass noun)

He then showed the children pictures of each unknown—the tool, the action, the substance—and asked them to point to the picture of a *sib/sibbing/some sib*, and the children were able to consistently pick out the right picture. This suggests that children use grammatical clues to make such determinations, clues that include word order (position of *sib* or *sibbing* in the sentence), morphology (the *-ing* affix on *sibbing*), and the distinction between *a*, a determiner that precedes only count nouns, and *some*, a quantifier that precedes mass nouns (nouns that don't take a plural *-s*, such as *furniture* or *jewelry*: *some furniture*/**furnitures*, *some jewelry*/**some jewelries*, *some sib*/**sibs*).

Brown's experiment shows that we rely on morphological and syntactic clues to determine the syntactic category of a word. What about when morphological clues, such as inflectional affixes, aren't there?

In many varieties of English, inflections go unpronounced, but their meanings aren't lost because other clues help us recover them. In African American Vernacular English and Chicano/Hispanic English, for example, inflections can go unpronounced, as in *six bat flew over the barn* or *I read John book*. This "lack" of inflection is not really a lack at all; one way to analyze such constructions is that the inflection is deleted as the result of a regular phonological rule, consonant cluster simplification. Most speakers of English employ a version of this rule in phrases in which a consonant cluster precedes another consonant, such as in *band saw* and *cold cuts*, which are frequently pronounced as *ban saw* and *col cuts*. Utterances such as *six bat flew over the barn* or *I read John book* are stigmatized as "lazy" or "sloppy" English, but in fact the deletions here are the result of a systematic phonological rule. Moreover, consonant cluster simplification rarely results in ambiguity; speakers who employ this in some contexts do not reduce the cluster if doing so would result in ambiguity. For example, speakers would not delete the plural *-s* in *the bats*, because *the bat* would be ambiguous with respect to singular or plural. However, *six bat* is not ambiguous because the numeral already indicates plurality, so that *-s* would be more likely to be deleted.

We'll now take a look at each inflectional affix in English in more detail, beginning with the inflectional affixes that occur on nouns.

RPE 5.10

Inflectional Affixation of English Nouns

Nouns take several kinds of inflectional affix in English. In this section, we will learn about number, case, and gender as they are expressed in English nouns.

Number

number singular,
plural, or other
(dual) inflection

English nouns productively express **number** (plural or singular) in the form of *-s* (which may be dropped for speakers of dialects that include the consonant cluster reduction rule). As mentioned, new words coming into the language are typically inflected with *-s*, though plural inflection is expressed in a number of other ways in English. These other methods of marking plural come from earlier forms of English or from adopting other languages' (e.g., Latin, Greek) methods of marking plural, as the following words show:

inflectional affix *-s*: dogs, cats, hallucinations, decisions

Latin plurals: syllabus/syllabi, medium/media, ovum/ova

Old English mutated (vowel) plurals: goose/geese, tooth/teeth, mouse/mice, foot/feet

Old English zero (affix) plurals: deer/deer, sheep/sheep, fish/fish, moose/moose, elk/elk

Old English *-en* plurals: brethren, children, oxen

LINGUISTICS
IN THE NEWS

Arkansas's Apostrophe

Do people really care about punctuation? Well, yes, and some quite vehemently. Since the seventeenth century, when the notion of "correct" English was born, "correct" punctuation has been tied to "correct" behavior, which is in turn linked to education and social class. It matters a great deal to many people whether punctuation rules are followed or "violated."

One of the few remaining morphological case markers in English—the possessive *-s* affix on noun phrases—became the subject of a surprising amount of media attention, all because it involved a punctuation mark, the apostrophe.

In 2007, Representative Steve Harrelson, a Democratic member of the Arkansas legislature, introduced a resolution to declare, once and for all, the correct way to write the possessive form of the state's name—Arkansas's rather than Arkansas'. Harrelson proposed the resolution as a favor to a friend who felt very strongly about the issue. Expecting this resolution to pass without fanfare, Harrelson was surprised by the strength of the opposition. Apparently, the largest newspaper in Little Rock, the *Arkansas Democrat-Gazette*, fiercely opposed the resolution because it ran counter to the Associated

Press's punctuation rules. Suddenly, the proposed resolution was a political hot potato and, although he did not want to alienate the *Gazette*, Harrelson persevered, and his resolution passed unanimously in March 2007. Such resolutions are non-binding, but clearly this one touched a nerve; the controversy over the Arkansas "Apostrophe Act" was reported on many blogs and also made the national news, appearing in *The Boston Globe* and on FOXNews.

The furor over the apostrophe stems in part from the clash between spoken and written language. For example, in a "normal" possessive noun phrase, *-s* is affixed to a phrase ending in a consonant and, depending on the consonant, pronounced /z/ or /s/: *the dog's bone*, *the cat's paw*. When the noun is plural, the *-s* affix is pronounced the same way: *the dogs' bones*, *the cats' paws*.

If the possessive noun ends in a sibilant sound, such as /s/ or /z/, most style manuals give two options: *Ross' house* or *Ross's house* and *Roz' house* or *Roz's house*. Both forms are generally accepted (except, apparently, in Arkansas). However, no matter how we punctuate the possessive in writing, most of us pronounce the possessive morpheme /əz/ after a sibilant consonant: *Ross/əz/ house*, *Roz/əz/ house*.

So, it seems that *Arkansas*, which ends with the letter <s>, should be subject to the same (inconsistent) rule, and hence the debate. Perhaps the whole issue could be resolved if Arkansans based their punctuation on phonology rather than spelling. *Arkansas* ends in a vowel sound. From that viewpoint, the punctuation is clear; add *-s*, as we would for any name ending in a vowel (*Gino's*). What does this mean for *Illinois*? And for *Texas* and *Kansas*? Given the way people feel about apostrophes, who knows?

For more information
Apostrophe Protection Society.
<http://www.apostrophe.fsnet.co.uk/>. (14 January, 2008.)

DeMillo, A. 2007. Arkansas House backs Apostrophe Act. Associated Press. March 6.

Gambrell, J. 2007. Arkansas House to argue over apostrophes. Associated Press. *Boston Globe*, February 27. http://www.boston.com/printer_friendly_news/nation/articles/2007/02/27/arkansas_house_to_argue_over_apostrophes/

National Public Radio. 2007. Arkansans quibble over the possessive 's.' *All Things Considered*. February 28. http://www.npr.org/tem_plates/story/story.php?storyId=7648711

vowel mutation
change of inflection
through a change
in vowel structure
rather than through
affixation

pluralia tantum
refers to a noun that
is morphologically
plural but
semantically singular
(*scissors*)

**grammatical
function** function
of a phrase in the
sentence as subject,
direct object, indirect
object, and so on

nominative case
case typically
assigned to subject
noun phrases

accusative case
case typically
assigned to direct
object noun phrases

dative case case
typically assigned to
indirect object noun
phrases

What we now consider the regular way of forming plurals, adding an *-s*, was only one of several ways of pluralizing nouns in older forms of English. Many nouns that have adopted the *-s* pluralization did not start out with it; for example, *eyes* used to be *eyen*, *shoes* used to be *shoon*, *hands* used to be *handen*, and *ears* used to be *earen*. As we'll see in the discussion of the history of English in Chapter 11, plurality also comes to be expressed through **vowel mutation**² rather than through affixation. Mutated plurals are now considered irregular because we don't use the process of mutation to form plurals in Present-Day English, but historically mutations followed a predictable pattern. And sometimes words have been added to the "irregular" patterns that didn't originally form their plurals in that way. For example, *moose* is a word borrowed from an Algonquin language and did not exist in Old English; however, by analogy with the other zero plurals, we form its plural in the same way as *deer* or *sheep*. Similarly, some words that end in *-um* or *-us* but are not of Latin origin, such as *cactus* and *octopus*, can have the non-English plural: *cacti* and *octopi*, though the historically "correct" plurals of these are *cactuses* and *octopuses*.

There also exist words in English, called **pluralia tantum** (from Latin, meaning 'plural as such'), that have a plural *-s* but refer to a single object.

scissors, pants, trousers, pliers, (*scissor, *pant, *trouser, *plier)

The fact that these words are morphologically plural but refer to semantically singular objects (with two parts) results in some dialectal variation. Most speakers use *pair* to individuate these words: *a pair of scissors*, *a pair of pants*; but some speakers can use the singular indefinite article and say *a scissors* or *a pliers*, treating these words simply as singular nouns, regardless of their *-s* ending.

Case

Case can express the **grammatical function** of a noun phrase (the unit of words containing a noun, such as *the student*, *six dogs*, or *the Queen of England's crown*) as the subject, object, indirect object, or possessor (and some languages mark many other functions by case). In English, noun phrase subjects, objects, and indirect objects are not inflected for case at all.

- The student bought a car. (nominative/subject)
- Louise saw the student. (accusative/direct object)
- Louise gave a book to the student. (dative/indirect object)

The noun phrase *the student* does not change its form, whether the noun phrase is in the subject position, as in (a), or in the direct object position, as in (b). The noun phrase *the student* also does not change its form when it is in the indirect object position, as in (c). In other languages, however, subjects are marked with **nominative case**, and direct objects are marked with **accusative case**. Indirect objects are marked with **dative case**. In German, for example, case inflection shows up on the determiner that precedes

2. The term *mutation* here has nothing to do with hereditary or genetic change but is used as Merriam-Webster's first definition, "a significant and basic alteration."

vowel mutation
change of inflection
through a change
in vowel structure
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a noun. In the following example, *der* is nominative, marking the subject; *den* is accusative, marking the direct object; and *dem* is dative, marking the indirect object.

<u>Der</u> Mann gibt	<u>den</u> Knochen	<u>dem</u> Hund
(nom./subj.)	(acc./dir. obj.)	(dat./ind. obj.)
the man gave	the bone	the dog

‘The man gave the bone to the dog.’

Because case is so clearly marked in German by the forms of the determiners that precede nouns, there is less dependence on word order to interpret grammatical function. That is, the noun phrases in the preceding German example can be rearranged without any loss in meaning.

<u>Den</u> Knochen gibt	<u>der</u> Mann	<u>dem</u> Hund.
(acc./dir. obj.)	(nom./subj.)	(dat./ind. obj.)
the bone gave	the man	the dog.

‘The man gave the bone to the dog.’

Word order in English, a language with little case morphology, is therefore more rigid than in languages with richer case morphology, like German.

RPE 5.11

Did You Know...?



Linguists in Hollywood

The language developed for the hit movie *Avatar*, called Na’vi, was created by linguist-turned-businessman Paul Frommer, Professor Emeritus of Clinical Management Communication, University of Southern California. Frommer developed a syntax for the language modeled on the structure of real languages; Na’vi is a case-marking language, which uses a system much like that found in Basque, Eskimo-Aleut languages, and Panoan languages of South America. The Na’vi language has quite a following, and continues to develop with the help of its “speakers.” Become a follower by visiting Frommer’s blog about the language <http://naviteri.org/>, and learn more about the structure of the language at <http://www.learnnavi.org/navi-grammar/>.

Na’vi was not the first language to be developed for a science fiction film. Klingon, the language used in many *Star Trek* films, was created by linguist Marc Okrand in the 1980s. He has since written two books on Klingon. And noted linguist Victoria Fromkin, who died in 2000, and is perhaps best known for her collection and analysis of slips of the tongue, developed the language Pakuni used by the primate-like creatures on the 1970s TV series *Land of the Lost*. So creating a language spoken by “aliens” is yet another interesting career option for someone with training in linguistics!

genitive case case typically assigned to possessive noun phrases

Pronouns and genitive case English expresses case distinctions in **only** two ways: on pronouns and in possessive (**genitive**) noun phrases.

Pronouns substitute for full noun phrases and, as you can see next, **have** different forms.

- She bought a car.
- Louise saw her.
- Louise gave a book to her.

In (a), the subject pronoun *she* is in nominative case, and in (b), the pronoun *her*, a direct object, is in accusative case. There is no distinction between accusative and dative case in English, so direct object pronouns and indirect object pronouns, such as *her* in (c), have the same forms. This nominative/accusative difference is expressed in other pronouns in English, as the following examples illustrate.

Nominative case

He bought a car.
They bought a car.
We bought a car.

Accusative case

Louise saw him.
Louise saw them.
Louise bought a car for us/them/him.

The other way that English expresses case morphology is on possessive noun phrases and pronouns. First, look at how pronouns express possessive, or genitive, case:

My/his/our book

The book is mine/his/ours

Table 5.4 shows how English personal pronouns morphologically express case (as well as number and gender).

Genitive case is also marked by the affix *-s* on the noun phrase possessor in phrases such as *the Queen of England's crown*. This case marking shows up as *'s* in written English.

Louise saw the student's car.

RPE 5.12

Table 5.4 English Personal Pronouns

Person	Number and Gender	Nominative	Accusative	Possessive
1st	singular	I	me	mine
	plural	we	us	ours
2nd	singular	you	you	yours
	plural	you	you	yours
3rd	singular masculine	he	him	his
	singular feminine	she	her	hers
	singular neuter	it	it	its
	plural	they	them	theirs

Language Alive!

The Battle over Whom

Which are you more likely to say?

Whom did you talk to?

Who did you talk to?

If you answer *whom*, you probably do so because it is a form that you were taught (by grammar-conscious parents or teachers). But really, you probably rarely, if ever, use *whom* in your conversations.

"Use *who* for subjects and *whom* for objects." This prescriptive grammar rule has a long history beginning in the seventeenth century in England. But in spite of efforts to maintain *whom* as the object pronoun, its usage has been in decline for centuries. (Chaucer, author of the *Canterbury Tales*, which he wrote over a period of years between 1386 and 1400, did not even use it consistently and instead used *who*.) It is interesting to note, however, that while use of *whom* is declining, the use of other object pronouns, such as *me* and *him*, is not.

This is the only case marking that Present-Day English has on noun phrases.

Gender

grammatical gender masculine, feminine, or neuter inflection realized on words that has no relation to biological gender

Many languages distinguish nouns in terms of **grammatical gender**—as masculine, feminine, or neuter. Old English divided nouns in this way; for example, the noun *bāt* 'boat' was masculine, *scip* 'ship' was neuter, and *brycg* 'bridge' was feminine. Despite our inclination to think otherwise, grammatical gender is just that: grammatical rather than biological.

In Germanic languages, such as Old English and German, all nouns are specified as masculine, feminine, or neuter. Function words that introduce these nouns, as well as adjectives that modify the nouns, must also *agree* in inflection (gender, case, and number) with the noun. So, the Old English masculine, nominative, singular noun *bāt* must be introduced by a masculine, nominative, singular function word, namely *se* 'this/that'.

se = masculine, nominative, singular

bāt = masculine, nominative, singular

se bāt = 'this/that boat'

The noun *scip*, on the other hand, is neuter, singular, and nominative, and the form of *this/that* that agrees with the inflection is *þæt*, and the adjective *gōd* must also agree, and so appears as *gōde*. (The runic symbol <þ> has been replaced by <th> in Present-Day English. See Chapter 11 for more discussion of runes.)

þæt scip 'this/that ship'

þæt = neuter, nominative, singular

scip = neuter, nominative, singular

þæt gōde scip 'this/that good ship'

gōde = neuter, nominative, singular

French expresses grammatical gender in a similar way; nouns are either masculine or feminine (there is no neuter gender in French). Determiners and adjectives that modify nouns must agree in gender with the noun; note how the determiners vary (*la* is feminine and *le* is masculine) and also how the adjective for 'white' changes from *blanche* (feminine) to *blanc* (masculine) to agree with the gender of the noun.

<i>la lune</i>	<i>la lune blanche</i>
'the moon'	'the white moon'

<i>le livre</i>	<i>le livre blanc</i>
'the book'	'the white book'

Though *la lune* 'the moon' is feminine in French and masculine in German (*der Mond*), and though *fille* 'girl' is feminine in French, *Mädchen* 'girl' in German is neuter. This is what we might expect, given that grammatical gender is not equivalent to "real-world" notions of gender but is rather a grammatical inflection. This is not to say that words can't express **biological gender**; they most certainly can. English pronouns *he/him* and *she/her* express (masculine and feminine) biological gender, but other pronouns do not. *They/them*, *we/us*, *you*, and *it* are unspecified for biological gender. The words *man*, *woman*, *filly*, *bachelor*, *wife*, and *rooster* are each specified as masculine or feminine, but these specifications have no grammatical effect.

biological gender
masculine or
feminine inflection
that expresses
biological gender of
the object a word
represents (*him/her*)

RPE 5.13

Inflectional Affixation of English Verbs

The English verb system is surprisingly complex, even though verbs in English take only the following four different inflectional affixes. We will discuss the function of each affix and in doing so provide an overview of the different morphological forms of verbs in English.

third-person singular -s

past tense -ed

progressive -ing

past participle -ed/-en

infinitive base
form of the verb, in
English preceded by
to (*to walk*)

Infinitives, Present Tense, and Past Tense

The form of the verb that has no inflection at all is the **infinitive**. In English, infinitives can be preceded by *to*, as in *to go*, *to walk*, *to eat*. The only form

of the verb in the present tense that expresses tense inflection is the third-person singular form, which is affixed by -s.

I/you/they/we	sleep, collapse, run, eat
he/she/it	sleeps, collapses, runs, eats

When we take a look at the past-tense forms of English verbs, things get a bit more complex. Many English verbs form the past tense with the affix -ed, as in *walked* or *chased*. Other verbs form the past tense by vowel mutation: by a change in the vowel rather than by adding an affix. Some examples of mutated forms include the past tenses of *run*, *sing*, and *drink*: *ran*, *sang*, and *drank*. Still other verbs form the past tense by both vowel mutation and affixation, as in *sleep/slept*, *keep/kept*, *buy/bought*.

We	walked, chased
	ran, drank, sang, ate
	slept, bought, kept

Though mutated forms are often called irregular, they follow regular patterns that you are very familiar with. In fact, you can easily make up mutated forms for past-tense verbs. The mutated past tense of *fling* could be *flang*, or that of *slink* could be *slank* (by analogy with other words: *sing/sang*, *drink/drank*). We can also make up examples of verbs with both mutated vowels and affixation: *bleek/blekt*.

Verbs that express inflection (such as tense) through vowel mutation alone are called **strong verbs**, and verbs that express inflection only through regular affixation (of -ed) or through vowel mutation and some other kind of suffix, such as -t (*buy/bought*, *keep/kept*), are called **weak verbs** (the terms *strong* and *weak* have nothing to do with the typical meanings we associate with these words!). Some of the formerly strong verbs that have become weak in Present-Day English (so they have acquired the “regular” affixation rather than a vowel change) include *bow/bowed*, *brew/brewed*, *burn/burned*, *climb/climbed*, *help/helped*, *mourn/mourned*, *row/rowed*, *step/stepped*, and *walk/walked*. The strong past tense form of *climb*, for example, used to be *clumban* in Old English, and that of *step* was *stop*. Look up the etymology of the others in the *Oxford English Dictionary*! And some verbs that used to be strong verbs have strong forms only as adjectives: from *cleave* we have *cloven*, from *melt* we have *molten*, and from *swell* we have *swollen*.

In contrast to English, many languages have far more inflectional affixes for verbs. This complexity is illustrated by the present tense of the Icelandic verb for ‘buy’ and by the present tense of the Old English verb ‘love.’ As you can see, both languages have a number of distinct affixes; these express tense, person, and number (singular or plural).

keypti	I buy	keyptum	we buy
keyptir	you (sg.) buy	keyptudh	you (pl.) buy
keypti	he/she buys	keyptu	they buy

strong verb verb that expresses inflection through vowel mutation

weak verb verb that expresses inflection through regular affixation and sometimes vowel mutation

lufian, to love

ic lufie	I love
þu lufast	you love
heo lufað	he/she loves
we lufiaþ	we love
ge lufiaþ	you love
hie lufiaþ	they love

Present and Past Participles

participle form of the verb that follows an auxiliary verb *have* or *be*

The affixes *-ing* and *-en/-ed/-t* occur on English **participles**, the forms of main verbs that occur with auxiliary verbs *have* and *be*.

Julia is talking to George. (talking = present participle)

Julia has talked to George. (talked = past participle)

George has eaten the apple. (eaten = past participle)

Though the auxiliary verb *be* is typically followed by a present participle (*V + ing*), in the passive voice, the auxiliary *be* is followed by a past participle:

active: George ate the apple.

passive: The apple was eaten by George. (eaten = past participle)

When the past participle is formed with *-ed*, it is identical to the past-tense form. Remember that the difference is that the past participle occurs in construction with a form of *have* (*has*, *have*, *had*).

Julia has talked to George. (talked = past participle)

Julia talked to George. (talked = past tense)

As with the past tense, the past participles of some verbs are formed by vowel mutation, and others are formed by both vowel mutation and an affix.

Julia has run, has drunk, has sung . . .

Julia and George have brought, have slept, have crept . . .

George had written, had bitten, had bought . . .

RPE 5.15

Table 5.5 shows the different verb forms we've discussed here.

Table 5.5

Standard English Morphological Verb Forms

Infinitive	(to) walk	(to) eat	(to) drink	(to) go	(to) bring
Present tense	walks	eats	drinks	goes	brings
Past tense	walked	ate	drank	went	brought
Present participle	walking	eating	drinking	going	bringing
Past participle	walked	eaten	drunk	gone	brought

Participles as markers of social class When we stigmatize a way of speaking, a particular use of a word or an accent, claiming that certain usage is bad grammar or sloppy English, we are basing our opinions on social attitudes rather than on linguistic facts. Participles are often markers of social class (as reflected in the following quote from Carl Sandburg: “*I never made a mistake in grammar but once in my life and as soon as I done it I seen it*”). We’ll see, though, that what we often label bad grammar is really the result of a linguistic pattern that has been around as long as the Old English epic poem *Beowulf*.

Because of the overlap in the past-tense and past-participial forms of many verbs (such as *walked: I walked. I have walked*), a common process in English is to extend this pattern to other verbs, even those whose past-participle form is different from the past tense. This pattern of regularization gives rise to two possible past participles, one that is identical to the past tense (following the same pattern as *walk*) and one that is not. For some verbs, neither form is particularly stigmatized for most North American English speakers. Consider these examples of verbs with two past-participle options: *I have sewn* or *I have sewed*, *I have shaven* or *I have shaved*, *I have mown* or *I have mowed*, *I have proven* or *I have proved*. But other verbs that follow exactly the same pattern are considered nonstandard and remain stigmatized: *I have sung* (more standard), *I have sang* (less standard); *I have drunk* (more standard), *I have drank* (less standard).

Yet another way in which past participles are changing and varying is that the past-participial form is used for the past tense. This variation is more highly stigmatized than the others we’ve discussed so far. *I saw* (more standard), *I seen* (less standard); or *I grew* (more standard), *I grown* (less standard).

The different forms of the past participle sometimes have different social uses. For example, the past participle of *strike* is *stricken* or *struck*, but the former is used primarily as a legal term (which is why *stricken* sounds bizarre in the context of baseball).

The defendant’s statement was stricken from the record.

The defendant’s statement was struck from the record.

*The first baseman was stricken by the ball.

The first baseman was struck by the ball.

The same is true of the verb *hang*: The past participial form *hanged* is preserved only in the context of capital punishment but not in everyday use applied, for instance, to hanging a picture.

The defendant was hanged.

The defendant was hung.

*The picture was hanged on the wall.

The picture was hung on the wall.

And finally, consider the following verb patterns, which illustrate yet another interesting fact about the strong verb system. Some speakers have created a new form of the past participle by affixing *-(e)n*, which is a common way to form a past-participial form, thus distinguishing the past participle from the

past tense. *I have bought* (more standard) or *I have boughten* (less standard); *I have put* (more standard) or *I have putten* (less standard); *I have cut* (more standard) or *I have cutten* (less standard). These newly affixed forms are quite common and are becoming standard among many speakers in various parts of the country. (These forms seem more common when a vowel follows, so *I have cutten all the meat* is more likely than *I have cutten the meat*.³)

All the variation that exists with respect to the past-participial forms of verbs suggests that we are torn right now (unconsciously, of course) about the past participle: either making a distinction where one has been lost (generalizing *-en* as a past-participle affix and attaching it to the past tense form) or letting go of the distinction (using the same form of the verb for the past tense and the past participle). Such examples illustrate well how the language that we usually see as quite fixed and standardized is indeed still changing, and such changes can even come into the standard language.

Suppletive Verbs and Adjectives

suppletion process of change whereby one form of a word has no phonological similarity to a related form of that word

Some verb forms seem to be completely unrelated to the infinitival form of the verb: *go/went*, for example. This is called **suppletion**: one form of the verb has no phonological similarity to another. Usually there is a historical reason for this; the current conjugation of *go/went*, for example, comes from two distinct Old English verbs, *gan* and *wendan* (related to the word *wend*: *I wended my way home*). It's hardly surprising that children produce *goed* before they learn suppletive *went*.

Suppletion is not confined to verbs; consider the comparative and superlative forms of the adjectives *good* and *bad*. These are also examples of suppletive forms.

good/better/best

bad/worse/worst

As we might expect, children acquire the basic form of the adjective and produce forms such as *gooder* and *goodest*, *badder* and *baddest* until they master the more idiosyncratic *better/best*, *worse/worst*.

And perhaps the most obvious example of suppletion in English is illustrated by the forms of the verb *be*, as you can see in Table 5.6.

The notoriously irregular forms of *be* have an interesting history. *Bēon* was used in the present tense, and the past-tense and present-participle forms derived from a different verb, *wesan*. These two distinct verbs led to the familiar but quite “irregular” pattern we have today. In most languages, the verb that means ‘to be’ is irregular because it is used so much. That makes it more susceptible to change. Some dialectal variations of *be* are common within other dialects, such as *I be working/they was working/I were working*. We discuss some of these patterns more in later chapters.

RPE 5.16

RPE 5.17

3. Thanks to Jason Cuniff for this insight. Subsequent data collection bears this out, at least among speakers in the Pacific Northwest.

Table 5.6 The English Verb *Be*

Person	Present	Past
I	am	was
you	are	were
he/she/it	is	was
we	are	were
you	are	were
they	are	were
Past participle	been	
Present participle	being	
Infinitive	(to) be	

Language Alive!

Ain't Ain't Had It Easy!

Did you learn that *ain't* was a bad word and that if you used it, you'd sound uneducated or at least careless in the way you express yourself? Well, there ain't really nothing wrong with *ain't*.

Ain't first appeared in print with this spelling in the late 1700s, though it had been around long before that—at least a century—with the spelling *an't*. It seems to have started as a contraction for *amn't* (*am not*), but probably because it's awkward to say the two nasals (*m* and *n*), *amn't* was usually reduced to *an't*. Some other common contractions also appeared in the Early Modern English period—Shakespeare uses many—including *don't*, *won't*, and *can't*. And though most of them became quite standard, *ain't/an't* came under attack. In Present-Day English, *ain't* is stigmatized even though linguistically it is formed by the same rule speakers use to form *aren't* and other nonstigmatized contracted auxiliary verbs. Look at the gap that *ain't* fills, allowing contraction of the verb and *not*:

I am not	→	<i>I ain't</i>	we are not	→	we aren't
you are not	→	you aren't	you are not	→	you aren't
(s)he/it is not	→	she isn't	they are not	→	they aren't

Ain't can now be used not only with the first-person singular *I* but with other subjects as well. Though it is highly stigmatized, there is nothing linguistically wrong with it; in fact, *ain't* is used by many speakers in certain fixed expressions and to convey a certain rhetorical effect: *It ain't over yet! You ain't seen nothing yet. If it ain't broke, don't fix it.*

Accent on Field Linguistics



Farah Nosh/Getty Images

As you've probably figured out by now, in order to study language scientifically linguists rely on data from a wide range of languages and language families. Where does this data come from? And how do researchers gather such data, especially when they don't speak the language in question? What methods does a researcher use to gather data from a speaker who not only speaks a different language but may also come from a vastly different culture?

There are many sources of written, well-studied languages, but what happens when we want to study a language without written records—no audio recordings, grammar books, or dictionaries, and no classes? What if all we have is access to the language's native speakers? How do we go about studying a language "from scratch," and how in the world do we figure out the phonology, morphology, and syntax of a language that no one has ever studied before?

Studying a language "from scratch" is the focus of field linguistics, which is not a theory of language but a methodology (see Munro 2001).

Field linguistics is also called *descriptive linguistics*, the process of describing a language based on work with native speakers. It has long been associated with anthropology, and field

linguists are often housed within anthropology departments. Linguists who do such work must not only be experts in language but must also be able to elicit data from speakers without violating cultural rules. They must also be able to determine whether that data is really representative of the speakers' natural language or whether it is shaped by, for example, what native speakers think the researcher wants to hear. This is no small feat! It sometimes takes years to achieve the trust and familiarity with native speakers required to really understand how the language works.

You don't need to travel to exotic places to do field linguistics, though many researchers do. Speakers of indigenous languages are not necessarily confined to inaccessible places, and many languages have yet to be described and analyzed. The photo shows linguists Erma Lawrence and Jordan Lachler in Alaska working to preserve the Haida language.

Computers and the Internet make gathering data and creating databases much easier, which contributes to cataloguing and, one hopes, preserving some of the world's disappearing languages—and in so doing, preserving disappearing cultures.

Field linguistics keeps linguists honest, often recovering data that challenges prevailing assumptions about language. For example, it was long assumed that the most basic orders of languages were SVO (subject, verb, object) and SOV, and that VSO and VOS were not found. But field linguists researching Amazonian languages found much evidence to the contrary, describing languages with both OSV and OVS order, giving rise to a shift in how we look at language typology (see Derbyshire & Pullum 1981 for discussion). Such discoveries shift and challenge conventional wisdom, an essential part of scientific study.

For more information

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Summary

In this chapter, we have explored our complex knowledge of words and how they are made up of one or more morphemes. We have examined different types of morphemes, how they can be bound or free, and how some are roots and some are affixes. We've looked at how words fall into two basic classes, content words and function words. We have closely investigated the internal structure of words and how they are built, particularly through derivational affixation. We have discussed how words express inflection through affixation, vowel mutation, suppletion, and even through their order in the sentence, and we've seen how morphology provides clues about a word's syntactic category as a noun, verb, adjective, and so on. We've seen that although not all of us share the same knowledge of morphology and etymology, we nevertheless all use morphological rules to break words into their component parts, and that each of us has a rich and complex store of words in our mental lexicons. All of these investigations have helped demonstrate the complexity of the morphological system of English as well as the enormous amount of unconscious knowledge we all have about words and their parts.

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Review, Practice, and Explore

RPE 5.1 OK, Break It Up!

Divide the following words into morphemes. If there are any you are not sure about—that you believe could be divided in more than one way—describe what is problematic and discuss any other issues that arise.

treehouses	equipment	massage
cabinets	freakishness	communism
shipment	turnip	nevertheless
gracious	begs	heated

Are any of these words monomorphemic? Give an example of how one of these words illustrates the difference between morphemes and syllables.

RPE 5.2 Finding Function Words

Find at least six (different) function words in the following text excerpt. Label each word's syntactic category. Also list and label at least six different content words. What kind of information is lost when function words are omitted?

Bilbo was very rich and very peculiar, and had been the wonder of the Shire for sixty years, ever since his remarkable disappearance and unexpected

return. The riches he had brought back from his travels had now become a local legend, and it was popularly believed, whatever the old folk might say, that the Hill at Bag End was full of tunnels stuffed with treasure. (from *The Fellowship of the Ring* by J. R. R. Tolkien)

RPE 5.3 What's Missing?

Find an example of a text that omits function words (the classified advertising section of any newspaper is a good place to look, and newspaper and magazine headlines provide good examples). Identify the syntactic category of each content word in your example, and list the function words that are missing. What effect does the lack of function words have on your understanding of the piece overall?

RPE 5.4 Free and Bound Morphemes

Divide the following words into morphemes. Which morphemes are affixes? Which morphemes are free morphemes, and which are bound?

legalize prescription distaste sportsmanship serenity ridden misinformation

RPE 5.5 A Wieldy Task

Analyze the morphology of the following text excerpt, in which the author plays with morphological rules for comic effect. Using the terminology and concepts discussed in the chapter, explain each example of wordplay as explicitly as you can. Do you find any “cranberry” (bound root) morphemes?

It had been a rough day, so when I walked into the party I was very chalan^t, despite my efforts to appear grun^tled and consola^te. I was furling my wieldy umbrella for the coat check when I saw her standing alone in a corner. She was a descript person, a woman in a state of total array. Her hair was kempt, her clothing shevelled, and she moved in a gainly way. I wanted desperately to meet her, but I knew I'd have to make bones about it since I was travelling cognito. Beknownst to me, the hostess, whom I could see both hide and hair of, was very proper, so it would be skin off my nose if anything bad happened. And even though I had only swerving loyalty to her, my manners couldn't be peccable. Only toward and heard-of behavior would do. (from “How I Met My Wife” by Jack Winter, *The New Yorker*, July 25, 1994.)

RPE 5.6 Derivational Affixation

See if you can come up with at least two other words for each of the following suffixes. Label the syntactic category of the words or roots to which each suffix attaches, and label the category of the word created by affixation. (Ignore spelling differences—they don't affect the outcome.) Here's an example:

Word	Root/Word	+ Suffix	= Word
serenity:	serene	+ ity	= serenity
	adjective	+ ity	= noun