

English Word Stress Patterns

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1. Stress

By stress we mean the amount of energy expended in producing a syllable. Stress is a relative matter. Some syllables in a length of speech are produced with more or less energy than others. This extra energy shows up as higher pitch, greater length, and greater loudness. We distinguish two levels of stress: primary stress and unstressed. Other linguists distinguish three and even four levels. We indicate primary stress by bolding the nucleus of the stressed syllable; we leave unstressed syllables unmarked.

2. Predictability of English stress

In general, English word stress is not phonemic. That is, except for a few pairs of words such as *differ* and *defer* (Giegerich 1992: 180), stress placement is not used to distinguish unrelated words, although it is used to distinguish the parts of speech of some morphologically related words such as the noun *convert* and the verb *convert*. This raises the question of whether English word stress is otherwise generally predictable.

Unfortunately, only partial generalizations are possible. This means that learners must learn both these partial generalizations and where they apply, as well as the stress placement in words in which stress is not predictable.

English has this mixed system because of its mixed heritage—it is fundamentally a Germanic language, which should give it predictable stress placement on the first syllable of a word's stem (i.e., the part of a word to which one or more affixes may be attached). However, it has borrowed heavily from many other languages, but particularly from French, Latin and Greek, so its basic Germanic regularity has been disrupted.

3. One syllable words

Because stress is a relative matter, logically, a one syllable word spoken in isolation cannot be said to be either stressed or unstressed. However, one syllable words spoken in isolation generally have the phonetic characteristics of primary stress, that is, they consist of heavy syllables (i.e., they have a tense vowel as nucleus, and/or a coda).

imp, stripe, strength, arm, go, to, the, a, an

4. Native and nativized words

Words that are of Germanic origins or which were borrowed into English early in its history and which have been thoroughly assimilated are generally stressed on their first syllable, as long as that is not a prefix:

father, mother, brother, sister, bishop, kitchen

5. Syllable weight and stress placement

English always locates a word's stress relative to the end of a word, on one of the last three syllables of words of three or more syllables. In words of two syllables, other factors, such as the word's part of speech and whether the word includes affixes, play roles. We will describe these roles below. For now, consider the following words:

(a)	(b)	(c)	(d)
A. re .tha	a. gen .da	cam .ou.flage	a. na .the.ma
Ta. co .ma	Co. ret .ta	in .stru.ment	A. mer .(r)i.ca
A. ru .ba	to. bac .co	mack .er.el	gul .li.ble
the. sau .rus	as. sas .sin	om .pha.los	syl .la.ble
di. plo .ma	e. stab .lish	Bu .ca.rest	a .ni.mal
en. ti .tle	as. bes .tos		ma .je.sty
an. hy .drous	ve. ran .dah		
an. gi .na			
al. migh .ty			
bar.ra. cu .da			

o.a.sis

The stress in the column (a) words is on the **penultimate** (2nd to last) syllable, which has either a tense vowel or a diphthong as its nucleus. The stress in column (b) words is also on the penultimate syllable, whose rhyme consists of a lax vowel and at least one coda consonant. Recall that syllables whose nuclear vowels are tense or whose rhymes contain a coda consonant are heavy.

In contrast, the words in columns (c) and (d) are stressed on their **antepenultimate** (3rd to last) syllables. Notice that the penultimate syllable in these words is light, that is, its rhyme consists solely of a lax vowel. So we begin with two partial generalizations (1) *A stressed syllable must be heavy*, and (2) *If the penultimate syllable is heavy, then it is stressed; otherwise the antepenultimate syllable is stressed* (Giegerich 1992:187).

6. Stress and part of speech

English has several pairs or triples of related two syllable words which differ in part of speech and in stress placement. The nouns and adjectives are stressed on their penultimate syllables, while the verbs are stressed on their last syllables, their **ultimates**:

Noun	Verb	Adjective
affix	affix	
compact	compact	compact
convert	convert	
discharge	discharge	
discount	discount	
dismount	dismount	
impact	impact	
	perfect	perfect
permit	permit	
pervert	pervert	
present	present	present
refill	refill	
transport	transport	

Exercise: Each of the following words can be a noun, verb, and/or adjective. For each part of speech the word can function as, determine where it takes its main stress. Are the words consistent with the generalization just above?

attribute	contrast	frequent	produce	reject
combat	convert	import	progress	subject
compound	convict	insult	project	survey
conduct	decrease	object	protest	suspect
construct	exploit	perfect	rebel	transfer
contest	export	permit		recall
transport				
contract	extract	pocket	present	record
upset				

(Cambridge International Dictionary of English p. 1439)

We hope that you found that the majority of the words in the exercise adhered to the general pattern, but that a few did not.

7. Stress placement, parts of speech, and syllable weight

When we look at the relationship of stress placement and part of speech beyond these sets of morphologically related words, we find similar but not identical patterns.

Nouns follow the general pattern of stressing a heavy penultimate syllable and an antepenultimate otherwise:

an.i.mal, **mi.ne.ral**, **att.ri.bute**, **con.fe.rence**, **diff.e.rence**, **li.ga.ment**,
le.vi.a.than, **lieu.ten.ant**, **o.bei.sance**, **o.cca.sion**, **Pan.do.ra**

A few nouns, typically borrowed ones, are stressed on heavy final syllables:

cadet, **hotel**, **catamaran**, **degree**, **ballyhoo**, **ravine**, **arcade**, **magazine**,
lament, **riposte**, **Bucarest**, **kangaroo**, **mayonaise** (Giegerich 1992:
 183).

Speakers may differ on how they stress these words. Alternative patterns tend to bring the word's stress more in line with the general pattern, e.g., *magazine*.

In verbs, a heavy final syllable may be stressed:

under**lie**, understand, invit**e**, obey, interv**ene**, interced**e**

which all have tense vowels or diphthongs and/or codas in their rhymes. If the final syllable is light, verbs stress the penultimate: *hurry*, *tarry*.

Adjectives tend to be like verbs, c.f., *obese*, *divine*, *absurd* and *gloomy*.

8. Stress determined by suffixes

Some suffixes do not affect stress placement. These include the syllabic inflections *-er*, *-est*, *-es* [əz], *-ed* [əd], and the derivational suffixes *-ly* and *-ite*:

small/smaller, tall/tallest, horse/horses, pat/patted, wife/wifely,
Trotsky/Trotskyite, Ludd/Luddite

Exercises: (1) The following suffixes are also claimed to have no effect on the where main stress falls in words that end with them. For each suffix, select at least three words that end in it, identify where the main stress is in each, and confirm (or not) the generalization.

-ment -age -less -ism -ness -en -ing -ful

(2) English has two suffixes that may be written as *-er*. One is attached to adjectives to indicate comparison, *stupid/stupider*. The other is attached to verbs to turn them into nouns, *smoke/smoker*. Collect about 10 words with each suffix and determine whether or not the two suffixes differ in their effect on stress placement.

A few suffixes take the word's main stress:

bombardier, engineer, Mouseketeer, musketeer, racketeer, privateer
amputee, devotee, divorcee, employee, refugee

Exercise: The suffixes *-ese*, *-esque*, *-ique*, and *-ette* are also claimed to take the word's stress. For each suffix find at least three words and determine whether this claim is true.

However, in most cases the addition of a suffix forces the stress to move:

democrat	democratic	democracy
empath	empathic	
empathy	empathetic	
sympathy	sympathetic	
grapheme	graphemic	
phoneme	phonemic	
photograph	photographic	photography
telephone	telephonic	telephony

The main stress in adjectives formed with the suffix *-ic* (e.g., *optic*, *basic*, *morphemic*, *electric*) falls on the syllable immediately before that suffix, the penultimate syllable. The main stress in nouns formed with the suffix *-y* (e.g., *mysogyny*, *phylogyny*, *ontogyny*) is on the third syllable from the end, that is, on the antepenultimate syllable. The suffix *-tion*, which creates abstract nouns, also requires that the main stress be on the syllable immediately before it. Notice that the form of the suffix will ensure that that syllable is heavy.

option, opinion, fragmentation, fermentation, actuation

Nouns and adjectives formed with the suffix *-ian* also generally take their main stress on the syllable immediately before the suffix, on their antepenults:

simian, agrarian, grammarian, latitudinarian, librarian

Nouns formed with the suffix *-ity* take their stress on the antepenultimate syllable, which, because the suffix has two syllables, is the syllable immediately before it. Note that the first syllable of the suffix is light and so cannot be stressed.

probity, necessity, curiosity, sanctity, electricity, adiposity

Exercise: The following suffixes require that the word's main stress fall on the syllable immediately preceding them. For each suffix, select at least three words that end in it, identify where the main stress is in each, and confirm (or not) the generalization.

-ia
-ial
-ible
-ify
-logy
-ual

Words ending in *-ate* and *-ize* take their main stress on the second syllable before the suffix, i.e., the antepenultimate, when there are enough syllables:

amputate, isolate, insulate, congratulate, coagulate, regulate
hydrogenize, sympathize, weatherize

Where only one syllable precedes the suffix, it receives main stress:

fixate, dictate

Exercise: The following suffixes also require that the word's main stress fall on the second syllable to their left. For each suffix, select at least three words that end in it, identify where the main stress is in each, and confirm (or not) the generalization.

-ist
-ous

Nouns ending in *-oid* and *-ute* take their main stress on the syllable immediately before the suffix in one syllable stems, and on the second syllable before the suffix in stems of two syllables:

asteroid, **planetoid**, **polaroid**, **factoid**
tribute, **attribute** (noun)

Generally, the addition of a suffix that affects the placement of stress does so in a way that is consistent with our earlier partial generalization about the placement of word stress: (1) *If the penultimate is heavy, it is stressed; otherwise, the antepenultimate is.* (2) *Nouns tend to stress antepenultimate syllables; verbs tend to stress penultimates.*

Exercises: (1) The following suffixes are similar to *-oid* and *-ute* in their effect on main stress. For each suffix, select at least three words that end in it, identify where the main stress is in each, and confirm (or not) the generalization.

-ine
 -ite
 -ose
 -ule

(2) For each of the suffixes italicized below select at least three words other than the one given that end in it, identify where the main stress is in each, and determine which group of suffixes above each of those below belongs with.

mundane
 iodide
 Caroliniana
 womanhood
 sixish
 liberalism
 owlet
 telegraph
 photography

farcical
workaholic
towelette
gradient
uranium
attitude
analysis/esis
invidious/uouseous
economy
quotidian

9. Prefixes and stress placement

Mostly, prefixes do not affect stress placement, but only mostly. The prefixes *a-* as in *awake*, *be-* as in *befriend* and *en-* as in *enclose* never take stress. Many words which begin with what appears to be a prefix (but which probably isn't now a separate morpheme) also fit this pattern:

alive, begin, confer, confront, forget, pretend, remove, withhold

Exercise: Check the following words and determine whether they are stressed according to the pattern described just above:

about, believe, contend, control, deter, delay, expect, infer, predict

Some prefixes such as *step-* as in *step-mother* and *counter-* in words like *counter-culture* take primary stress. This pattern of stressed prefix is particularly obvious when the prefix has more than one syllable: *antimatter*, *pseudo-scientist*. Some of these words may be compounds, which normally take primary stress on their first element.

Exercise: Find ten words that are prefixed with *sub-*. Determine for each word whether it is a noun, a verb, or an adjective. Identify the main stress on each word and then articulate whatever pattern of relationship between stress and part of speech you perceive for these words.

10. Other factors that affect stress placement

As you worked through the exercises above, you no doubt discovered words which did not fit the pattern as you expected. For example, words ending in the suffix *-ic* generally take main stress on the syllable immediately preceding the suffix, as in *symbolic*. You may have come across *Arabic* which is stressed on the second syllable before the suffix. It is possible that in words such as *Arabic*, *choleric*, *arsenic*, which are stressed on the antepenultimate rather than the penultimate syllable, that the sequence *-ic* is no longer a separate English morpheme. That is, these words are stressed according to the most general pattern for polysyllabic words in English, namely on the antepenultimate syllable because they are no longer morphologically complex.

As we just noted the most general tendency is for English words to be stressed on their antepenultimate syllables. You can verify this yourself by reexamining the words discussed in the earlier sections. Notice, for example, that when the suffix consists of two syllables, the main word stress generally falls on the syllable immediately before it, which is, of course, the antepenult.

Exercise: What, if any, difference you perceive between *recover* and *recover*?

11. Conclusion

The general pattern is that (1) stressed syllables are heavy, and (2) if the penultimate syllable of a word is heavy, then it is stressed, otherwise, the antepenult is. This general pattern interacts with other factors such as the word's part of speech and whether the word includes affixes. There is a significant number of relatively frequent, related, two syllable words which are differentiated only by stress placement: the nouns and adjectives are stressed on the penult; the verbs on the ult. Nouns tend to follow the general pattern; verbs tend to place their stress one syllable later than nouns.

Inflectional suffixes, some derivational suffixes, and prefixes in general do not affect stress placement; some derivational suffixes take primary stress; most derivational suffixes affect stress placement in ways that accord with the general pattern of English word stress placement.

Sources/Resources

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