

كلية : الاداب

القسم او الفرع : اللغة الانكليزية

المرحلة: الثانية

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اسم المادة باللغة العربية : الصوت

اسم المادة باللغة الإنكليزية : Phonetics and Phonology: An Introduction

What is a syllable?

- Syllable is a unit of pronunciation having one vowel sound, with or without surrounding consonants, forming the whole or a part of a word; for example, there are two syllables in **water** and three in **inferno**.

- A syllable is a single, unbroken sound of a spoken (or written) word. Syllables usually contain a vowel and accompanying consonants.

- Syllables differ from phonemes in that a phoneme is the smallest unit of sound; the number of syllables in a word is unrelated to the number of phonemes it contains. For example: /b/, /k/, /t/, /ch/, /sh/, /ee/, /ai/, /ear/ are all phonemes. The word 'chat' is made up of three phonemes (/ch/ /a/ /t/). The word 'light' is made up of three phonemes (/l/ /igh/ /t/). However, both the words 'chat' and 'light' have only one syllable each.

- The number of times you hear a vowel (a, e, i, o, u) in a word is equal to the number of syllables a word has. A good way to identify syllables is to think about whether you need to change your mouth shape to say the next bit of the word / the new syllable.

• The nature of the Syllable

- The Syllable may be defined both phonetically and phonologically. Phonetically (i.e. in relation to the way we produce them and the way they sound), syllables are usually described as consisting of a centre which has little or no obstruction to airflow and which sounds comparatively loud; before and after this centre (i.e. at the beginning and end of the syllable), there will be greater obstruction to airflow and/or less loud sound. We will now look at some examples:
- i) What we will call a minimum syllable is a single vowel in isolation (e.g. the words 'are' a:, 'or' o:, 'err' 3:).
- These are preceded and followed by silence. Isolated sounds such as m, which we sometimes produce to indicate agreement, or S, to ask for silence, must also be regarded as syllables.
- ii) Some syllables have an onset that is, instead of silence, they have one or more consonants preceding the centre of the syllable:
- 'bar' ba: 'key' Ki: 'more' mo:
- iii) Syllables may have no onset but have a coda that is, they end with one or more consonants:
- 'am' am 'ought' o:t 'ease' i:z
- iv) Some syllables have both onset and coda:
- 'ran' ran 'sat' sat 'fill' fil

Phonologically: It is simplest to start by looking at what can occur in initial position - at the beginning of the word. We find that the word can begin with a vowel, or with one, two or three consonants. No word begins with more than three consonants. In the same way, we can look at how a word ends; it can end with a vowel, or with one, two, three or (in a small number of cases) four consonants. No current word ends with more than four consonants.

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The structure of the English syllable: syllable onsets

If the first syllable of the word in question begins with a vowel (any vowel may occur, though u is rare) we say that this initial syllable has a zero onset.

One consonant Syllable: If the syllable begins with one consonant, that initial consonant may be any consonant phoneme except N; Z is rare.

Two-consonant syllables. When we have two or more consonants together we call them a consonant cluster.

Initial two-consonant clusters are of two sorts in English:

One sort is composed of s followed by one of a small set of consonants; examples of such clusters are found in words such as 'sting' stIN, 'sway' swei, 'smoke' sm@Uk. The s in these clusters is called the pre-initial consonant and the other consonant (t, w, m in the

above examples) the initial consonant. These clusters are shown in Table 2.

Table 2 Two-consonant clusters with pre-initial s Pre-initial s followed by:

									INITI	AL							
p	t	k	b	d	g	f	θ	8	ſ	h	V	ð	Z	3	m	n	ŋ
spin	stık	skin	-	-	-	sfiə	-	-	-	-	-	-	-	-	smel	snəu	-

The other sort begins with one of a set of about fifteen consonants, followed by one of the set l, r, w, j as in, for example, 'play' plei, 'try' trai, 'quick' kwik, 'few' fju:. We call the first consonant of these clusters the initial consonant and the second the post-initial. There are some restrictions on which consonants can occur together. This can best be shown in table form, as in Table 3.

Table 3 Two-consonant clusters with post-initial l, r, w, j

_		-					<u> </u>																
		p	t	k	b	d	g	f	θ	8	ſ	h	V	ð	Z	3	m	n	ŋ	1	r	W	j
AL	1	pleı	-	kleı	blæk	-	glu:	flaı	-	slıp	-	-	-	-	-	-	-	-	-	-	-	-	-
Ez	r	prei	trei	kraı	brıŋ	drıp	grın	fraı	θrəu	?1	∫ru:	-	-	-	-	-	-	- , ;	-	- ; `	-	-	-
ST-I	W	-	twin	kwık	-	dwel	? ²	-	θwort	swim	?3	- , ,	-	-	-	-	-	_ ``	-		-	_	_
PO	j	pjo:	tjum	kju:	bju:ti	dju:	?4	fju:	?5	sju:	-	hju:dz	vju:	-	-	-	mju:z	nju:z	-	lju:d	-	-	-

Initial three-consonant clusters: Examples of three consonant initial clusters are: 'split' split, 'stream' stri:m, 'square' skwe@. The s is the pre-initial consonant, the p, t, k that follow s in the three example

words are the initial consonant and the l, r, w are post-initial. In fact, the number of possible initial three-consonant clusters is quite small and they can be set out in full (words given in spelling form):

		POST-INITIAL			
		1	r	W	j
	Р	'splay'	'spray'	-	'spew'
s plus initial	Т		'string'	-	'stew'
	k	'sclerosis'	'screen'	'squeak'	'skewer'

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Final Consonant Cluster

Here we find the possibility of up to four consonants at the end of a word. If there is no final consonant we say that there is a zero coda. When there is one consonant only, this is called the final consonant. Any consonant may be a final consonant except h, w, j.

Final Two-Consonant Cluster: Two sorts

- 1. one being a final consonant preceded by a pre-final consonant: The pre-final consonants form a small set: m, n, N, l, s. We can see these in 'bump' bVmp, 'bent' bent, 'bank' b{Nk, 'belt' belt, 'ask' a:sk.
- and the other a final consonant followed by a post-final consonant: The post-final consonants also form a small set: s, z, t, d, T; example words are: 'bets' bets, 'beds' bedz, 'backed' baekt, 'bagged' b{gd, 'eighth' eItT.

Final Three-Consonant Cluster: Two Types

1- the first is pre-final plus final plus post-final, as set out in the following table:

		Pre-final	Final	Post-final
'helped'	he	I	р	t
'banks'	bæ	ŋ	k	S
'bonds'	bp	n	d	z
'twelfth'	twe	I	f	θ

2- The second type shows that more than one post-final consonant can occur in a final cluster: final plus post-final 1 plus post-final 2. Post-final 2 is again one of s, z, t, d, T.

		Pre-final	Final	Post-final 1	Post-final 2
'fifths'	fı	-	f	θ	s
'next'	ne	-	k	S	t
'lapsed'	læ	-	р	S	t

Final Four-Consonant Clusters

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Most four-consonant clusters can be analysed as consisting of a final consonant preceded by a pre-final and followed by post-final 1 and post-final 2, as shown below:

		Pre-final	Final	Post-final 1	Post-final 2
'twelfths'	twe		f	θ	S
'prompts'	pro	m	Р	t	S

A small number of cases seem to require a different analysis, as consisting of a final consonant with no pre-final but three post-final consonants:

		Pre-final	Final	Post-final 1	Post-final 2	Post-final 3
'sixths'	SI	_		S	θ	S
'texts'	te	-	k	S	t	S
T		1 1 4 1 1	1 11 11	1 1	1 0 11 1	1 1

To sum up, we may describe the English syllable as having the following maximum phonological structure:

pre- initial	initial	post- initial	VOWEL	pre- final	final	post- final	post- final	post- final
						1	2	3
	ONSET					CODA		
			••••					• •

Strong and Weak Syllables

- One of the most noticeable features of English pronunciation is that some of its syllables are strong while many others are weak. In weak syllables, the vowel tends to be shorter, of lower intensity (loudness), and different in quality. For example, the word 'data' /deitə/ whose second syllable is weak and shorter than the first one. It is less loud as well.
- In a word like 'bottle' /'bot(ə)l/, the weak second syllable contains no vowel at all, but consists entirely of the consonant []. We call this a syllabic consonant.

Three Ways of Characterizing Strong and Weak Syllables

- 1. We could describe them partly in terms of stress (that strong syllables are stressed and weak ones are unstressed).
- 2. The strong syllable usually has one of vowels, diphthongs and triphthongs as its peak, but not ə, i, u.
- 3. The weak syllables are in the following vowels such as ə, i, u with no coda (zero coda).

The most important thing to note at present is that any strong syllable will have as its peak one of the vowel phonemes (or possibly a triphthong), but not a, i, u.

Where can we find weak syllables??

- WEAK SYLLABLE
- 1- At the end of a word, we may have a weak syllable ending with a vowel (with no coda). These vowels are:

- ə (schwa) Better /betə/ Centre /sentə/
- i Happy /hæpi/ Carry /kæri/ a close front unrounded vowel
- u Thank you /θæŋk. ju/ a close back rounded vowel
- We also find weak syllables in word-final position with a coda if the vowel is \Rightarrow (schwa).
- For example: Open /supen/ Sharpen /ʃa: pən/
- 3 Inside a word, we can find the above vowels acting as peaks without codas in weak syllables.
- Examples: Photograph /fəʊtəgra: f/ Radio /reɪdiəʊ/

1. The vowel **a** (schwa). We find this vowel in the following: i) Spelt with 'a'; strong pronunciation would have a

Attend /əˈtɛnd/; barracks /ˈbarəks/; character /ˈkarəktə/

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ii) Spelt with 'ar'; strong pronunciation would have a: 'particular' pətikjələ 'molar' məulə

'monarchy' monaki

iii) Adjectival endings spelt 'ate'; strong pronunciation would have er

'intimate' **intimet** 'accurate' ækjeret 'desolate' deselet (although there are exceptions to this: 'private' is usually **prarvit**)

- iv) Spelt with 'o'; strong pronunciation would have p or əu 'tomorrow' təmprəu 'potato' pətertəu 'carrot' kærət
- v) Spelt with 'or'; strong pronunciation would have or 'forget' faget 'ambassador' æmbæsada 'opportunity' ppatjumati
- vi) Spelt with 'e'; strong pronunciation would have e 'settlement' setlmant 'violet' varalat 'postmen' paustman
- vii) Spelt with 'er'; strong pronunciation would have sr 'perhaps' pəhæps 'stronger' strongə 'superman' surpəmæn
- viii) Spelt with 'u'; strong pronunciation would have A 'Autumn' ortom 'support' soport 'halibut' hælibot
- ix) Spelt with 'ough' (there are many pronunciations for the lettersequence 'ough')

'thorough' θArə 'borough' bArə

ix) Spelt with 'ou'; strong pronunciation might have au 'gracious' greifss 'callous' kæles

• Syllabic m

- As well as the occurrence of syllabic-n in unstressed syllables, syllabic-m can occur in similar environments. Examples of syllabic-m, which similarly take the full measure of a syllable, i.e. taking the nuclear vowel slot in the syllable, include the following.

- *rhythm* /'rıðəm/ → ['Jıðm] *bottom* /'bɒtəm/ → ['bɒtm] *blossom* /'blɒsəm / → ['blɒsm]
 - Syllabic-ng
 - In certain environments, the third English nasal $/\eta$ / may also occur as a syllabic consonant. Consider the following:
 - broken /'brəukən/ → ['b.ıəukŋ]
 - Here, the /ən/ sequence is compressed. Such compression could plausibly yield syllabic-n in the nuclear vowel slot, i.e. ['b.joukn]. Further, in some instances, the occurrence of a velar plosive (here /k/) adjacent to a nasal (here /n/) leads to the nasal assimilating a feature of the velar plosive. This yields a velar nasal. Of course, the English velar nasal is $/\eta/$ (as in the word wing /win/). Hence, we can argue that ['b.iəukn] undergoes an assimilatory process to yield ['b.jouknj]. This assimilation is more likely to occur if the nasal consonant /n/occurs between two velar consonants, as in the following example.

- broken key /'brəvkən ki/ \rightarrow ['bıəvkŋ ki]
- Syllabic liquids
- There are two 'liquid' phonemes in English: /l/ as in *look*, and /r/ as in *run*.
- Syllabic-l
- Examples of **syllabic-l** filling the vowel slot in unstressed syllables include the following.
- handle /'hændəl/ \rightarrow ['hænd $\frac{1}{2}$]
- *bottle* /'bptəl/ \rightarrow ['bpt $\frac{1}{2}$]
- *bagel* /'beigəl/ \rightarrow ['beigi]
- SYLLABIC I The most obvious case is where we have a word ending with one or more consonant letters followed by 'le' Alveolar Cattle /kætl/ Wrestle /resl/ Bottle /bptl/ Muddle /mʌdl/ Non-alveolar Couple /kʌpl/ Struggle /strʌgl/ Trouble /trʌbl/ Knuckle /nʌkl/.
- •
- We also find syllabic 1 in words spelt with one or more consonant letters followed by 'al' or 'el': 'al' Petal /petl/ Pedal /pedl/ Papal /peipl/ 'el' Panel /pænl/ Camel /kæml/ Parcel /pa: sl/.
- Syllabic-r
- Roach (2009:70) provides the example of the word *particular*, which is likely to be pronounced as /prt1kjəlr/ by most

Americans in careful speech, i.e. with syllabic-r, but as /pətɪkjələ/ by Standard British English speakers.

- A further example is the word *perhaps*. This is likely to be pronounced with syllabic-r in most American accents, i.e. /præps/, but without syllabic-r in Standard British English, i.e. /pəhæps/. Further examples include:
- *history* /'histəri/ \rightarrow ['histii]
- blustery /'blastəri/ \rightarrow ['blastii]
- *preference* /'prefərəns/ → ['prefiəns]

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- blossom /'blbsəm / \rightarrow ['blbsm]

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- *history* /'histəri/ \rightarrow ['histii]
- blustery /'blastəri/ \rightarrow ['blastii]
- *preference* /'prɛfərəns/ → ['prɛfiəns]

• Stress in Simple Words

Stress is the degree of force that **the speaker makes on the specific syllable or words.**

Stress refers to the **degree of force** used in producing a syllable. Father /fa:ðə/, open /əupn/, camera /kæmrə/ (in such words the first

syllable is stressed).

Potato/pəteitəu/, apartment/əpa:tmənt/, relation/rileijn/ (the second

syllable is stressed).

Simple words mean those words which contain no prefixes or suffixes.

There are very simple rules about word stress:

- 1. One word has only one stress. (One word cannot have two stresses. If you hear two stresses, you hear two words. Two stresses cannot be one word. It is true that there can be a "secondary" stress in some words. But a secondary stress is much smaller than the main [primary] stress, and is only used in long words.)
- 2. We can only stress vowels, not consonants.

Word stress means pronouncing one syllable of a multisyllabic word with greater emphasis (stress) than the other syllables in the word.

3. Two-syllable words have stress on the second syllable if that syllable is long. If it is short, the first syllable is stressed .

We will mark a stressed syllable in transcription by placing a small vertical line (') high up, just before the syllable it relates to; the words quoted above will thus be transcribed as follows:

'fa:ðə	pə'teitəu	ə'baut
'əupən	ə'pa:tmənt	rı'si:v
'kæmŗə	rı'leı∫ņ	pə'hasps

Ways of Identifying Stress

Stress can be studied from the point of view of production and of perception.

The production of stress depends on the speaker using more muscular energy than is used for unstressed syllables.

From the perception point of view, all stressed syllables have one characteristic in common, and that is prominence. Stressed syllables are more prominent than unstressed syllables.

What Makes a Syllable Prominent? Four Factors:

There are four factors that make a syllable prominent: loudness, length, pitch and quality.

- 1. loudness: Most people seem to feel that stressed syllables are louder than unstressed syllables; in other words, loudness is a component of prominence. In a sequence of identical syllables (e.g. ba:ba:ba:ba:), if one syllable is made louder than the others, it will be heard as stressed.
- 2. Length: If one of the syllables in our "nonsense word" ba:ba:ba:ba: is made longer than the others, there is quite a strong tendency for that syllable to be heard as stressed.
- 3. Pitch: pitch in speech is closely related to the frequency of vibration of the vocal folds. It refers to the rate of vibrations producing a sound; the degree of highness or lowness of a tone. If one syllable of our "nonsense word" is said with a pitch that is noticeably different from that of the others, this will have a strong tendency to produce the effect of prominence. For example, if all syllables are said with low pitch except for one said with high pitch, then the high-pitched syllable will be heard as stressed and the others as unstressed. To place some movement of pitch (e.g. rising or falling) on a syllable is even more effective in making it sound prominent.

4. Quality: A syllable will tend to be prominent if it contains a vowel that is different in quality from neighbouring vowels. If we change one of the vowels in our "nonsense word" (e.g. ba:bi:ba:ba:) the "odd" syllable bi: will tend to be heard as stressed.

Prominence, then, is produced by four main factors: (i) loudness, (ii) length, (iii) pitch and (iv) quality. Generally these four factors work together in combination, although syllables may sometimes be made prominent by means of only one or two of them. Experimental work has shown that these factors are not equally important; the strongest effect is produced by pitch, and length is also a powerful factor. Loudness and quality have much less effect.

Levels of Stress

- There are 3 levels of stress in English: primary, secondary, and completely unstressed syllables.
- Some syllables are louder and longer, some syllables are shorter and quieter, and some syllables are in-between.
- 1. **Primary Stress**: The syllable with the Primary Stress is the loudest and longest syllable in a word. In one-syllable words, that one syllable gets the primary stress.
- Examples:

- "blue" = /BLUUU/
- "ten" = /TEHN/
- The only exceptions to this rule are a handful of function words like "the" which are usually unstressed or reduced.
- Primary stress is marked in IPA by putting a raised vertical line ['] at the beginning of the syllable.
- 2. Secondary Stress: These are the syllables that are stressed, but not as much the primary stress, so they are loud and long with a change in pitch, but not *as* loud or *as* long as the syllables that get the primary stress. The change in pitch on the vowel is not quite as noticeable.
- Example:
- "<u>disappear</u>" = /<u>DIH</u>-suh **PEEER**/ (syllable with secondary stress is underlined)
- Secondary stress is marked with a lowered vertical line [,] at the beginning of the syllable.
- 3. The completely Unstressed Syllable: These are the syllables that have no stress at all so we rush through them and shorten them so much that the vowel in the syllable is almost completely gone. The change in pitch on the vowel is barely noticeable, but it is there.
- Example:
- "<u>prepare</u>" = /<u>pruh</u>-**PAIR**/ (unstressed syllable is underlined)

- In English, almost all of these have schwa [ə] for their vowel, though [i] will also often be unstressed, like the [i] in *happy* ['hæpi]. (Very rarely, another non-schwa vowel might be unstressed, like the [o] of *potato* [pə'teito] for most speakers.)
- A good example of the difference between secondary stress and the complete absence of stress is the final syllable of delegate, used as a verb and used as a noun.
- ['dɛlə get] verb: You have to delegate your responsibilities
- ['dɛləgət] noun: We elected a delegate to the national committee.

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What Makes a Syllable Prominent? Four Factors:

In order to decide on stress placement, it is necessary to make use of some or all of the following information:

i) Whether the word is morphologically simple, or whether it is complex as a result either of containing one or more affixes (i.e. prefixes or suffixes) or of being a compound word.

ii) What the grammatical category of the word is (noun, verb, adjective, etc.).

iii) How many syllables the word has.

iv) What the phonological structure of those syllables is.

Single- syllable words:

One-syllable words present no problems: if they are pronounced in isolation they are said with primary stress.

- A strong syllable has a rhyme with either (1) a syllable peak which is a long vowel or diphthong, with or without a following consonant (coda). Examples:
- or (2) a syllable peak which is a short vowel, one of

I, e, æ, **Λ**, **D**, **U**,

followed by at least one consonant. Examples: 'bat' /bat/

'much' mʌt∫ 'pull' pʊl

A weak syllable has a syllable peak which consists of one of the vowels {, i, u and no coda except when the vowel is a. Syllabic consonants are also weak. Examples:

'fa' in 'sofa''səufə'zy' in 'lazy' 'leızi'flu' in 'influence''influəns'en' in 'sudden' 'sadn

The vowel I may also be the peak of a weak syllable if it occurs before a consonant that is initial in the syllable that follows it. Examples:

'bi' in 'herbicide' 'h3:b1sa1d 'e' in 'event' 1'vent

(However, this vowel is also found frequently as the peak of stressed syllables, as in 'thinker' 'θιŋkə, 'input' 'input.)

The important point to remember is that, although we do find unstressed strong syllables (as in the last syllable of 'dialect' 'darəlekt), only strong syllables can be stressed. Weak syllables are always unstressed. This piece of knowledge does not by any means solve all the problems of how to place English stress, but it does help in some cases.

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Stress in Two syllable Words

Two-syllable words

₩AU 1. Ex ٣

In the case of simple two-syllable words, either the first or the second syllable will be stressed - not both. There is a general tendency for verbs to be stressed nearer the end of a word and for nouns to be stressed nearer the beginning. We will look first at verbs. If the final syllable is weak, then the first syllable is stressed. Thus:

'enter' 'entə	'open' 'əupən
'envy' 'envi	'equal' 'i:kwəl

A final syllable is also unstressed if it contains au (e.g. 'follow' 'fplou, 'borrow' 'bprou).

If the final syllable is strong, then that syllable is stressed even if the first syllable is also strong. Thus:

'apply' ə'plaı	'attract' ə'traekt	'rotate' rəu'teit
'arrive' ə'raıv	'assist' ə'sıst	'maintain' mein'tein

Two-syllable simple adjectives are stressed according to the same rule, giving:

'lovely' 'lʌvli	'divine' dı'vaın
'even' 'i:vən	'correct' kə'rekt
'hollow' 'hnləu	'alive' ə'laıv

As with most stress rules, there are exceptions; for example: 'honest' 'pnist, 'perfect' 'p3:fikt, both of which end with strong syllables but are stressed on the first syllable.

Nouns require a different rule: stress will fall on the first syllable unless the first syllable is weak and the second syllable is strong. Thus:

'money"mani	'divan' dı'væn
'product' 'prod^kt	'balloon' bə'lu:n
'larynx' 'laer1ŋks	'design' dı'zaın

Other two-syllable words such as adverbs seem to behave like verbs and adjectives.

Three-syllable words

Here we find a more complicated picture. One problem is the difficulty of identifying three-syllable words which are indisputably simple. In simple verbs, if the final syllable is strong, then it will receive primary stress. Thus:

'entertain', entə'tein 'resurrect', rezə'rekt

If the last syllable is weak, then it will be unstressed, and stress will be placed on the preceding (penultimate) syllable if that syllable is strong. Thus:

'encounter' ıŋ'kaunto 'determine 'dı'to:min

If both the second and third syllables are weak, then the stress falls on the initial syllable:

'parody' 'pærədi 'monitor' 'mɒnɪtə

Nouns require a slightly different rule. The general tendency is for stress to fall on the first syllable unless it is weak. Thus:

'quantity' 'kwontəti	'emperor' 'empərə	
'custody' 'ka∫tədi	'enmity' 'enməti	
However, in words with a weak first syllable the stress comes on the next syllable:		
'mimosa'm1'məuzə	'disaster' dı'za:stə	
'potato' pə'teitəu	'synopsis' s1'nops1s	
When a three-syllable noun has a strong final syllable, that syllable will not usually receive the main stress:		
'intellect' 'intəlekt 'alkali' 'ælkəlaı	'marigold' 'mærıgəuld 'stalactite' 'stæləktaıt	
Adjectives seem to need the same rule, to produce stress patterns such as:		
'opportune' 'ppətju:n	'insolent' 'Insələnt	
'derelict' 'derəlıkt	'anthropoid' 'ænθrəpɔid	

The above rules certainly do not cover all English words. They apply only to major categories of lexical words (nouns, verbs and adjectives in this chapter), not to function words such as articles and prepositions.

Complex Word Stress

Complex words are of two major types :

1. words made from a basic stem word with addition of an affix.

2.compound words. which are made of two (or occasionally more) independent English words (e.g. 'ice-cream', 'armchair').

Affixes:

Affixes are of two sorts in English : prefixes, which come before the stem (e.g. prefix 'un-' + stem Pleasant' – 'unpleasant') and suffixes, which come after the stem (e.g. stem 'good' + suffix '-ness;-'goodness').

Affixes will have one of three possible types of word stress:

a) The affix itself receives the primary stress (e.g.'semi- '+'circle' 's:kl -> 'semicircle' 'semis:kl; '-ality'+'person' 'p:sn - 'personality' p:sn'ælti).

b) The word is stressed just as if the affix was not there (e.g.'pleasant', 'pleznt, 'unpleasant' An'pleznt, 'market' 'm:kt, 'marketing', 'm:kitiŋ).

c) The stress remains on the stem, not the affix, but is shifted to a different syllable (e.g. 'magnet''mægnt, 'magnetic' mæg'netk).

Suffixes

Suffixes carrying primary stress themselves. If the stem consists of more than one syllable there will by a secondary stress on one of the

syllables of the stem. This cannot fall on the last syllable of the stem, and is, if necessary, moved to an earlier syllable. For example, in 'japan' /d $3 \Rightarrow$ 'pan/ the primary stress is on the last syllable , but when we add the stress-carrying suffix '-ese' the primary stress is on the suffix and the secondary stress is placed not on the second syllable but on the first: 'Japanese' /d $3 \Rightarrow$ 'ni:z/

- '-ee': 'refugee' refju'dzi:; 'evacuee' 1,vækju'i:
- '-eer': 'mountaineer' maunti'niə; 'volunteer' volən'tiə
- '-ese': 'Portuguese' po:tjo'gi:z; 'journalese' d33:nli:z
- '-ette': 'cigarette' sıgr'et; 'launderette' lo:ndr'et
- 'esque': 'picturesque' piktfr'esk
 - Suffixes that do not affect stress placement

- '-able': 'comfort' 'kamfət; 'comfortable' 'kʌmfətəbl
- '-age': 'anchor' 'æŋkə; 'anchorage' 'æŋkridʒ
- '-al': 'refuse' (verb) rı'fju:z; 'refusal' rı'fju:zl
- '-en': 'wide' 'waid; 'widen' 'waidn
- '-ful': 'wonder' 'wandə; 'wonderful' 'wandəfl.
- '-ing': 'amaze' ə'meiz; 'amazing' ə'meiziŋ
- '-like': 'bird' 'b3:d; 'birdlike' 'b3:dla1k
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- '-ly': 'hurried' 'hArId; 'hurriedly' 'hArIdli
- '-ment' (noun): 'punish' 'p Λ nı \int ; 'punishment' 'p Λ nı \int mənt
- '-ness': 'yellow' 'jeləu; 'yellowness' 'jeləunəs
- '-ous': 'poison' 'poizn; 'poisonous' 'poizņes
- '-fy: 'glory' 'gb:ri; 'glorify' 'glo:r1fa1
- '-wise': 'other' 'Aðə; 'otherwise' 'Aðawaiz
- '-y' (adjective or noun): 'fun' 'f
An; 'funny' 'fani
- ('-ish' in the case of adjectives does not affect stress placement: 'devil' 'devil; 'devilish' 'devili\$', however, verbs with stems of more than one syllable always have the stress on the syllable immediately preceding 'ish' for example, 'replenish' ri'pleni\$', 'demolish' di'mðli\$)

Suffixes that influence stress in the stem

In these examples primary stress is on the last syllable of the stem.

•	'-eous':	'advantage'	əd'va:ntɪdʒ;	'advantageous'	,ædvən'teıdʒəs
•	'-graphy':	'photo'	'fəutəu;	'photography'	fa'tðgrafi
•	'-ial':	'proverb'	'prðʌɜːb;	'proverbial'	prə'vɜ:biəl
•	'-ic':	'climate'	'klaımət;	'climatic'	klaı'mætık
•	'-ion':	'perfect'	'pɜ:fɪkt;	'perfection'	pə'fek∫n
•	'-ious':	'injure'	'ındzə;	'injurious'	ın'dsvəriəs
•	'- ty':	'tranquil'	'trəŋkwıl;	'tranquillity'	træŋ'kwıləti
•	'-ive':	'reflex'	ri;fleks;	'reflexive'	rı'fleksıv

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Stress in Complex Words

Prefixes and compound words

Prefixes

• the best treatment seems to be to say that stress in words with prefixes is governed by the same rules as those for polysyllabic words without prefixes.

• Compound Words

When is primary stress placed on the first constituent word of the compound and when on the second? Both patterns are found. A few rules can be given, although these are not completely reliable. Perhaps the most familiar type of compound is the one which combines two nouns and which normally has the stress on the first element, as in:

'typewriter' 'taıpraıtə 'car ferry' 'ka:feri 'sunrise' 'sanraız 'suitcase' 'su:tkeıs 'teacup' 'ti:kap However, a number of compounds receive stress instead on the second element. The first words in such compounds often have secondary stress. For example, compounds with an adjectival first element and the -ed morpheme at the end have this pattern.

.bad-'tempered ,half-'timbered ,heavy-'handed

Compounds in which the first element is a number in some form also tend to have final stress:

,three-'wheeler ,second-'class ,five-'finger

Compounds functioning as adverbs are usually final-stressed:

,head'first

,North-'East

,down'stream

Finally, compounds which function as verbs and have an adverbial first element take final stress:

,down'grade .back-'pedal .ill-`'treat

• Variable Stress

Stress position may vary for one of two reasons: either as a result of the stress on other words occurring next to the word in question, or because not all speakers agree on the placement of stress in some words. The former case is an aspect of connected speech that the stress on a final-stressed compound tends to move to a preceding syllable and change to secondary stress if the following word begins with a strongly stressed syllable.

,bad-'tempered	but	a ,bad-tempered 'teacher
.half-'timbered	but	a ,half-timbered 'house
.heavy-'handed	but	a .heavy-handed 'sentence

The second is not a serious problem, but is one that foreign learners should be aware of. A well-known example is 'controversy', which is pronounced by some speakers as /'kontroversi/ and by others as

/kənˈtrɒvəsi/. It would be quite wrong to say that one version was correct and one incorrect. Other examples of different possibilities are 'ice cream'

(either ,ais kriim or 'ais kriim)

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