TABLE 4.9 Typical effects of Class 1 affixes

Affix	Sample word	Change triggered by affix
-ity	san-ity; public-ity	vowel in the base changes from /e/ to /æ/ (cf. *sane*) final consonant of the base changes from /k/ to /s/, stress shifts to second syllable (cf. *public* vs. *publicity*)
-y	democrac-y	final consonant of the base changes from /t/ to /s/, stress shifts to second syllable (cf. *democrat* vs. *democracy*)
-ive	product-ive	stress shifts to second syllable (cf. *próduct* vs. *productive*)
-(i)al	part-ial	final consonant of the base changes from /t/ to /ʃ/ (cf. *part* vs. *partial*)
-ize	critic-ize	final consonant of the base changes from /k/ to /s/, (cf. *critic* vs. *criticize*)
-ion	nat-ion	final consonant of the base changes from /t/ to /ʃ/ (cf. *native* vs. *nation*)

In contrast, **Class 2 affixes** tend to be phonologically neutral, having no effect on the segmental makeup of the base or on stress placement (see table 4.10).

TABLE 4.10 Some typical Class 2 affixes

Affix	Sample word	Change triggered by affix
-ness	prompt-ness	None
-less	hair-less	None
-ful	hope-ful	None
-ly	quiet-ly	None
-er	defend-er	None
-ish	self-ish	None

As the following examples illustrate, a Class 2 affix cannot intervene between the root and a Class 1 affix.

(11)

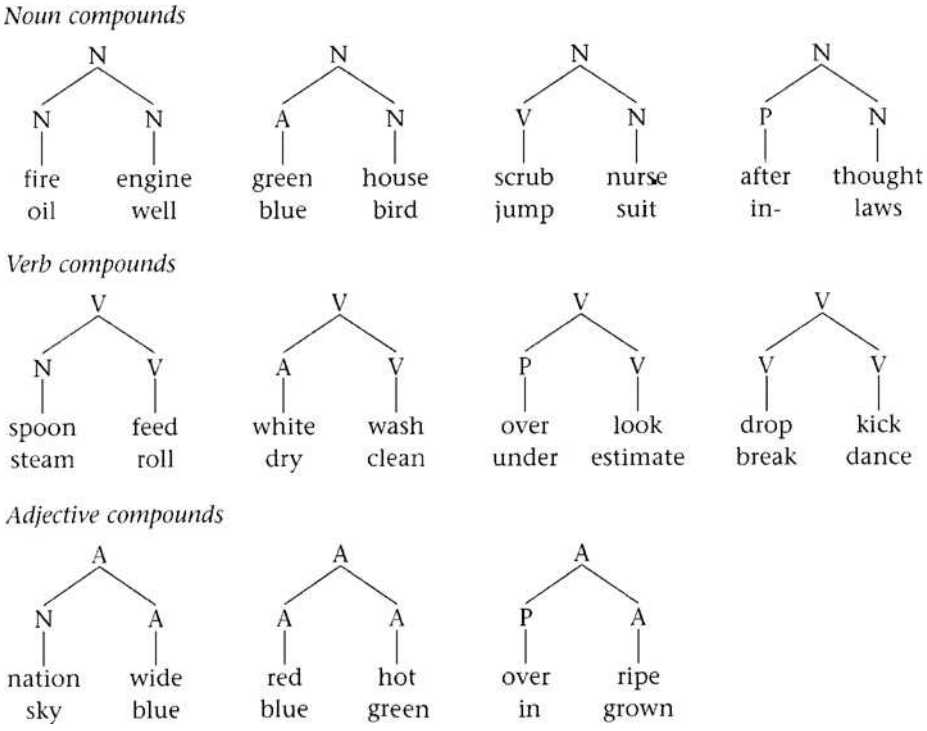
relat-ion-al	divis-ive-ness	*fear-less-ity	fear-less-ness
ROOT 1 1	ROOT 1 2	ROOT 2 1	ROOT 2 2

Notice that all combinations of Class 1 and Class 2 affixes are found in English words, except one—a Class 2 suffix followed by a Class 1 suffix.

4.3 Compounding

Another common technique for word building in English involves **compounding**, the combination of two already existing words (see figure 4.9). With very few exceptions, the resulting compound word is a noun, a verb, or an adjective. (Possible examples of compound prepositions include the words *into* and *onto*.)

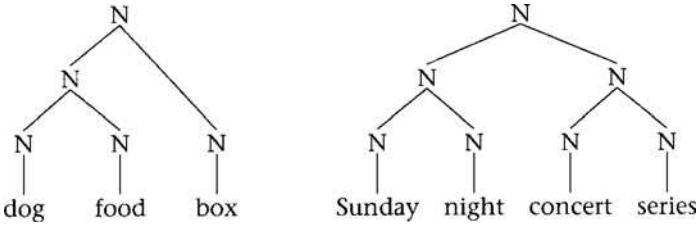
FIGURE 4.9
Some English compounds



In the most common type of English compound, the rightmost morpheme determines the category of the entire word. Thus, *bluebird* is a noun because its rightmost component is a noun, *spoonfeed* is a verb because *feed* also belongs to this category, and *nationwide* is an adjective just as *wide* is. The morpheme that determines the category of the entire word is called the **head**.

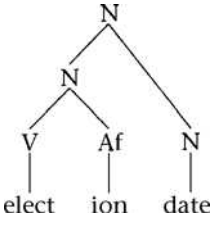
Once formed, compounds can be combined with other words to create still larger compounds, as the examples in figure 4.10 show.

FIGURE 4.10
Compounds formed from smaller compounds



In addition, compounding can interact with derivation, yielding forms such as *election date*, in which the first word in the compound is the result of derivation, as shown in figure 4.11.

FIGURE 4.11
The interaction of derivation with compounding



Compounding is an inexhaustible source of new words in English, as can easily be seen by perusing the new-word updates offered by Oxford Dictionaries Online. Additions for 2013 included the following items, among many others.

TABLE 4.11 Some new compounds recognized by Oxford Dictionaries Online in 2013

New compound	Meaning
bitcoin	a digital currency
buzzworthy	likely to arouse public interest and attention
cake pop	a piece of cake on a stick
digital detox	refraining from using electronic devices
hackerspace	a community-operated workspace where people with common interests can socialize and collaborate
space tourism	travel to space for recreational purposes

4.3.1 Properties of compounds

English orthography is not consistent in representing compounds, which are sometimes written as single words, sometimes with a hyphen, and sometimes as separate words. In terms of pronunciation, however, an important generalization can be made (see table 4.12): adjective–noun compounds are characterized by more prominent stress on their first component. In non-compounds consisting of an adjective and a noun, in contrast, the second element is generally stressed.

TABLE 4.12 Compounds versus non-compounds

Compound word		Non-compound expressions	
greénhouse	'a glass-enclosed garden'	green hoúse	'a house painted green'
bláckboard	'a chalkboard'	black boárd	'a board that is black'
wét suit	'a diver's costume'	wet suít	'a suit that is wet'

A second distinguishing feature of compounds in English is that tense and plural markers can typically not be attached to the first element, although they can be added to the compound as a whole. (There are some exceptions, however, such as *craftsman* and *parks supervisor*.)

(12) *a.* Compound verb with internal tense:
*The player [dropped kick] the ball through the goal post.

b. Compound verb with external tense:
The player [drop kick]ed the ball through the goal post.

(13) *a.* Compound noun with internal plural:
*The [ducks hunter] didn't have a licence.

b. Compound noun with external plural (different meaning):
The [duck hunter]s didn't have a licence.

Language Matters **Do You Say Brothers-in-Law or Brother-in-Laws?**

Is it *governors-general* or *governor-generals*? *Maids-of-honour* or *maid-of-honours*? *Runners up* or *runner ups*? There is now variation on this point. For some people, at least some expressions of this type have become compounds, which is why the plural marker cannot occur inside, as it once had to.

4.3.2 Endocentric and exocentric compounds

In most cases, a compound denotes a subtype of the concept denoted by its head (the rightmost component). Thus, *dog food* is a type of food, a *caveman* is a type of man, *sky blue* is a type of blue, and so on. Such compounds are said to be (semantically) **endocentric**. In a smaller number of cases, however, the meaning of the compound does not follow from the meaning of its parts in this way. Thus, although *redneck* is a noun (like *neck*), it denotes a type of person, not a type of neck. Similarly, a *sabre-tooth* is a type of tiger rather than a type of tooth. Such compounds are **exocentric**.

A very striking difference between English endocentric and exocentric compounds sometimes shows up in cases where the head is a word like *tooth* or *foot*, which has an irregular plural form. Consider in this regard the examples in table 4.13.

TABLE 4.13 Pluralization in English compounds

In endocentric compounds	In exocentric compounds
wisdom t<u>ee</u>th	sabre-t<u>oo</u>th<u>s</u> (an extinct species of carnivore)
club f<u>ee</u>t	big<u>foo</u>t<u>s</u> (a mythical creature, or sasquatch)
policem<u>e</u>n	Watchm<u>a</u>n<u>s</u> (a type of portable TV)
oak lea<u>ves</u>	Maple Leaf<u>s</u> (Toronto's NHL hockey team)

Notice that whereas the endocentric compounds employ the usual irregular plural (*teeth*, *feet*, etc.), the exocentric compounds permit the regular plural suffix *-s*.

4.3.3 Compounds in other languages

The practice of combining words (especially nouns) to build a more complex word is very widespread in the languages of the world. With the exception of Tagalog, in which compounds are left-headed, the languages exemplified in table 4.14 all have compounds in which the rightmost element is the head. In right-headed Korean, for example, the head of *kot elum* 'icicle' is *elum* 'ice' since icicles are a type of ice, and the head of the *nwun mwul* 'tears' is *mwul* 'water' since tears are a type of water. In left-headed Tagalog, in contrast, the head of *tubig-alat* 'sea water' is *tubig* 'water' since sea water is a type of water, and in *bayad-utang* 'debt payment', the head is *bayad* 'payment' since a debt payment is a type of payment.

TABLE 4.14 Noun compounds in various languages

Korean		
kot elum	isul pi	nwun mwul
straight ice	dew rain	eye water
'icicle'	'drizzle'	'tears'
Tagalog		
tubig-alat	isip-lamok	bayad-utang
water salt	mind mosquito	payment debt
'sea water'	'weak mind'	'debt payment'
German		
Gast-haus	Wort-bedeutungs-lehre	Fern-seher
guest-house	word-meaning-theory	far-seer
'inn'	'semantics'	'television'
Finnish		
lammas-nahka-turkki	elin-keino-tulo-vero-laki	
sheep-skin-coat	life's-means-income-tax-law	
'sheepskin coat'	'income tax law'	
Cree		
mishtikw naapeu	piyesuu upiiwiih	ishkuteu utaapan
wood man	duck feather	fire vehicle
'carpenter'	'duck feather'	'train'

Source: East Cree Compound Nouns, http://www.eastcree.org/cree/en/grammar/southern-dialect/word-formation/noun-structure/compound-nouns-a1/.

4.4 Inflection

Virtually all languages have contrasts such as singular versus plural and present versus past. Such contrasts are often marked with the help of **inflection**, the modification of a word's form to indicate grammatical information of various sorts. (The base to which an inflectional affix is added is sometimes called a **stem**.)

4.4.1 Inflection in English

Inflection is most often expressed via affixation, and many languages (e.g., Japanese, Swahili, Inuktitut, and Finnish) have dozens of inflectional affixes. With only eight inflectional affixes (all suffixes), English is not a highly inflected language. Table 4.15 lists the inflectional affixes of English.[1]

TABLE 4.15 The English inflectional affixes

Nouns	
Plural *-s*	the book<u>s</u>
Possessive (genitive) *-'s*	John<u>'s</u> book
Verbs	
3rd person singular non-past *-s*	He read<u>s</u> well.
Progressive *-ing*	He is work<u>ing</u>.
Past tense *-ed*	He work<u>ed</u>.
Past participle *-en/-ed*	He has eat<u>en</u> /studi<u>ed</u>.
Adjectives	
Comparative *-er*	the small<u>er</u> one
Superlative *-est*	the small<u>est</u> one

Although most inflection in English involves affixation, some words mark inflectional contrasts in other ways. This is most obvious in the case of verbs, a number of which indicate past tense by substituting one form with another (as in *am-was* or *go-went*) or by internal changes of various sorts (*come-came*, *see-saw*, *fall-fell*, *eat-ate*). We will consider these processes in more detail in section 4.5.

4.4.2 Inflection versus derivation

Because inflection and derivation are both commonly marked by affixation, the distinction between the two can be subtle. Four criteria are commonly used to help distinguish between inflectional and derivational affixes.

Category change

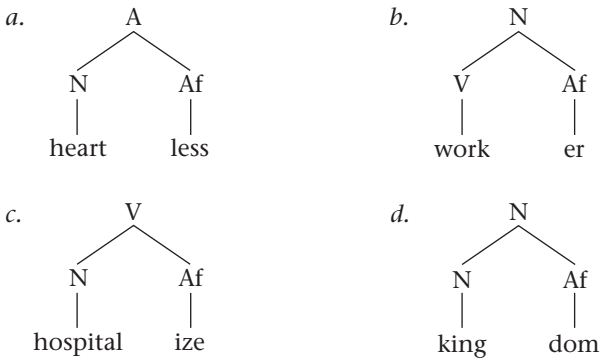
Inflection does not change either the syntactic category or the type of meaning found in the word to which it applies, as shown in figure 4.12.

FIGURE 4.12 The output of inflection: there is no change in either the category of the base or the type of meaning it denotes.

The form produced by adding the plural suffix *-s* in figure 4.12a is still a noun and has the same type of meaning as the base. Even though *hearts* differs from *heart* in referring to several things rather than just one, the type of thing(s) to which it refers remains the same. Similarly, a past tense suffix such as the one in figure 4.12b indicates that the action took place in the past, but the word remains a verb and it continues to denote the same type of action.

In contrast, derivational suffixes usually change the category and/or the type of meaning of the form to which they apply. Consider the examples of derivation given in figure 4.13.

FIGURE 4.13
The output of derivation: there is a change in the category of the base and/ or the type of meaning it denotes.

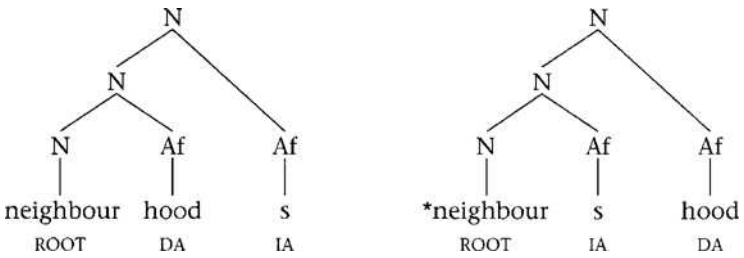


As figure 4.13a shows, *-less* makes an adjective out of a noun, changing the type of meaning it expresses from a thing (*heart*) to a property (*heartless*). Parallel changes in category and type of meaning are brought about by *-er* (V to N) and *-ize* (N to V). Matters are a little different in the case of *-dom*, which does not bring about a category change in the word *kingdom* since both the base and the resulting word are nouns. However, *-dom* does modify the type of meaning from a person (*king*) to a place (*kingdom*).

Order

A second property of inflectional affixes has to do with the order in which they are combined with a base relative to derivational affixes. As figure 4.14 illustrates, a derivational affix must combine with the base before an inflectional affix does (IA = inflectional affix; DA = derivational affix).

FIGURE 4.14
The relative positioning of derivational and inflectional affixes: the derivational affix must be closer to the root.



The positioning of inflectional affixes outside derivational affixes in these examples reflects the fact that inflection applies to the output of derivation.

Productivity

A third criterion for distinguishing between inflectional and derivational affixes has to do with **productivity**, the relative freedom with which they can combine with bases of the

appropriate category. Inflectional affixes are typically more productive than derivational affixes. The suffix *-s*, for example, can combine with virtually any noun that allows a plural form (aside from a few exceptions such as *oxen* and *feet*). In contrast, derivational affixes characteristically apply to restricted classes of bases. Thus, *-ize* can combine with only certain adjectives to form a verb.

(14) modern-ize *new-ize
legal-ize *lawful-ize
final-ize *last-ize

In the case of verbs, matters are somewhat more complicated, since many English verbs have irregular past tense forms (*saw*, *left*, *went*, and so on). Nonetheless, the inflectional affix *-ed* is much more generally applicable than a derivational affix such as *-ment*. All the verbs in table 4.16 can take the regular past tense ending, but only those in the top three rows are able to take the *-ment* suffix.

TABLE 4.16 Compatibility of verb bases with inflectional *-ed* and derivational *-ment*

Verb	With *-ed*	With *-ment*
confine	confined	confinement
align	aligned	alignment
treat	treated	treatment
arrest	arrested	*arrestment
straighten	straightened	*straightenment
cure	cured	*curement

Semantic transparency

Finally, the contribution of an inflectional affix to the word's meaning is usually completely transparent and consistent. Adding a plural suffix gives the meaning 'more than one' (*cat-cats*, *tree-trees*), adding a past tense suffix gives the meaning 'prior to the present' (*walk-walked*, *play-played*), and so forth.

Things are not always so straightforward in the case of derivation, where it is often not possible to predict the word's meaning from its parts. An *actor* is someone who acts, but a *professor* is not someone who professes. The word *teacher* often refers to someone who holds a teaching job, but no such implication is associated with *walker*. *Government* can be used to refer either to an institution (as in 'the government's agenda') or the act of governing (as in 'government by the people'), but *abandonment* lacks the first type of meaning.

4.4.3 Other inflectional phenomena

Inflection is a very widely used morphological process, and its effects can be seen in far more cases than can be discussed here. Nonetheless, two additional phenomena are worth mentioning, however briefly, because of their importance and frequency in languages of the world.

Case inflection indicates a word's grammatical role in the sentence (subject, direct object, and so on). A very simple example of this can be seen in English, where the pronoun form *he* is used for subjects and the form *him* is employed for direct objects. There is a comparable contrast between *I* and *me*, *she* and *her*, *we* and *us*, and *they* and *them*.

(15) He met the new professor. The new professor met him.
↑ ↑
subject direct object

Agreement takes place when one word is inflected to match certain grammatical properties of another word. Especially common is agreement for number (singular vs. plural) and for person (first person—speaker; second person—addressee; third person—anyone else). Here again, English offers a simple example: the suffix *-s* appears on a present tense verb when the subject is third person singular.

(16) That woman speaks French.

(Compare: *I speak French* or *They speak French*, with no *-s* suffix.)

4.5 Other morphological phenomena

No introductory textbook can hope to offer a full survey of the processes that contribute to word formation in human language. The preceding sections have touched upon many of the most common and central processes, but a number of others merit consideration as well. We will divide these into two groups—those that pertain primarily to inflection and those that involve other sorts of phenomena.

4.5.1 Processes primarily related to inflection

Internal change

Internal change is a process that substitutes one non-morphemic segment for another to mark a grammatical contrast, as illustrated in the following pairs of words in table 4.17.

TABLE 4.17 Internal change in English

sing (present)	sang (past)
sink (present)	sank (past)
drive (present)	drove (past)
foot (singular)	feet (plural)
goose (singular)	geese (plural)

Verbs such as *sing, sink*, and *drive* form their past tense by changing the vowel (e.g., from *i* to *a* in the first two examples). The term **ablaut** is often used for vowel alternations that mark grammatical contrasts in this way.

Some internal changes reflect phonologically conditioned alternations from an earlier stage in the language's history. The irregular plurals *geese* and *feet* came about in this way: the original back vowel /o/ in the words *goose* and *foot* was fronted under the influence of the front vowel in the old plural suffix /i/, which was subsequently dropped. This type of change in English and other Germanic languages is known as **umlaut**.

(17)

Old singular form of *goose*:	/gos/
Old plural form:	/gos-i/
Umlaut:	/gœs-i/(/œ/ is a front version of the vowel /o/)
Loss of the plural suffix:	/gœs/
Other changes:	/ges/ and then /gis/ 'geese'

Internal change differs from infixing in important ways. As shown by the Tagalog examples in table 4.4, the base into which an infix is inserted typically exists as a separate form elsewhere in the language (compare *sulat* 'write' with *s-in-ulat* 'wrote'). Matters are quite different in the case of alternations such as *foot/feet* or *sing/sang* in English, since we have no form **ft* meaning 'lower extremity of the leg' or **sng* meaning 'produce words in a musical tone'. Moreover, in contrast to the situation in Tagalog, the segments that alternate when there is internal change are not systematically associated with a particular meaning and therefore do not count as morphemes: the *a* of *ran* and the *o* of *drove* do not in general carry the meaning 'past' in English any more than the *ee* of *geese* normally carries the meaning 'plural'.

Suppletion

Suppletion replaces a morpheme with an entirely different morpheme in order to indicate a grammatical contrast. Examples of this phenomenon in English include the use of *went* as the past tense form of the verb *go*, and *was* and *were* as the past tense forms of *be*. (See table 4.18 for examples of suppletion in some other European languages.)

TABLE 4.18 Suppletion in some European languages

Language	Basic form	Suppletive form
French	*avoir* 'to have'	*eu* 'had'
Spanish	*ir* 'to go'	*fue* '(s/he) went'
German	*ist* 'is'	*sind* 'are'
Russian	*xorošij* 'good'	*lučše* 'better' ('more good')

In some cases, it is hard to distinguish between suppletion and internal change. For example, are the past tense forms of *think* (*thought*) and *seek* (*sought*) instances of suppletion or internal change? This type of alternation is sometimes treated as an extreme form of internal change, but the term **partial suppletion** is also used by some linguists.

Reduplication

A common morphological process in some languages involves **reduplication**, which marks a grammatical or semantic contrast by repeating all or part of the base to which it applies.

Repetition of the entire base yields **full reduplication**, as in the data from Turkish and Indonesian given in table 4.19.

TABLE 4.19 Examples of full reduplication

Base		Reduplicated form	
Turkish			
çabuk	'quickly'	çabuk çabuk	'very quickly'
yavaş	'slowly'	yavaş yavaş	'very slowly'
iyi	'well'	iyi iyi	'very well'
güzel	'beautifully'	güzel güzel	'very beautifully'
Indonesian			
orang	'man'	orang orang	'men'
anak	'child'	anak anak	'children'
mangga	'mango'	mangga mangga	'mangoes'

In contrast, **partial reduplication** copies only part of the base. In the data from Tagalog in table 4.20, for instance, reduplication affects the first consonant-vowel sequence rather than the entire word.

TABLE 4.20 Examples of partial reduplication in Tagalog

Base		Reduplicated form	
takbo	'run'	tatakbo	'will run'
lakad	'walk'	lalakad	'will walk'
pili	'choose'	pipili	'will choose'

English makes limited use of partial reduplication in various semi-idiomatic expressions such as *hocus pocus, razzle dazzle*, and *nitty gritty*, but this process does not mark grammatical information and is not productive.

Tone placement

In Mono-Bili (spoken in the Congo), tone is used to make the distinction between past and future tense. (A high tone is marked by ´ and a low tone by ` in table 4.21.)

TABLE 4.21 Past and future tense in Mono-Bili

Past		Future	
dá	'spanked'	dà	'will spank'
zɨ́	'ate'	zɨ̀	'will eat'
wó	'killed'	wò	'will kill'

4.5.2 Other processes

Cliticization

Some morphemes behave like words in terms of their meaning and function but are unable to stand alone as independent forms for phonological reasons. Called **clitics**, these elements must always be pronounced with another word (known as a **host**). A good example of this can be found in English, where certain verb forms have reduced variants (*'m* for *am, 's* for *is*, and *'re* for *are*) that cannot stand alone. Cliticization occurs, attaching these elements to the preceding word.

(18) *a.* I*'m* leaving now.
b. Mary*'s* going to succeed.
c. They*'re* here now.

Cliticization is also common in French, which has a set of unstressed clitic object pronouns that must be attached to the verb. The two are then pronounced as if they formed a single word.

(19) Jean *t'*aime. Suzanne *les* voit.
John you-likes Suzanne them-sees
'John likes you.' 'Suzanne sees them.'

Clitics that attach to the end of their host (as in the English examples) are called **enclitics**; those that attach to the beginning of their host (as in the French examples) are known as **proclitics**.

The effects of cliticization can bear a superficial resemblance to affixation: in both cases, a morpheme that cannot stand alone is attached to a word belonging to a syntactic category, such as a noun or a verb.

Conversion

Conversion is a process that assigns an already existing word to a new syntactic category. Even though it does not add an affix, conversion is often considered to be a type of derivation because of the change in category and meaning that it brings about. For this reason, it is sometimes called **zero derivation**. Table 4.22 contains examples of the three most common types of conversion in English.

Less common types of conversion can yield a noun from an adjective (*the poor, gays*) and even a verb from a preposition (*down a beer, up the price*).

TABLE 4.22 Examples of conversion

V derived from N	N derived from V	V derived from A
ink (a contract)	(a long) run	dirty (a shirt)
butter (the bread)	(a hot) drink	empty (the box)
ship (the package)	(a pleasant) drive	better (the old score)
nail (the door shut)	(a brief) report	right (a wrong)
button (the shirt)	(an important) call	total (a car)

A notorious recent example of conversion involves the use of the noun *friend* as a verb to mean 'add someone as a friend on a social networking website', making it distinct from the already existent word *befriend*, which refers to a more conventional social relationship. The transition to verbhood in this case is confirmed by the appearance of derived words such as *unfriend* and *defriend*, created with the help of prefixes used for other verbs in the language (*untie, deactivate*).

Conversion is usually restricted to words containing a single morpheme, although there are some exceptions, such as *refer-ee* (noun to verb) and *dirt-y* (adjective to verb). In addition, it is common in English to form nouns from verb + preposition combinations—a *toss-up*, a *slowdown*, a *dropout*, and so on. The result is a headless compound—the category of the entire word (noun) cannot be traced to either of its component parts.

Conversion in two-syllable words is often accompanied by stress shift in English. As the examples in table 4.23 show, the verb has stress on the final syllable while the corresponding noun is stressed on the first syllable. (Stress is represented here by ´.)

TABLE 4.23 Stress shift and conversion of two-syllable words

Verb	Noun
implánt	ímplant
impórt	ímport
presént	présent
subjéct	súbject
contést	cóntest
slow dówn	slówdown

Clipping

Clipping is a process that shortens a polysyllabic word by deleting one or more syllables. Some of the most common products of clipping are names—*Liz, Ron, Rob, Sue*, and so on. Clipping is especially popular in casual speech, where it has yielded forms like *prof* for *professor, psych* for *psychology, doc* for *doctor*, and *burger* for *hamburger*. However, many clipped forms have also been accepted in general usage: *app, ad, auto, lab, sub, deli, porn, demo*, and *condo*.

Language Matters **Some Cases of Clipping That Might Surprise You**

zoo < zoological garden
fax < facsimile
fan (as in sports) < fanatic
flu < influenza
van < caravan
mob < mobile vulgus (Latin, for 'fickle crowd')

An interesting recent clip is *blog*, from *Web log*—a personal website-based log of events, comments, and links. Once formed, *blog* quickly appeared in compounds (*blog archive, blogosphere*) and has undergone conversion to a verb (as in 'things to blog about'). The verb, in turn, has undergone derivation, resulting in the noun *blogger*. No wonder *blog* was voted the new word most likely to succeed at the 2003 meeting of the American Dialect Society!

Blending

Blending creates words from non-morphemic parts of two already existing items, usually the first part of one and the final part of the other. Recent innovations of this type include *froyo* (from *frozen yogurt), wi-fi* (from *wireless* and *hi-fi*), and *bromance* (from *brother* and *romance*). Older and perhaps more familiar examples include *brunch* from *breakfast* and *lunch, smog* from *smoke* and *fog, motel* from *motor* and *hotel, telethon* from *telephone* and *marathon, aerobicise* from *aerobics* and *exercise, chunnel* (for the underwater link between Britain and mainland Europe) from *channel* and *tunnel*, and *infomercial* from *information* and *commercial*. And where would we be without the word *toonie*, the affectionate name for Canada's two-dollar coin—a blend of *two* and *loonie*?

Another type of blend, common in languages of Asia, is strongly syllable-oriented: two or more words each contribute a syllable to the blend.

(20) *a.* Tagalog
tap-si-log < tapa sinangag itlog
breakfast combination (from 'dried meat – fried rice – egg')

b. Malay
pulada < pusat latihan darat
army training camp (from 'centre – training – army')

In Japanese, Korean, and Mandarin, nicknames for universities (among other words) are often created in this way.

(21) *a.* Korea Tayhakkyo > Kotay
Korea University

b. Tokyo Daigakku > Todai
Tokyo University

c. Beijing Da Xue > Bei Da
Beijing University

Sometimes, a word is formed by a process that is on the borderline between compounding and blending in that it combines all of one word with part of another. Examples of this in English include *email, perma-press, workaholic, medicare, guesstimate*, and *Amerindian*. Even *blog* has managed to participate in this process—*blogma* is a blend of *blog* and *dogma* and *blook* refers to a book based on content from a blog.

Backformation

Backformation is a process that creates a new word by removing a real or supposed affix from another word in the language. *Resurrect* was originally formed in this way from *resurrection*. Other backformations in English include *enthuse* from *enthusiasm, donate* from *donation, orientate* from *orientation*, and *self-destruct* from *self-destruction*.

Language Matters **Some Words That Originated as Blends**

Some words become part of the language without its users having any idea of their origin. For example, all of the following words began as blends.

bit (unit of information in computer science) < binary + digit
modem < modulator + demodulator
pixel < picture + element
quasar < quasi + stellar
chortle < chuckle + snort
spam (the sandwich meat) < spiced + ham

Sometimes, backformation involves an incorrect assumption about a word's form: for example, the word *pea* was derived from the singular noun *pease*, whose final /z/ was incorrectly interpreted as the plural suffix.

Words that end in *-or* or *-er* have proven very susceptible to backformation in English. Because hundreds of such words are the result of affixation (*runner, walker, collector,* etc.), any word with this shape is likely to be perceived as a verb + *-er* combination. The words *editor, peddler*, and *swindler* were (mis)analyzed in just this way, resulting in the creation of the verbs *edit, peddle*, and *swindle*, as shown in table 4.24.

TABLE 4.24 Some examples of backformation

Original word	Misanalysis	Verb formed by backformation
editor	edit + or	edit
peddler	peddle + er	peddle
swindler	swindle + er	swindle

Two relatively recent backformations are *lase* and *tase*, from *laser* and *taser*, respectively, each of which have their own unusual origin (see "Acronyms and initialisms" on page 126).

Backformation continues to produce new words in modern English—*aggress* (from *aggression*), *allegate* (from *allegation*), *liaise* (from *liaison*), *administrate* (from *administration*), *claustrophobe* (from *claustrophobia*) and *liposuct* (from *liposuction*) have all been derived in this way.

Language Matters **Word of the Year for 2013**

Every year, Oxford Dictionaries picks a 'word of the year' (http://blog.oxforddictionaries.com/press-releases/oxford-dictionaries-word-of-the-year-2013/). The winner for 2013 was *selfie*—a root-plus-suffix combination that refers to a photo that one has taken of oneself, usually with a smart phone. Runner-ups included *showrooming* (a suffixed compound that describes the practice of examining a product in a store before buying it at a lower price online) and *twerk* (dance to popular music in a sexually provocative manner)—a word that Oxford lexicographers think may be a blend of *twist* or *twitch* and *work*.

Acronyms and initialisms

Acronyms are formed by taking the initial letters of (some or all) the words in a phrase or title and pronouncing them as a word. This type of word formation is especially common in names of organizations and in military and scientific terminology. Common examples include *UNICEF* for *United Nations International Children's Emergency Fund, CIDA* for *Canadian International Development Agency, NATO* for *North Atlantic Treaty Organization*, and *AIDS* for *acquired immune deficiency syndrome*. More recent innovations include MOOC 'massive open online course', YOLO 'you only live once', FOMO 'fear of missing out', and BOGO 'buy one, get one (free)'.

Acronyms are to be distinguished from **initialisms** such as *PEI* for *Prince Edward Island* or *USA* for *United States of America*, not to mention *BYOB* for *bring your own booze*, all of which are pronounced as a series of letters rather than as a word. An intermediate case is *CD-ROM*, a compound consisting of the initialism *CD* (*compact disc*) and the acronym *ROM* (*read-only memory*).

Some words enter the language as acronyms without speakers' knowledge of their origins, perhaps because they sound similar to other words in the language or because they have been in the language for more than one generation. Four commonly used words of this type are *radar* (from *radio detecting and ranging*), *scuba* (*self-contained underwater breathing apparatus*), *laser* (*light amplification by stimulated emission of radiation*), and *taser* (named by its inventor after his hero, Tom Swift: *Thomas A. Swift's electrical rifle*)!

Onomatopoeia

All languages have some words that have been created to sound like the thing that they name. Examples of such **onomatopoeic** words in English include *buzz, hiss, sizzle*, and *cuckoo*. Since onomatopoeic words are not exact phonetic copies of noises, their form can differ from language to language, as shown in table 4.25.

TABLE 4.25 Onomatopoeia across languages

English	Japanese	Tagalog
cock-a-doodle-doo	kokekokko	kuk-kukaok
meow	nyaa	ngiyaw
chirp	pii-pii	tiririt
bow-wow	wan-wan	aw-aw

English does not always have an equivalent for the onomatopoeic words found in other languages. The Athabaskan language Slavey, for instance, has the onomatopoeic word [sah sah sah] for 'the sound of a bear walking unseen not far from camp', [ðik] for 'the sound of a knife hitting a tree', and [tɬóòtʃ] for 'the sound of an egg splattering'.

Other sources of new words

Sometimes, a word may be created from scratch. Called **word manufacture** or **coinage**, this phenomenon is especially common in the case of product names, including *Kodak, Dacron, Orlon*, and *Teflon*. (Notice how the *on* of the final three words makes them sound more

scientific, perhaps because an affix with this form occurs in science-related words of Greek origin such as *phenomenon* and *automaton*.)

New words can also sometimes be created from names, including those listed in table 4.26. Words created in this way are called **eponyms**.

TABLE 4.26 Some English words created from names

Word	Name of the person
watt	James Watt (late 18th-century scientist)
curie	Marie and Pierre Curie (early 20th-century scientists)
Fahrenheit	Gabriel Fahrenheit (18th-century scientist)
boycott	Charles Boycott (19th-century land agent in Ireland who was ostracized for refusing to lower rents)

In still other cases, brand names can become so widely known that they are accepted as generic terms for the product with which they are associated. The words *kleenex* for 'facial tissue' and *xerox* for 'photocopy' are two obvious examples of this, as is the verb *google* in the sense of 'conduct an Internet search'.

Finally, languages frequently look to other languages for new words. English has always been open to borrowing of this sort, and the language continues to absorb new words from many different sources—*latte* from Italian, *feng shui* from Chinese, *al Qaeda* from Arabic, and so forth.

Language Matters **What's the Longest Word in English?**

Is it

ANTIDISESTABLISHMENTARIANISM (28 letters)
(the belief that opposes removing the tie between church and state)?

Or is it

SUPERCALIFRAGILISTICEXPIALIDOCIOUS (34 letters)
('extremely wonderful' from the Disney movie *Mary Poppins*)?

Neither! The longest English word in any dictionary is

PNEUMONOULTRAMICROSCOPICSILICOVOLCANOCONIOSIS
(45 letters; also spelled '.. . koniosis')
(a lung disease caused by breathing in particles of siliceous volcanic dust).

4.6 Morphophonemics

A word's pronunciation can be affected by morphological factors, including its internal structure. The study of these effects is known as **morphophonemics** (or **morphophonology**).

A well-known example of a morphophonemic phenomenon in English involves the plural suffix *-s*, which can be /s/, /z/, or /əz/, depending on the context, as mentioned in section 4.1.1.

(22) lip/s/
pill/z/
judg/əz/

This alternation is, in part, the result of phonetic factors: voiceless /-s/ occurs after voiceless sounds (such as /p/), voiced /-z/ occurs after voiced sounds (such as /l/), and the /-əz/ form shows up only when a vowel is needed to break up a non-English consonant cluster (no English syllable ends with the coda /dʒz/). What makes the alternation morphophonemic is its interaction with two additional factors.

First, the alternation involves separate phonemes—/s/ and /z/. In this, it differs from a purely phonetic alternation, such as aspiration of the /t/ in *top* but not *stop*, a variation that involves allophones of the same phoneme.

Second, morphological structure matters. It is perfectly possible to have /s/ after /l/ in English when they are both in the same morpheme, as in the word *pulse*. But when the 's' represents the plural as it does in *pills*, and is therefore a separate morpheme, only /z/ is permitted. Alternations like this that occur specifically at morpheme boundaries are sometimes referred to as sandhi, a Sanskrit word used to describe similar phenomena in the languages of India, where morphophonological analysis was being done in the 4th century BC.

Another example of morphophonemic alternation, also mentioned in section 4.1.1, involves the variant forms of the prefix *in-*, whose final consonant is /n/ in *inactive*, /m/ in *impossible*, /l/ in *illegal*, and /r/ in *irregular*. Here again, the alternation involves distinct phonemes and is associated with a particular morpheme in a particular context. (The final consonant of the semantically similar prefix *un-* does not change to /l/ in *unlawful* or to /r/ in *unreadable*.)

Summing up

This chapter has focused on the structure and formation of **words** in human language. **Morphemes** are the basic building blocks for words. These elements can be classified in a variety of ways (**free** versus **bound**, **root** versus **affix**, **prefix** versus **suffix**) and can be combined and modified under various conditions to build words.

The two basic types of word formation in English are **derivation** and **compounding**. **Inflection**, a change in the form of a word to convey grammatical information such as plurality or tense, can be expressed via **affixation**, **internal change**, **reduplication**, and **tone placement**. Other important morphological phenomena include **cliticization**, **conversion**, **clipping**, **blending**, and **backformation**.