UNIT 6 WORD ACCENT, STRESS AND RHYTHM IN CONNECTED SPEECH

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6.0 OBJECTIVES

In this unit we shall study (a) how words of more than one syllable receive stress, (b) the patterns of word stress in English, (c) the function of word stress, and (d) some rules for placement of primary stress on derived words. We shall then look at stress in connected speech. We shall examine the influence of stress on rhythm in English and also look at those factors that contribute to the characteristic rhythm of English.

After completing this Unit you should be able to

- (i) divide a word into syllables
- (ii) recognize the different patterns of word stress
- (iii) identify those 2-syllable words (that are spelt exactly alike), the grammatical function of which can be differentiated by means of stress alone.
- (iv) identify the stressed syllable in words of more than one syllable.
- (v) produce words with the primary stress on the right syllable
- (vi) apply the rules for word stress to other words with similar endings
- (vii) identify the stressed syllables in connected speech
- (viii) identify and produce weak forms and contracted forms of words
- (ix) produce utterances with correct stress and rhythm

6.1 INTRODUCTION

In Units 4 and 5 we learnt to recognize and produce the consonants and vowels of English, in different combinations in words. In Unit 3 we familiarized ourselves with the syllable in English – its structure and types. In this unit we look at the next higher unit – the word, which can be comprised of one or two or even upto seven syllables. Of the syllables in a word we will pay special attention to the one that receives

primary stress. It is as much an essential part of the identity of English words as are the sounds that may form words. Though word stress in English is by and large unpredictable, it is possible to frame rules for primary stress on words with some derivational suffixes. Not all the derivational suffixes affect stress. We need to know the suffixes that affect stress and those that do not affect stress. When words are fitted into utterances they contribute to the rhythm of English. Utterances have strings of words, some of which are stressed and some are not. While the stressed syllables in words tend to occur at roughly regular intervals of time, the unstressed syllables between them are weakened. Indeed some words that are predisposed to being unstressed even have weak forms.

In this unit we study not only the character and form of words as said in isolation but also the relationship between stress and rhythm in utterances.

6.2 WORD ACCENT

6.2.1 Dividing a Word into Syllables

As we have already seen (Unit 4) a syllable consists of an obligatory V element and one, two or three elements before the V element and C_0 to C_4 elements after the V element. One, two or more syllables can make up a word. In a word of more than one syllable, some syllables are heard as more prominent than others.

Now it is easy for us to say how many syllables a word has. We just need to count the number of vowels sounds in each word. There are as many syllables in a word as there are V elements. For example, the words call, collect, collection, have one, two, and three vowel sounds respectively and therefore consists of one, two and three syllables respectively. All of us agree on the number of syllables a word consists of. But we do not always agree as to where to divide the syllable. Let us look at a few examples.

There would apparently be few difference of opinion as to where we should divide the following words.

The word <u>pelican</u> has three syllables. The syllable division is pe - li - can

Peter has two syllables Pe - ter

Philosophy has 4 syllables phi - lo - so - phy.

However these words could alternatively be divided like this -

Pel -i - can or Pel -ic - an

Pet – er Phil-os-oph - y

Some more examples of alternatives ways of dividing words into syllables are

ability	discuss	mistake	
ab-il-it-y	dis – cuss	mis – take	
a-bi-li-ty	disc-uss	mi-stake	

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Now, which alternative for each word is the correct one? — you might ask. Are there any guidelines that we can follow when we divide words into syllables? Yes, there are a few guidelines which would help us to do this.

(a) As far as possible start a syllable with a consonant where there is one, e.g.

Differ → di-ffer
Prefer → pre-fer
Locate → lo-cate

If possible end a syllable with a consonant and begin it with a consonant when there are two. For example,

hel-met con-scious cal-cu-late al-ti-tude

There may, however, be exceptions to these rules. For example, the word extra $-e k^1 s^2 t^3 r^4 \partial$ can fulfil both conditions 1 and 2. It can be divided into syllables in three different ways.

- (a) ek str∂
- (b) eks tr∂
- (c) ekst − r∂

In this case anyone of the first two alternatives would be acceptable. The third alternative is not well balanced, though possible. Another criterion we need to keep in mind for the division of words into syllables is the combinatorial possibilities in the language. Let us look at the following words, for instance.

The word <u>fender</u> could be divided in three possible ways - (a) fen - der
or (b) fe - nder
or (c) fend-er

The first division is acceptable while the second division is not. The reason for this is that in a syllable in English an initial consonant cluster — nd is not possible. The third alternative does not follow rule 2. Similarly, in the word silver the alternative divisions are sil-ver or silver or silver. Only the first one is the most acceptable, as it follows rule (2) according to which we should as far as possible, end a syllable with a consonant and begin it with a consonant when there are two. Thus the first syllable sil ends with /l/ and the second syllable ver begins with a consonant. The second alternative, is not quite acceptable because in English the consonant sequence ly does not occur in the initial position in a syllable. The third alternative does not follow rule (2) and is therefore not acceptable.

It would be very convenient to refer to the dictionary for the division of words into syllables. Very often a phonemic transcription of word like account, command, assume, exit, exempt makes it easier for us to divide them into syllables, because the double letters, and the single letters x which stands for two sounds /ks/or/gz/, make it difficult for us to mark syllable division

6.2.2 Degrees of Prominence

Words can have one or more than one syllable. In English for example, there are words with two, three, four, five, six or even seven syllables. The words, point, lost, threat, salt, grade all have one syllable. Some words with two or more than two syllables are —

2 syllables	3 syllables	4 syllables
n <u>ever</u> c <u>olou</u> r r <u>api</u> d f <u>e</u> llow p <u>a</u> ck <u>e</u> t	fallacy celebrate capital destiny juvenile	c <u>apitalize</u> fundamental centenarian formality ph <u>iloso</u> phy
5 syllables	6 syllables	
electricity association organization generosity	r <u>e</u> sp <u>o</u> ns <u>i</u> b <u>i</u> l <u>ity</u> <u>a</u> nthr <u>opologi</u> c <u>a</u> l	

In English words of two or more than two syllables, the speaker uses several degrees of articulatory energy. The listener perceives only two degrees – the syllable that s/he perceives as prominent and the syllables that are not prominent. What are the phonetic factors that contribute to or are responsible for prominence?

The factors responsible for prominence are:

- Loudness: The breath force used by a speaker and the greater muscular energy involved is heard as greater loudness or stress. In a word of more than 3 syllables several degrees of articulatory energy is used. For example, in calculation one of the syllables is heard as the loudest of all and that is la. The syllable cal is heard as the second loudest. Listeners can perceive two degrees of loudness clearly and therefore the majority of listeners are in agreement regarding two degrees of stress. Listeners seldom agree as to which syllables have the third, fourth or fifth degree of loudness because these degrees of loudness are not clearly perceptible to the naked ear.
- (b) Pitch Change: In English stress alone is not an efficient marker of prominence. If we change only the loudness, the perceptual effect of stress is not very strong. The pattern of accent in a word becomes clearer when the syllable that is prominent is associated with pitch change. For example, the word 'insult' as a noun is recognised not only because the speaker uses extra breath force and thus stresses the first syllable, but also because there is a pitch change on the first syllable. In other words when the word 'insult' is said, the first syllable, in addition to being heard as louder than the second syllable, carries pitch change, that is, a movement of pitch from high to low or low to high., The pitch change is generally indicated by a slanting line above and before the stressed syllable if the word is said with a falling pitch as shown on the word insult. It is generally marked with a slanting line below and before the stressed syllable if it is said with a rising pitch, like this - insult. However, when a word is said in isolation we generally use a falling pitch.
- (c) A third factor that plays an important part in prominence is the quality of a vowel. A syllable will tend to be prominent if it contains a vowel that is different from the vowels in the neighbouring syllables. If we take a nonsense word like /ta:ta:ta:ta:/and change one of the vowels, we get/ta:ti:ta:ta:/. The odd syllable /ti:/ will be heard as more prominent. Indeed, in words of more than one syllable, the syllable that has a vowel that is different from the weak vowels, particularly /ə/ and also /i/ and /u/ in weak syllables, stands out against a background of these weak syllables, and is often a stressed syllable.

(d) Another factor that is responsible for prominence is the quantity or length of syllables. If one of the syllables in a word of more than one syllable is made longer than the others, there is quite a strong tendency for that syllable to be heard as prominent.

Prominence, than is produced by 4 main factors (a) loudness (b) pitch, (c) quality and (d) quantity. Generally, these factors work in combination, though syllables may sometimes be made prominent by means of only one or two of them. Experiments have shown that these factors do not have equal importance; the strongest effect is produced by pitch, and length is also a powerful factor. Loudness and quality have much less effect.

6.2.3 Levels of Stress

So far we have talked about the factors that play an important role in the perception of the prominent syllable in a word. We have referred to the stressed syllable as contrasted with the unstressed or Weak syllables in a word. This might give the impression that there is only a very simple distinction between stressed and unstressed syllables. As we have said earlier, the listener is able to perceive two degrees of stress and the remaining syllables in a word of more than three syllables are unstressed. What is the first level or highest level of stress? What helps us to perceive this level of stress? Let us take the word organisation for example. Listeners identify the s llable sa as the most prominents. This prominence results from a pitch movement from a higher pitch to a lower pitch in addition to the greater loudness with which the syllable is produced. When we wish to refer to the type of stress which is characterized by pitch movement we call it primary or tonic stress. The first syllable or in organisation is perceived as next in prominence to sa. It is characterized to a large extent by loudness or extra breath force and may have no pitch prominence in relation to its neighbours. This type of stress may be called secondary or non-tonic or rhythmic. The syllable sa on the other hand will always be associated with a pitch change when the word is said in isolation. The remaining three syllables would be grouped together and described as weak or unstressed. The primary stress may be marked with a vertical stroke above and in front of the syllable in question, and the secondary stress with a vertical stroke below and in front of the syllable.

We have now identified two levels of stress: primary or tonic and secondary or non-tonic and another level which could be called unstressed and be regarded as being the absence of any perceivable amount of prominence. Phoneticians distinguish between primary and secondary stress by referring to the former as accent.

6.2.4 Placement of Stress on the Word

This brings us to a question which most non-native second or foreign language learners would ask. How do we know which syllable in a word must be stressed? How do we know that the syllable we select is the correct syllable? These questions do not have simple answers. In English, word stress cannot be decided in relation to the syllable in the word. In other words, word stress is not fixed and therefore not attached to a single syllable, as it is in the case of French where the last syllable is usually stressed or in the case of Czech where the first syllable is usually stressed, or in the case of Polish where the syllable before the last – the penultimate syllable – is stressed. In some other languages, such as Spanish and Italian, rules governing the placement of stress in the majority of words can formulated. In English we cannot give any simple rules regarding placement of stress. Some words are stressed on the first syllable, some on the second syllable, others on the third syllable and so on. Owing to the different patterns of word stress, we need to consult the dictionary for the pronunciation of words, which includes the sequence of vowels and consonants that a word is made up of and the syllable that receives the stress. Why is it

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necessary to stress the right syllable in word? It is necessary because word stress patterns/contribute as much to the identity of a word as its sequence of phonemes. So much so, that sometimes a word may be unintelligible or be mistaken for another word. For example, the word below pronounced with stress on the first syllable instead of the second, would be mistaken for the word billow. The word develop pronounced with stress on the first syllable instead of the second might be mistaken for the word double up.

6.2.5 Patterns of Stress in English Words

Let us look at examples of patterns of word stress in English.

(a) Words of two syllables with stress on the first syllable.

(i)	'able	(vi)	'dozen	(xi)	'instant	(xvi)	'subject (noun/adj)
(ii) ·	'almost	(vii)	'fortune	(xii)	'interest	(xvii)	'welcome
(iii)	'answer	(viii)	'govern	(xiii)	'paper	(xviii)	'wisdom
(iv)	'awkward	(ix)	'honesi	(xiv)	'question	(xix)	'woman
(v)	'business	(x)	'husband	(xv)	'second	(xx)	'yellow
(b)	Words of	<u>two</u> s	yllables w	ith stress	on the second s	yllable	•
(i)	a'bove	(vi)	be'come	(xi)	e'vent	(xvi)	in'stead
(ii)	ad'dress	(vii)	be'tween	(xli)	ex'change	(xvii)	my'self
(iii)	ad'mit	(viii)	de'fence	(xiii)	ex'pense	(xviii)	per'haps
(iv)	ad'vance	(ix)	de'gree	(xiv)	forbid	(xix)	sug'gest
(v)	ap'pear	(x)	en'tire	(xv)	for get	(xx)	to'wards

(c) · Words of three syllables with stress on the first syllable.

(i)	'absolute	(vi)	'character	(xi)	'memory	(xvi)	'properly
(ii)	'advertise	(vii)	'delicate	(xii)	'minister	(xvii)	industry
(iii)	'agency	(viii)	'educate	(xiii)	'passenger	(xvii)	'relative
(iv)	'avenue	(ix)	'hesitate	(xiv)	'prejudice ·	(xix)	'yesterday
(v)	'bicycle	(x)	'library	(xv)	'probable	•	

(d) Words of three syllables with stress on the second syllable

ad¹venture (vi) con sider

(.)		(11) 5511 51651	()	
(ii)	al ¹ ready	(vii) con¹tinue	(xii) es¹sential	(xvii) im ¹ mediate
(iii)	a nother	(viii) de ¹ cision	(xiii) ex ¹ ample	(xviii) im ¹ portant

(xi) en courage

(xvi) fa¹miliar

(iv) com¹mercial (ix) de¹velop (xiv) ex¹istence (xix) to¹bacco

(v) com¹parison (x) di¹rection (xv) ex'penseive (xx) to ¹morrow

Three syllable words with the primary stress on the third syllable (e) (vi) engi'neer compre¹hend (i) intro duce (vii) disap pear (ii) recom mend (viii) diap point (iii) repre¹sent domi neer (ix) (iv) repro¹duce employ ee (x) (v) Words of four syllables with the primary stress on the first syllable (f) . ¹temperament (vi) 'melancholy (xi) categorize (i) commentary (xii) territory (vii) corrugated (ii) percolator (viii) (iii) dynamism ¹pomegranate ¹educated (ix) (iv) ¹salivary (x) (v) ¹helicopter Words of four syllables with the primary stress on the second syllable. (g) phi¹losophy (xi) (vi) hy pocrisy de¹ficiency (i) (xii) re ciprocal in telligent (vii) de generate (11) ther mometre par¹ticular (xiii) (viii) e¹mancipate (iii) ma nipulate (xiv) fe¹licitate ri diculous (ix) (iv) re versible (xv) de mocracy con¹spiracy (x) . (v) Words of four syllables that receive primary stress on the third syllable. (h) advan tageous (i) appa ratus (ii) corres pondent (iii) diso bedient (iv) inde pendence (v) semo^llina (vi) Words of five syllables with the primary stress on the second syllable (i) in corrigible (i) i¹conoclasm (ii) de cipherable (ii) co operative (iv) pe rambulator (v) Words of five syllables with the primary stress on the third syllable **(i)** cosmo politian **(i)**

elec tricity

(ii) ·

- (iii) inter'national
- (iv) sensi bility
- (v) philo¹ sophical
- (vi) ophthal mology
- (k) Words of <u>five</u> syllables with primary stress on the <u>fourth</u> syllable.
 - (i) aristo¹cratic
 - (ii) characte¹ristic
 - (iii) octoge¹narian
 - (iv) organi'zation
 - (v) experi mental
- (1) Words of six syllables with primary stress on the fourth or fifth syllables
 - (i) autobi ography
 - (ii) meteoro logical
 - (iii) orgi¹nality
 - (iv) characteri¹zation
 - (v) experimen tation

Thus all the different patterns that we have just looked at are clearly indicative of the fact that word stress in English is to a large extent unpredicatable, and therefore needs to be learnt.

6.2.5 Functions of Word Stress in English

(a) Word stress in English sometimes helps us to distinguish between the grammatical function of words that have identical spelling. In other words, stress in a sense determines whether these words function as nouns/adjectives or as verbs in a sentence. Some two-syllable words conform to the general noun/verb stress pattern distinction, and some words containing more than two syllables also exhibit distinctive stress patterns. This distinction made by the shift in primary stress. When two-syllable words function as nouns or adjectives they are stressed on the first syllable and when they function as verbs they receive the stress on the second syllable.

For example,

Word	Noun/Adjective	Verb
(spelling)	(transcription)	(transcription)
absent	¹æbs <i>ə</i> nt	ab sent
accent	¹æks∂nt	∂k¹sent
compound	1kpmaund	k∂m¹paund
compress	'kompres	k∂m¹pres
conduct	¹kond۸ائند	k∂n¹d∧kt
conflict	^t konflikt	k∂n¹flikt
contract	'kontrækt	k∂n¹trækt
contrast	¹kontra:st	k∂n¹tra:st
convict	¹konvikt	k∂n¹vikt
desert	¹dez <i>a</i> t	di¹z3:t
export	¹ ekspo:t	ık¹spɔ:t
frequent	¹fri:kwənt	fri:¹kwent
object	¹pbd3ikt	∂b¹d 3 ekt
perfect	'p3:fikt	p∂¹fekt
permit	¹ p3:mɪt	p∂¹mit
present	¹prez∂nt	pn¹zent
produce	¹prod∫u:s	pr∂¹dju:s

project	.¹prodʒekt	pra ^t d3ekt	Accent, Stress
rebel	irebal	n¹bel	& Rhythm
refuse	¹refju:s	ភ ^រ ព្វ័ប:z	

(b) Some times word stress is associated with the morphological structure of words, that is, the way words are derived with the addition of prefixes and suffixes. The stress shifts as longer words are derived from smaller words, and change their grammatical forms. Look at the following words, for example. They are derivationally related, and the primary stress is marked on each word.

a ^l cademy	aca¹demic	acade mician
¹ democrat	de ¹ mocracy	demo'cratic
¹ diplomat	di ¹ plomacy	diplo ¹ matic
^t family	fa ^l miliar	famili larity
'hypocrite	hy ¹ procrisy	hypo ¹ critical
¹ mechanism	me¹chanical	mechani ¹ zation
¹ monotone	mo ¹ notony mo ¹ notonous	mono¹tonic
¹ photograph	pho tography	photo ¹ graphic
¹ politics	po ¹ litical	poli¹tician

(c) Word accent also helps to distinguish between some compound words and noun phrases (adjective +noun, or noun + noun) and verb - plus - adverbial collocations. Look at the following words, for example

Compound	Noun Phrase etc.	
¹blackbird	¹ black bird	
¹ copperplate	¹copper ¹plate	
crossword	¹cross ¹word	
¹bluebottle	¹ blue ¹ bottle	
grandmother	¹ grand ¹ mother	
greenfly	green 'fly	
¹ put-on	¹ put ¹ on	
walkout	¹walk ¹out	

6.2.6 Some Rules for Placement of Primary Stress on Words

We have so far seen that word stress is ¹free¹. In other words, it is not predictable. In a word of more than one syllable it is not easy to predict where the stress is to be placed. It is fixed only in the limited sense that a given word receives the stress nearly always on the same syllable. This might give us the impression that we have to learn the stress pattern of each word in English. While this might be true of a large number of two-syllable words, it does not always apply to <u>all</u> the words in English. There are regularities in word stress patterns to which there are very few exceptions. They are like rules that can be applied to words with similar suffixes. Let us look at those regularities in word stress that enable us to frame rules for the placement of word stress, and also enable us to predict word stress to a large extent.

(a) The first rule that we need to remember is that all English words have some stress (primary or secondary) on the first or the second syllable. For

example, in words of two syllables we have seen that words are stressed either on the first or the second syllable. Longer words, that is some words to which prefixes/suffixes are added may receive the primary stress on the third, fourth or fifth syllable and the secondary stress on either the first or second syllables. For example, in the words calculation and sensibility, the third syllable receives the primary stress, and the first syllable the secondary stress. If however, longer words receive the primary stress on the first or the second syllable, then secondary stress is less likely on any other syllable.

(b) The second rule that we need to remember is that no inflectional suffix is stressed, nor does it affect stress. In other word, inflections of number, tense, person, degree, etc. do not affect stress nor are they accented. For example,

table	tables
garage	garages
en'joy	en'joyed
cor'rect	cor'recting
mi'stake	mi'staken
se'lect	se'lects
'clever	'cleverer
'ugly	'ugliest

(c) The following derivational suffixes are not stressed and do not affect stress either. Look at these suffixes and the examples we have for each.

-age	postage, breakage
-ance	ap'pearance, 'goverance (but 'maintenance)
-en	soften, brighten
-ence	subsistence
-er	doer, keeper
-ess	lioness, goddess
-ful	dutiful, faithful
-fy	classify, falsify
-hood	childhood, manhood
-ice	cowardice
-ish	childish, foolish
-ive	cre'ative, at'tractive (but 'negative)
-less	aimless, careless
-ly	faithfully, happily
-ment	government, postponement
-ness	boldness, heaviness
-OT	governor
-ship	scholarship, fellowship
-ter	laughter
-ure	enclosure, failure
-y	bloody, woolly
-zen	citizen

(d) Some derivational suffixes receive stress and some others affect word stress. In other words, when these suffixes are added to the stem there is a shift in primary stress, either to the suffix itself or to a syllable other than the one stressed in the stem. For example, in the word em'ploy the primary stress is on the second syllable. If the suffix -ee is added to em'ploy the primary stress shifts to the suffix itself, so we get iemploy'ee. Similiarly, we have ad'dress but addres'see. Another example of a suffix that affects primary stress is - ental. 'Government changes to the stress pattern igovern'mental with the addition of -ental. Also, the stress pattern in 'office changes to of ficial when we add the suffix - ial, 'ceremony becomes icere'monial.

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cent.		•		se rules determine only the primar
	-aire	••		-1
	imillion'naire			
				-1
	-eer, -ee	••	• • •	lengi'neer
	ca'reer			inomi'nee
	mountai'neer			
	ichimpan'zee			
3.	-esque	•		-1
•	gro'tesque			ipictu'resque
				-1
4.	-ique	•	••	tech'nique
	phy'sique			
5 .	-ental		.,.	-2
J.	1 funda'mental			igovern'mental
	seg'mental			•
	J			2
6.	-ial		•••	-2 es'sential
	ıarti'ficial			official
	1cere'monial			ornetial re'medial
	iconfi'dential			ie ilieulai
7.	-ian			-2
	gram'marian			mu'sician
	li'brarian	4		_l phone'tician
	lo'gician			statis'tician
	ma'gician			itotali'tarian
	Illa giciali			•
8.	-ic		•••	-2
	ld-mia			ro'mantic
	jaca'demic			ıscien'tific
	ar'tistic _I philo'sophic			se'mantic
	1photo'graphic			syste'matic
. 9.	-ics		•••	-2
	•			pho'nemics
	eco'nomics			pho'netics
	lin'guistics			P
	mathe matics			
	Exceptions:	'Arabic, 'chole 'lunatic, 'politic	ric, 'rl cs	hetoric, a'rithmetic, 'catholic
10.	-ion			-2
				per'mission
	ad'mission			re'vision

col'lection

di'vision

compe'tition

10ccu'pation

re'vision

so'lution

vo'cation

sub'mission

English Phonetics and Phonology-II	11.	-ience	· · · · · · · · · · · · · · · · · · ·	-2		
		con'venience o'bedience	·	'lenience		
	12.	-itis bron'chitis	•••	-2 neu'ritis		
	13.	-ious, -uous	•••	-2		
		'anxious in'dustrious la'borious lu'xurious re'bellious vic'torious		con'tinuous 'virtuous pro'miscuous		
	14.	-iency	***	-3		
		efficiency		pro ficiency		
	15.	-ate	•••	-3		
		'compli ₁ cate 'edu ₁ cate 'hesitate		o'rigi ₁ nate 'fortunate		
	16.	-graphy,		-logy	-metry	-3
		bi'ography ge'ography pho'tography		bi'ology ge'ology pho'nology psy'chology zo'ology	bi ometry ge ometry trig nometry	
	17.	-grapher		-logist		
		bi'ographer ge'ographer pho'tographer		bi'ologist ge'ologist pho'nologist psy'chologist zo'ologist		
	18.	-ical	•••	-3		
		leco'nomical geo'graphical psycho'logical		geo'metrical philo'sophical typo'graphical		
	19.	-ity	•••	-3		
		a'bility 1dura'bility 1elec'tricity fa'cility		possibility suitability university		
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6.3 STRESS AND RHYTHM IN CONNECTED SPEECH

6.3.1 Introduction

We have already discussed word stress at length and have seen that there are levels of stress – primary stress/accent which is characterized by loudness and pitch movement and secondary stress which is characterized by loudness or extra breath force only. We have said that in English, a word of more than one syllable, one of the syllables is said to receive the primary stress. We shall now try to understand what rhythm means in general, what it means with reference to language – English, in particular, what the relationship between stress and rhythm in connected speech is and what features contribute to the rhythm of English.

6.3.2 Rhythm

Rhythm is the regular periodic recurrence of certain patterns of colour, design or sound. Rhythm in a painting or in embroidery would refer to the even spacing or distribution of colour and design. In music, a certain kind of beat or sound complex that continues to be repeated at equal intervals of time constitutes its rhythm. One can detect the rhythm of a heart beat. In language, rhythm refers to the recurrence of certain patterns of sound in utterances constituting a text.

Rhythm in the languages of the world is roughly of two types. Some phoneticians have in the past claimed that in some languages (e.g. French), syllables constituting utterances, whether stressed or not tend to occur at equal intervals of time. The time taken to move from one stressed syllable to the next is generally in proportion to the number of unstressed syllables between them. Such languages have what is called a syllable-timed rhythm. Some other languages according to this theory have a stress-timed rhythm. In these languages, stressed syllables have a tendency to occur at roughly regular intervals of time, irrespective of the number of unstressed syllables, occurring between one stressed syllable and the next. English according to this theory belongs to this second category of languages. This theory, has so far, neither been validated nor refuted beyond doubt. However, we do recognise that the rhythm of English is different from the rhythm of Indian languages and has to the learnt. We have, for instance, to recognise the very important difference in English between strong and weak syllables; some languages do not have such a noticeable difference.

6.3.3 Influence of Stress on Rhythm in English

You must have noticed that utterances in English are a series of close knit groups each comprising stressed and unstressed syllables. Rhythmic grouping correlates with a stressed syllable followed by unstressed syllables upto the next stressed syllable but not including it.

Let us look at the following sentences for instance. They can have the rhythmic groups indicated by the vertical lines.

- I'want to/'go to/'Delhi to-/'morrow
- 2. 'Tell him to/go to the /'market
- 3. I'want you to stand there and shold it for me.
- 4. 'Make me some/'puppets for the /'show
- We 'went for a /'walk in the/'park.

The rhythmic groups in each of these sentences are closely knit. This does not imply that there is necessarily a pause between each group. In fact there is no pause between each group, for it is held together in the utterance.

Notice that in each of the sentences above, the number of unstressed syllables between the stressed syllables is more or less the same, thus giving them a fairly regular rhythmic beat. In sentence 1 there is one unstressed syllable between two stressed syllables - to/to/to/-row/in to-morrow. Similarly in sentences 2,3, 4 and 5, there are two unstressed syllables between two stressed syllables.

2. him to/to the /ket in market.

In the third rhythmic group there is only one unstressed syllable.

- you to/there and/if for me
 only the last group has three unstressed syllables.
- 4. me some/for the/
- 5. for a /in the/

Owing to the same number of unstressed syllables in each utterance the rhythmic beat is fairly regular, and gives the impression that all English utterances must have a regular rhythm. But this is indeed untrue. Many of our utterances in English do not have this kind of regular rhythm, because the stressed syllables may not always be separated by the same number of unstressed syllables throughout the utterance. Look at the following sentences.

- 1. 'What/'name shall I/'ask for?
- 2. You can 'always/find me at/'this ad /'dress
- 3. There's 'none/'left in the/'cupboard.
- Walk/down the /path to the/bottom of the/hill.

Notice that the number of unstressed syllables between stressed syllables varies from none to three in each sentence. In sentence 4 for instance, the first and second stressed syllable have no unstressed syllables between them. Between the 2nd and 3rd stressed syllables there is only one unstressed syllable, between the 3rd and 4th two unstressed syllables and between the 4th and 5th three unstressed syllables.

It is now clear to us that utterances do not always have a regular rhythm and have varying stress patterns. The number of stressed syllables in an utterance depends on the nature of the words composing the utterance.

- e.g.(1) There are 'fifty in the 'box.
 - (2) 'All 'fifty are 'quite 'heavy.

Comparing the two utterances above we find that both of them have the same number of syllables (7), but they differ with regard to the number of stressed syllables. The greater the number of content words in an utterance, the greater the number of stressed syllables it is likely to have. Therefore the tempo of utterances may also differ, depending on the number of stressed and unstressed syllables they are composed of. An utterance with a large number of stressed syllables is likely to have a heavier, slower rhythm than one which has very few stressed syllables. An utterance composed of a large number of unstressed syllables between stressed syllables generally has a faster, lighter rhythm.

Given below, are examples of some stress patterns in English. The vertical lines beside each sentence represent stressed syllables, and the horizontal lines the unstressed syllables.

- 1. 'brown 'dog. //
- 2. 'sharp 'pen //
- 3. 'Try a'gain /-/

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'very 'hard
4.
        'Show me'yours /-/
5.
        'Here's some 'tea /-/
6.
        It's broken -/-
7.
        I'thought so -/-
8.
        'Give him some 'food /- -/
9.
        'Where have they 'gone /- - /
10.
        'Follow my ad'vice /- -- /
11.
        'Carry it a'way /- - - /
12.
         She 'isn't on the 'phone -/ ---/,
13.
         The 'children are in 'bed. -/---/
14.
         I'gave it to her -/---
 15.
         I've 'written to them -/---
 16.
         We 'shan't be in 'time for the 'play - / - -/- -/
 17.
         I'wonder if he'll 'ask me in ad'vance -/- - -/-
 18.
         He 'did his 'best to 'save the 'child. -/-/-/
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19.

He 'wants you to 'write her a 'letter to'morrow. -/--/--20. You must have noticed that in these sentences content words are stressed and structure words are not. Content words are important for meaning. So they are predisposed by virtue of their function in utterances, to receive stress. These are main verbs, adverbs, nouns, adjectives, demonstratives. Form or structure words are more likely to be unstressed. These are personal pronouns, relative pronouns, some prepositions, conjunctions, articles and auxiliary verbs. You must have noticed that in the sentences we have just looked at, the content words are almost always stressed and the structure words are unstressed. These sentences are isolated and have no context. It is therefore easy to apply the guidelines given above and stress content words.

In connected speech stress is much freer and is largely determined by the meaning the speaker intends to convey. If the meaning requires it, content words may be unstressed and structure words may be stressed. What is it that conditions and determines meaning?

It is the context that determines the meaning. Let us study the following examples.

If your hands and feet are warm, the whole body will be warm. 5.

The adjective warm is stressed in the first part of the utterance but when it occurs a second time in the utterance it is generally unstressed even though it is a content word. When a word is repeated, it does not add any meaning to the utterance. Let us look at another sentence.

- How many 'horses did you 'see? A: 2. Ten horses.
 - B:

In this sentence again 'horses is repeated in the reply. In fact it is redundant and even if omitted it will not affect the answer. B could also say just one word 'Ten' in response to A and be understood.

Another short exchange between Alice and the March Hare makes this clear.

"Have some wine," said the March Hare. "I don't see any wine," remarked 3. Alice.

Here again the word wine does not receive any stress the second time it is uttered. Indeed, it could even be omitted without affecting the meaning. As we have seen above, the repetition of a content word in a context reduces its chances of being

stressed considerably. But sometimes a feeling for rhythmic balance dictates repetition and therefore stress on words is repeated. For example,

- 'Handsome is that 'handsome 'does. (a)
- (p) · What's 'sauce for the 'goose is 'sauce for the 'gander.

6.3.4 Weak Forms in English

We have so far been trying to understand the relationship between stress and rhythm in English and the influence of one upon the other.

We will now take up another feature which is very closely linked with the characteristic rhythm of English. To maintain the characteristic rhythm of English, we need to weaken the syllables that are unstressed. Most of these unstressed words are form words. Of these form words there are roughly 45 words which have two or more pronunciations - one strong pronunciation and one or more than one weak ronunciation or weak form. The weak form of these words are used in unstressed positions, and play an important role in giving English its characteristic rhythm.

A list of the weak forms of these words is given below, along with notes on the contexts in which they can be used.

Weak Forms

Articles

1	a .	/ð/	
	a book	/a buk/	
2.	an	/ <i>∂</i> n/	
	an apple	/ən əp!/	
3.	the .	/ða/ (before co	nsonants)
		/al/ (before vo	wels)

Pronouns

. 4	he	/hu/ He isn't here He's is pronounced /hi:z/, not /hız/
5	her	(object pronoun) /a (r)/
6	him.	I gave it to her /Im/ Send him away.
7.	me	/mi/ Tell me your name.
8.	she	/ʃu/ She says he's out.

but She's is pronounced /si:z/

She's very hardworking.

	9.	them	/ðəm/ Take them away.		Accent, S & Rhythi	
	10.	us	/əs/ He asked us to go and see them.			
	11.	we	/wi/ We aren't as stupid as you think.			
		we're	/wið (r)/ We're late.			
	12.	you	/ju/ You promised to write.			
			You're /juə(r)/			
			You're right. Your is pronounced /jo:(r)/			
Determ	niners					
	13.	her (determin	er [possessive adjective] /hə(r)/			
	14.	his/ız/ (not in She's	itially) his wife.	·		
	15	some (determ	tiner [adjective] /s(a)m/ nt some books.			
Verbs						
·	16	am /əm/ /m/ in I'm So am I But finally , / Who's comin				
	17.	are (written Why're you But finally, Who's comi We are.	late?			
	18.	be /bi/ Don't be lat	e.			
	· 19.	been /bin/ He's been p	ounished.			
	20.	can /k(ə)n/ When can y You can go But finally Who can gi I can.	• .			37

English Phonetics and Phonology-II	.21	could /kad/
THE I NORTH J-11		I could go if I wanted to.
		But initially and finally /kud/.
		Could you tell me the time?
		Who could do it?
		John could.
		•
	22	do (auxiliary) /du/
		Nor do I.
		/d/ in d'you
		What d' you mean?
		But finally /du:/
	•	Who wants to go?
		We do.
	23	does (auxiliary) /daz/
		How does it work?
		But finally /dAz/
		Who lives there?
		John does.
	24	had (auxiliary) /had/
		/ad/ (not initially)
		/d/ written as 'd
		Had he done it before he left?
		When I reached here, the train had lef
		He said he'd lost it.
		But finally /hæd/
		Who'd told him?
		I had.
	25.	has (auxiliary) /həz/
		/z/ after a voiced sound
		/s/ after a voiceless consonant Written as 's
		Has he finished?
•		Where's he gone?
		What's he done?
		But finally /hæz/
		Who's got it?
		John has,
	26	have (auxiliary) /həv/
		/ðv/
	•	/v/ ∫ written as <u>'ve</u>
		Have you done it?
		Where've you been?
		You've been putting on weight.
		But finally /hæv/
		Who's got it?
		I-have

George'll certainly come.

He'll never agree.

But initially and finally /wil/
Will they agree?

Who'll go there?

John will.

34. would /wad/
/ad/ (after a consonant)
/d/ (after a vowel)

That would be very kind of you. That'd be nice.

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Who'd like to go, But initially and finally /wud/ Would you like to see him? Who'd like to go? I would.

Prepositions

35. at/at/
He's standing at the gate.
But finally /æt/
What're you looking at?

36. for /fa/

It's time for tea.
But finally /fb/
What're you looking for?

37 from /fr(*δ*)m/

A letter from John.
But finally /from/
Where d'you come from?

38. of /av/

A glass of milk But finally /ov/ What's it made of?

39. to /tu/ (before vowels and finally) /ta/ (before consonants)

I want to ask you.
I think he wants to.
I asked her to take them away.

Conjunctions

40. and /and/ /an/ /n/

> in and out up and down bread and butter

- 41 as /az/ as soon as possible
- 42. or /∂ (r)/ one or two more
- 43. than /oan/
 It's harder than you think.

that (conjunction; also relative pronoun).

/ठॅंग/
I think that he wants us to.
The book that I lent you.

Accent, Stress & Rhythm

44. Introductory there

There's /ðəz/ /ðeəz/ There're /ðərə (r) /ðeərə(r)/

Is there /iz δa/
Are there /α:δa/

There's a man at the door.
There're ten in the box. Öərə
Is there any more milk? Öər
Are there any more questions? Öər

6.3.5 Contracted Forms

In some forms of words, the severely reduced forms of auxiliary verbs, such as <u>is</u>, <u>are</u>, <u>have</u>, <u>has</u>, <u>had</u>, <u>will</u> and <u>would</u> are often attached to the preceding subject pronoun or noun. For example,

He + xs he's/hi:z/
They + axe = theyre/ōea/
We + xve = we've /wi:v/
John + xs = John's /dʒonz/
He + xill = he'll /hi:l/
They + would = they'd (ŏeid/

In other forms of words the shortened form of not (n't) is attached to the preceding auxiliary verb. For example,

Does not becomes doesn't /dAznt/
Shall not becomes shan't/a:nt/
Have not becomes haven't /hævnt/
Could not becomes couldn't /kudnt/

Such forms of words as those above are known as contracted forms. Contracted forms are also an important feature of spoken English.

6.3.6 Use of Strong Forms of Grammatical Words

As we have already said, there are form words in English which have strong forms as well as weak forms. The weak forms of these words have been given along with examples of the contexts in which they are used. We have also indicated some contexts in which many of these grammatical words have strong forms, but are not stressed. For example, the initial and final position in sentences.

- (i) How could he do it 'hau kad hi'du'it
- (ii) Could you post this for me? 'kud ju'paust ŏis fa'mı
- (iii) What are you looking at 'wot oju 'lukm æt
- (iv) I am looking at that picture. aim'lukin at öæt 'piktla

Besides these we have not so far considered other contexts in which they retain their strong forms. In fact in these contexts, only their strong forms are acceptable.

When these weak-form words are stressed they always have their strong forms. These words are stressed in the following contexts.

- i) When a weak form word is being contrasted with another word, e.g.
 The 'gift's 'for him not 'from him
 ös gifts 'fo him not 'from him
- (ii) When there is a coordinated use of prepositions, e.g.

I travel to and from Delhi a lot as 'travel tu: an 'from 'deli a 'lot

The government of the people and for the people

ŏə 'gAvənmənt 'Dv öə 'pi: pl ən 'fa: ŏə *pi:pl

(iii) When a weak-form word is used for the purpose of emphasis, e.g.

You must be here before ten Ju mast bi his bifo: ten I'm sure you can do it aim sus ju kæn du: it

(iv) When a weak-form word is being 'cited' or 'quoted', e.g.

You always say an 'apple not a apple.

Ju 'O: lweiz 'sei 'æn æpl not 'ei æpl.

You should 'never 'end a 'sentence with and Ju sad 'neve 'end a 'sentens wio 'end

Thus the position of weak-form words and contexts in which they are stressed necessitates the use of their strong forms.

6.4 LET US SUM UP

Words have as many syllables as there are vowel sounds in them. In English, words can have one, two, three, four, five, six or even seven syllables.

In words of more than one syllable one of the syllables can be heard by the listener as more prominent than the others. The prominence of a particular syllable is quite often owing to the presence of any, or all four of the following factors — Loudness, pitch change, quality, and quantity (length). When a word of three or more than three syllables is produced, the speaker uses several degress of articulatory energy, but the speaker perceives only two degress of stress. The highest level of stress is characterized by pitch movement and is known as nuclear or primary stress. The syllable that is characterised to a large extent by loudness and generally has no pitch movement is said to receive secondary or non-tonic stress. It is perceived as next in prominence to the syllable that receives primary or tonic stress.

Word stress is as essential a part of the character of the word, as the vowels and consonants. Every English word of more than one syllable has its own characteristic

stress pattern, which must be learnt. While word stress is fixed in a number of languages like French, Czech, etc, it is free in English. In other words, it is not easy to predict which syllable in a given word would be stressed. Nevertheless there are some guidelines which have been formulated on the basis of word endings.

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In connected speech some words are generally stressed because they are important for meaning vis content words; while some other words are predisposed to being unstressed because they are not important for meaning, viz form or structure words.

The rhythm of English is often described as stress-timed, because the stressed syllables in English utterances tend to occur at roughly regular intervals of time, irrespective of the number of unstressed syllables between any two stressed syllables. Most of the unstressed syllables constitute form words. Some of these form words have weak forms in unstressed positions, that is, when several of them occur between stressed syllables. The use of weak forms, in unstressed positions is essential for maintaining the characteristic rhythm of English. Sometimes the strong forms of these grammatical words are also used.

6.5 KEY WORDS

Syllable:

A fundamental but apparently elusive unit in phonology. A syllable typically consists of one vowel or diphthong possibly preceded and/or followed by one or more consonants.

Attempts have been made to define the syllable in terms of muscular contractions, in terms of neural programming, and in terms of peaks of sonority; but no satisfactory definition has been found.

Prominence:

The property of a linguistic element which stands out in comparison with neighbouring elements. For example, a stressed syllable is more prominent than an unstressed syllable.

Emphasis on a particular syllable in comparison with others. Stress is typically produced by combination of greater loudness, higher pitch and greater length.

Pitch

Stress:

The quality of "highness" or "lowness" of a sound, as perceived by our ears.

Ouality:

The most obvious property of a <u>vowel</u>, the characteristic which distinguishes it from other vowels, chiefly determined by the position of the jaw, tongue and lips during its production.

Quantity:

Another name for <u>length</u>, i.e. the amount of time required to pronounce a speech sound, particularly when this is linguistically important in a particular language.

Primary Stress:

The strongest degree of stress in a word.

Secondary Stress:

A degree of stress which is less then <u>primary stress</u> but still greater then no stress.

Rhythm

The pattern you perceive in speech or poetry as a result of the repetition at regular intervals of prominent elements, such as stressed syllables.

Stressed-timed rhythm:

A type of speech rhythm in which stressed syllables occur at roughly equal intervals, regardless of the number of intervening unstressed syllables. English follows a stressed-time rhythm.

Weak forms:

The way a grammatical word is pronounced when it

is unstressed.

Strong forms:

The way a grammatical word is pronounced when it is stressed, as opposed to the weak form it assumes

when unstressed.

6.6 **EXERCISES**

I. Divide the following words syllable-wise using a hyphen to mark syllable boundaries and mark primary stress. You could consult the dictionary for marking stress. Example: (a) ab-'surd

(a) absurd

(b) adjoin

(c) agency

(d) allopathy

(e) alternative

(f) aluminimum (g) amateu

(h) anonymous (l) determine

(i) anxiety (m) excessive

(j) behaviour (n) helicopter

(o) independence (p) catastrophe (s) repetitive

(k) caricature

(t) meiancholy

(q) component (r) extinguish (u) thermometer

11 Applying the rules of word accent that we have learnt, mark the primary stress on the following words. Then practise saying the words aloud.

(a) experimental (e) sentimental

(b) pioneer

(c) genetics

(d) collaboration

(i) celebrity

(f) elaborate

(g) physiology (h) palatography (k) suggestion

(I)magnanimity

(m) ornithology

(j) mathematician (n) gregarious

(o) ecological

(p) participate

(q) commercial

(r) optician

(s) addressee

(t) racketeer

Transcribe the words given above with the help of the dictionary. Ш

Mark the stressed syllables in the following sentences. For this apply the ĮΥ guidelines we have learnt for stressing (syllables of) words in connected speech. Remember words that receive stress on a particular syllable when they are said in isolation generally receive it on the same syllable when they occur in connected speech.

- (a) Collect them tomorrow.
- **(b)** Colour the picture.
- (c) Bring it in this evening.
- (d) Six of them surrendered. We've put them on your desk. (e)
- He's forgotten to leave his telephone number. **(f)**
- (g) He invited us to dine with them.
- Whey don't you take some for her. (h) I think that he wants us to go with him. (i)
- (i) Where've all the flowers gone?

	 (k) I wanted him to listen to my song. (l) Aren't you going to Delhi tomorrow? (m) She bought a basketful of fruit from the shop. (n) This is not the way to do it. (o) An apple a day keeps the doctor away. (p) These are certainly not enough (q) You mustn't waste even a minute. (r) Its time we went on a holiday (s) I ought to have written her a letter. (t) What have you done with my pen? 					
V)	With the help of dictionary write a phonemic transcription of the sentences above and remember to make a note of all the weak form words and the unstressed syllables in these sentences.					
VI	Listen to these sentence	s on tape and repeat th	nem.			
VII	Listen to some sentences on tape, transcribe each sentence and mark the stress.					
6.7	ANSWERS TO E	XERCISES				
I	(a) absurd (d) al-'lo-pa-thy (g) 'a-ma-teur (j) be-'ha-viour (m) ex-'cess-sive (p) ca-'tas-tro-phe (s) re-'pe-ti-tive	(b) a(d)' join (e) al-'ter-na-tive (h) a'-no-ny-mous (k) ca-ri-'ca-ture (n) 'he-li-cop-ter (q) com-'po-nent (t) 'me-lan-cho-ly	(c) 'a - gen-cy (f) a-lu-'mi-nium (I) an-'xi-e-ty (l) de-'ter-mine (o) in-de-'pen-dence (r) ex-'tin-guish (u) ther-'mo-me-ter			
	(a) experi'mental (b) pio'neer (c) ge'netics (d) collabo'ration (e) senti'mental (f) e'laborate (g) physi'ology (h) pala'tography (i) ce'lebrity (j) mathema'tician (k) sug'gestion (l) magna'nimity (m) orni'thology (n) gre'garious (o) eco'logical (p) par'ticipate (q) com'mercial (r) op'tician (s) addres'see (t) racke'teer	(-2)(-1)(-2)(-3)(-3)(-3)(-3)(-2)(-3)(-3)(-3)(-2)(-3)(-2)(-1)				
IV	a) Col'lect them to b) 'Colour the 'pic c) 'Bring it in this d) 'Six of them su e) We've 'put them f) He's for gotten	ture 'evening	ne 'number.			

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- g) He in vited us to 'dine with them.h) 'Why don't you 'take some for her.
- i) I 'think that he 'wants' us to 'go with him.
- j) 'Where've all the 'flowers 'gone?
- k) I 'wanted him to 'listen to my 'song.l) 'Aren't you 'going to 'Delhi to'morrow?
- m) She bought a basketful of fruit from the shop.
- n) This is 'not the 'way to 'do it.
- o) An 'apple a 'day keeps the 'doctor a'way,
- p) These are 'certainly 'not e'nough.
- q) You 'mustn't 'waste even a 'minute.
- r) Its 'time we 'went on a 'holiday.
- s) I'ought to have 'written her a 'letter
- t) 'What have you 'done with my 'pen?

VII

- 1. 'Hold it for me
- 'Give him some 'food.
- 3. 'Where have they 'gone.
- 4. Is's 'rather 'late.
- 5. She 'wrote me a 'letter.
- 6. I 'asked her to 'come here on 'Sunday.
- 7. I 'wonder if he'll 'make me a'nother one.
- 8. They are extremely intelligent.
- 9. There's a 'train to Cal'cutta in the 'evening.
- 10. They 'won't be on 'time for the 'flight.
- 11. I 'wonder if he'll 'ask me for the 'book.
- 12. There 'isn't e'nough for 'all of us.
- 13. He 'looked for a 'stick to de'fend himself.
- 14. They're 'coming back 'home in a 'bus.
- 15. Why have they 'left you be'hind?