MODULE 4 NON-SEGMENTAL FEATURES

UNIT 1 TONE/INTONATION

CONTENTS

1.0 INTRODUCTION

In this unit, you are going to study variations of pitch in natural languages, how the variations result in tone and intonation, as well as the different types of intonation and accentual patterns in English.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- explain variations of pitch in natural languages;
- distinguish between tone and intonation;
- describe types of intonation patterns;
- express the functions of intonation in English; and
- explain the production of intonation patterns as recorded on your audio tape.

3.0 MAIN CONTENT

3.1 Variations of Pitch in Natural Languages

It has generally, (indeed universally) been observed that natural languages are never spoken at one level of voice pitch for a considerable length of time. When people speak or read aloud, the voice pitch is always falling or rising, rising or falling, falling and then rising, rising and then falling and only occasionally level for a specific effect.

In some languages, the variations indicated here are generally noticed in relation to the sentence, the clause, the group or even the word. In other languages, the variations indicated above are usually noticed in relation to the word only. When the variations relate to items higher than the word, they are normally said to signal intonation, the patterns of which occur at the ends of specific utterances. Languages which use pitch variation in this way are generally said to be intonational. English, German and Russian are examples of intonational languages. When variations in pitch relate to the word, they are usually said to signal tone. The variations in that case, feature within the words. The languages which use pitch variation in this way are usually classified as tonal. Chinese, Spanish, Italian and the majority of African and Nigerian languages like Hausa, Igbo, Yoruba and Ibibio are in this class.
So, we can talk about intonation patterns in English for instance, and tone patterns in Ibibio, for example.

The two variations in pitch shown above create melody in natural languages. But as hinted here, they create melody (musical effect) in different ways and with different results. As we are concerned in this unit mainly with intonation, we shall restrict our discussion to intonation in English.

SELF-ASSESSMENT EXERCISE 1

Briefly discuss the term "variability of pitch in natural languages."

3.2 Intonation in English: Key Notions and Variability

It is now commonly known that there are many speakers of English who, in their performances, have exploited the rich, variable and almost inexhaustible possibilities within intonation in English. People in this group are essentially those who speak English as a first language ($L_{1)}$ and those non-native speakers (L_2 or foreign) who are appropriately educated in the language. The users of English in this second group (most probably only a few), have generally employed intonation patterns for two main purposes – to distinguish meanings and to show various

forms of attitude and emotion. Even for such users of the language, complete agreement on intonation usage has never been achieved. Indeed, while it is quite possible, (even easy), to reach agreement on one aspect of functional use of identifying meanings of utterances, it is not so possible and not so easy to reach agreement on one functional level namely that of indicating attitude or emotion. It is for this latter purpose that intonation has been described as being largely idiosyncratic, conventional to a group and generally variable from one individual to the other.

There are also some groups of English speakers who have never managed to get near to exhausting the full range of possibilities offered by intonation in English. Various groups within L_2 speakers and users of English as a foreign language are in this category. Probably the most easily identifiable in this are the nonstandard speakers of the new English in particular. Indeed one can see why the intonation of a large number of speakers of the new English is often said to be colourless; for a large number, there is hardly any variation beyond the fall and the rise, with the former dominating.

Nevertheless, it is worth emphasising, as in O'Connor (1970: 137-138), that intonation is a major source of meaning variation in English. Let us illustrate with the words "Yes" and "No". These words are common for speakers of English. However, they can be said in a great variety of ways to bring out various shades of meaning in English. The morphological shapes of the words may remain the same, but their meanings could vary with each intonation tune, pattern or contour. For instance, the word "Yes" can be said with a falling tune, (•\). In that case, the word would suggest agreement on an issue stated or argued. It can be said with a rising tune, (•/). In that case it could suggest a doubt in the mind of the speaker. On a different occasion, a rising tune could be used to show that the speaker did not understand what was said. The intonation options shown here in respect of "Yes" are also possible in respect of "No".

In a similar way, the words "thank you" may be said on a falling tune, when they are intended to express gratitude; they may be said on a rising tune when they are intended to demonstrate casual acknowledgement of something said or done.

Again, the words "good morning" could be said on different times. When said with a falling tune, it suggests formal greeting, which, ordinarily, would need a reply.

When said with a rising pattern, it tends towards causal exchange of pleasantries often referred to as "phatic communion" which may be

replied to in an equally causal manner. The greetings could even be ignored without creating a problem for the speakers.

SELF-ASSESSMENT EXERCISE

Briefly illustrate variability with regard to intonation usage.

3.3 Types of Intonation and Their Functions in English

Put very simply, intonation in English may be classified into two groups in the first instance:

i) those with pitch movement involving no change of direction on the tonic syllable;
ii) those with pitch movement involving change of direction on the tonic syllable.

Intonation in the first group may be said to be simple or unidirectional; intonation in the second case is said to be complex or bidirectional. The fall, the rise, the level tunes are unidirectional. The fall-rise, the rise-fall are bidirectional. You can appreciate these points by going through the following intonation patterns.

i) The Falling Pattern

Statements without implication, commands, wh-questions are generally known to be realised on a falling intonation. The following are examples:

1(a) Statements without implication
(a) Peter is in London.
(b) Mary played the piano.

1(b) Commands
(a) Take your feet off the chair.
(b) Put the book on the table.

1(c) Wh-questions
(a) Which is the correct answer?
(b) What is your name?

ii) The Rising Pattern

When the pitch of the voice rises at the end of an utterance or at a tonic syllable, we have a rising intonation. A rise of that nature generally

signals non finality such as we notice in non final coordinates, non final subordinates, first parts of enumerations, the second parts of some tags. The rising intonation pattern is also generally noticed in questions requiring the answer "Yes" or "No", in requests as well as in statements with implication.

You should note carefully that we are dealing with two types of rises: the unidirectional rise as in questions requiring the answer "Yes" or "No", and the bidirectional rise as in utterances involving a majority of non finality and statements with implication. The following are examples:

i) Non final Coordinates

(a) I wanted to go to London; my wife preferred going to Canada

(b) Peter got on a bus; Alice went by sea

In each of the above examples, the falling-rising pattern of intonation occurs at the tonic syllable of the non final coordinates, namely, London, and bus, while the falling pattern of intonation occurs at the second coordinate which marks the end of each sentence.

ii) Non final subordinates

(a) A year ago, I studied Mathematics

(b) Without further explanation, the case ended

In the two examples above, we see that the falling-rising pattern is at the non final subordinates marked by both ago and explanation.

iii) First parts of enumerations

For first parts of enumerations, there are two patterns: the fall throughout or the rises plus a final fall. So, we can have either

a) Peter bought a book a pen a pencil and a ruler

Or

b) Peter bought a book, a pen, a pencil, and a ruler

iv) Requests

With regard to requests, we often notice the bidirectional rise: the falling-rising. Examples here include:

a) Could I have your pen? 

b) Come over now, please! 

v) Questions requiring the answer "Yes" or "No"

Examples here include:

a) Should we start off at six? 

b) Was Alice at home? 

i) What you have so far studied here are the more common, regular, objective, grammatical or even routine functions of intonation. There are other functions which tend to be situational, depending on attitude of the speaker to his audience and to the general context of utterance, to the speaker's emotion or changes in situations. For instance, we can say routinely:

'This is my book'

• . . 

ii) We can say enthusiastically:
'This is my book'

• . . 

iii) We can say this same sentence with a shift of the tonic syllable as in the three examples below here

(a) 'This is my 'book

• •  (tonic on <u>my</u>)

(b) 'This is my 'book

. .  • (tonic on <u>this</u>)

(c) 'This is my 'book

- . •(tonic on is)

These last three examples are sometimes referred to as contrastive stress. So, we move on from here to our next focus: accentuation (stress).

SELF-ASSESSMENT EXERCISE

Listen to the voice one the audio tapes and practice the intonation patterns.

4.0 CONCLUSION

You have, in this unit, been exposed to the melody of language through your study of tone and intonation. You have also studied various functions of intonation in English.

5.0 SUMMARY

In this unit, you have defined the term intonation and have contrasted it with tone. You have isolated the various uses of intonation patterns such as the falling pattern, the rising pattern, the fall-rise pattern (the commoner patterns). You have also learnt that in real life, intonation patterns are much more varied than we have seen here.

6.0 TUTOR-MARKED ASSIGNMENT

Briefly discuss the functions of intonation in English.

7.0 REFERENCES/FURTHER READING

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UNIT 2 DEFINING THE SYLLABLE

CONTENTS

1.0 INTRODUCTION

A syllable is the smallest unit of pronunciation in a word. It can also be defined as the puff of air that accompanies the production of speech sounds. This corresponds to a peak in the flow rate of the pulmonary air stream. Syllable can also be considered as the most prominent or sonorous sound in a sound neighbourhood or phonetic environment. Vowels usually form the peak of the syllable, as they are always louder than consonants. However, some consonants, called syllabic liquids / l, r / and nasals /m, n, / can also function as the peak of the syllable(s).

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define the concept: Syllable;
- explain the different theoretical definitions of syllable;
- identify the different types of syllables;
- explain the structure of a syllable;
- assess how to determine syllable boundaries; and
- assess how to determine the strength or weight of a syllable.

3.0 MAIN CONTENT

3.1 Defining the Syllable

The exact definition of syllable has been elusive, because of the problems associated with syllabification of words. Considering the different phonological theories of syllables, syllables can be defined based on:

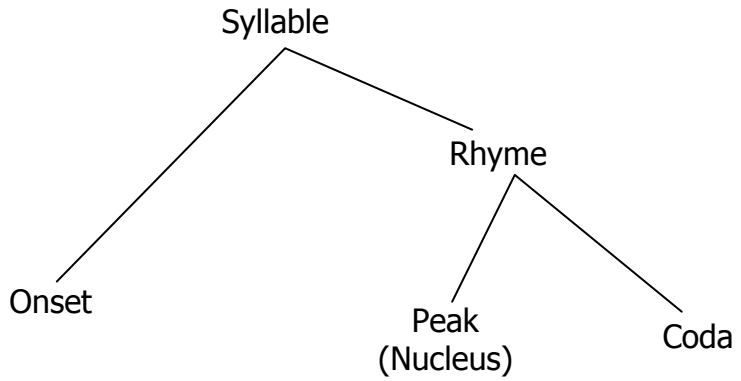
3.1.1 Chest Pulse Theory

Physiologically, Stetson using Chest Pulse Theory defines, syllable from the point of view of its production as a "puff of air pushed upward through the vocal tract by a compression of the intercostals muscles". This corresponds to a peak in the flow rate of the pulmonary air stream. He says, every syllable consists of three successive phases;

- The release phase
- The culminate phase
- The arrest of the pulse phrase

The consonant sounds form the release and the arrest of the pulse phases (onset and coda), while the vowel sound or the nucleus or the peak form the culminate phrase. Thus a syllable is described structurally as comprising:

- The onset
- The nucleus/ peak
- The coda

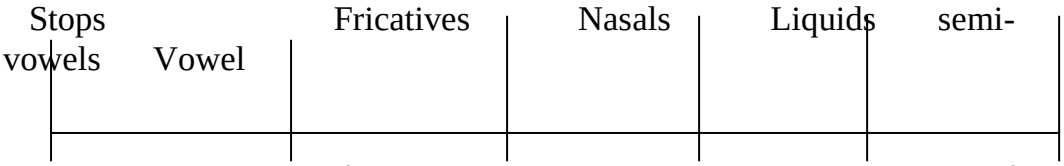


3.1.2 Prominence/Sonority Theory

Phonetically, a Danish phonetician, Otto Jasperson, defines syllable as the most prominent or relatively loudest or most sonorous sound in a

sound neighbourhood or phonetic environment. Vowels usually form the peak of the syllable, as they are more sonorous than consonants. However, some consonants, called syllabic liquids / l, r / and nasals /m, n, / can also function as the peak of the syllable(s).

Sonority is the phonetic loudness of sounds, thus syllables are associated with the peak of sonority. Oral stops are the least sonorous while vowels are the most sonorous. These are exemplified in sonority hierarchy table.



Note that the sonority of a sound is determined primarily by the size of the resonance chamber through which the air stream flows. Thus within vowels, the low vowel is more plainly audible than a higher vowel / i, I, u: u / uttered with the same force, and any vowel is more sonorous than any consonant.

Goldsmith (1990:11) Sonority Hierarchy

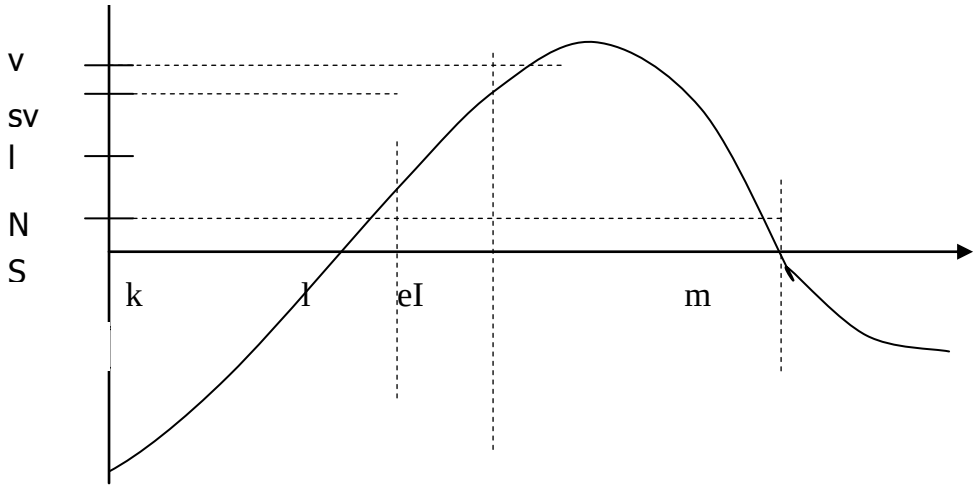
Vowels	sound	sonority index
-low vowels	a	10
-mid vowels	e, o	9
-high vowels	i, u	8
Glides	r	7
Liquids	l	6
Nasals	m, n	5
Obstruent's	s	4
Fricatives	v, z, ð	3
Affricate	f, θ	2
Stops	b, d, g, p, t, k	0.5

Arithmetic System

The larger the chamber of the mouth determines the sonorous of the sound. For example, compare. / i, e, a / or / u, כ , a /. Producing these sounds as arranged, there is a sort of grading in terms of resonance based on the opening and the chamber created as the production of these sounds progress. The articulation of / a / sound in the two groups has a greater resonance than any other sound in the groups.

Among the sounds that constitute the word 'claim', the diphthong /ei/ is the most sonorous as shown in the graph below.
Claim /kleim/

Sonority Peak



3.1.3 The Structure of Syllable

Syllables are usually described as consisting of a centre, which has little or no obstruction to air flow, and which sounds comparatively louder; before and after this centre; there will be greater obstruction to airflow and / or less loud sound.

The four major structures are:

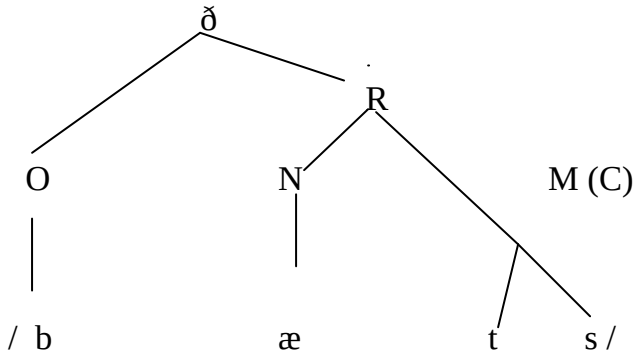
- A minimum syllable with a single vowel in isolation e.g. are /a: /, or /כ: / and err /ɜ:/

These are preceded and followed by silence. Structurally this is a V-syllable structure.

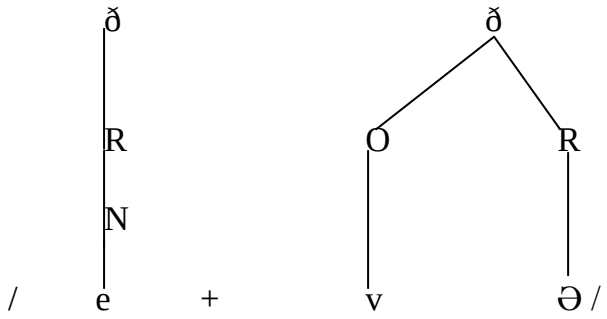
- Some syllables have an onset e.g. bar /ba: /, key / ki: /, more /mכ: /. CV-structure
- Syllables with no onset, but coda e.g. am /æm/, ought /כ:t /, ease /i:z/. VC structure
- Syllables with onset and coda e.g. run /rʌn /, sat / sæt /, fill / fIl /. CVC structure

Thus syllable structure can be represented thus:

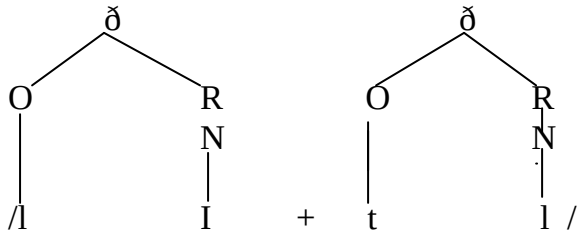
a) bats / bæts /



b) Ever / e v Ə /



c) Little / litl /



Note: ð - Syllable
O – Onset
R – Rhyme
N – Nucleus
M – Margin
+ - Syllable boundary

The major problem in the phonetic description of the syllable is on the division between syllable or syllable boundary (+). There are some words that the exact syllable boundary cannot be determined. For example;

I. Aroma / ∂r∂ʊma /
II. Extra / ekstrə /

e + kstrə ek + trə eks + trə ekst + ə ekstr + ə

In the word 'going' / g∂ʊIŋ /, does / ʊ / belong to the first or second syllable, since its articulation is slightly closer to obstructing airflow than the vowels next to it. Phonologically, / ʊ / is part of the / əu / diphthong phoneme. This makes syllabification a bit difficult.

Syllabification provides a way of grouping arrays of CV elements into syllables. It is clear that each V-element will be associated with a syllable peak. What is confusing is which syllable modes are C-elements e.g. panic "CVCVC-structure". The onset first principle (Khan 1976, Clements and Keyser 1983) says,

a) Syllable-initial consonants are maximised to the extent consistent with the syllable structure of the language concerned.
b) Subsequently, syllable-final consonants are maximised to the extent consistent with the syllable structure of the language in question.

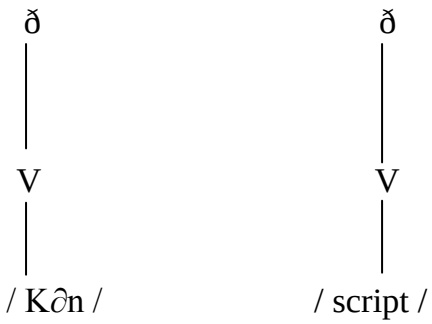
Principle (a) must apply before (b) in any derivation. In a word like [e + və] the Onset First Principle requires that the string be divided up as 'V + CV' rather than 'VC+V', that is,
[e + v ə] and not [ev+ ə].
Another example is 'a + spire' or 'asp+ ire'. The former is correct using the onset first principle.

Clements and Keyser (1983: 38) also say;

a) Underlying every 'V' of the 'CV – tier' is linked to ð, this shows that no syllable exists without a V-element (as nucleus)
b) Link each C- element to the nearest V-element to its right provided the resulting sequence of segments does not violate any language specific rules. This procedure creates syllable onsets.
c) Repeat the procedure in (b), this time linking the 'C- elements' to the nearest 'V' to its left. This procedure creates syllable coda / margin.

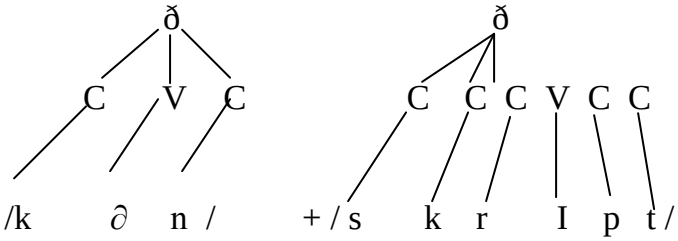
Consider the example below, .

a) 'Conscript' -/ k∂nscript /



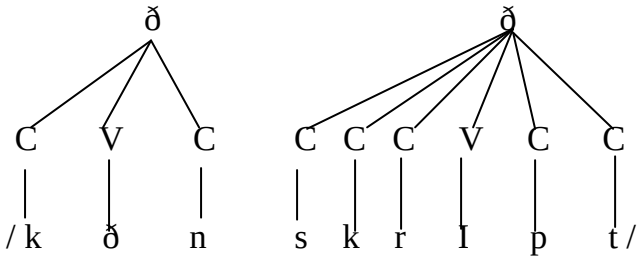
Linking V element with by convention 'a'

b)

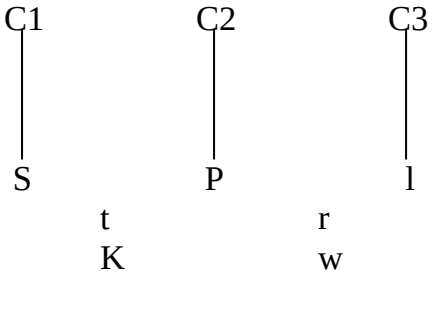


By convention 'b' link c-element to the V on their right, one at a time provided the resulting sequence is permissible in the language. Thus /skri/, but not /nscri/ because in English nasals are not allowed to occur at the beginning of a syllable initial consonant cluster.

c) By convention 'c', link C-elements to the V preceding them, so long as the resulting sequence is allowed.



Phono tactically, syllable rules in English say, if the first syllable of a word begins with a vowel (any vowel may occur, though / ʊ / is rare, such syllable has a zero onset. If the syllable begins with one consonant, that initial consonant may be any consonant except
/ ŋ /, / ʒ/ which is rare. In terms of initial consonant clusters, the maximum is three:



The pre-initial consonant must be /s/, the initial must and could be any of /p t k/, which the post-initial could be any of / l, r, w , j /.

Pre-initial		initial	post-initial			
S	+	p	l	r	w	j
		T				
		K				

At the onset the C- elements range from 0-3 = C 0-3

On the right margin or coda, consonant clusters range from 0-4=C0-4
It is zero codas when there is no final consonant e.g. tea, air, ear. It is final or one consonant coda when there is one consonant only. It could be any consonant, except / h, r, w, j /.

In terms of two consonant codas, there are two types,

A) A final consonant preceded by a pre-final consonant. The pre-consonant form a small set: / m, n, ŋ, l, s / bump, bent, bank, belt, ask.
B) A final consonant followed by a post-final consonant. The post-final consonants also form a small set: / s, z, t, d, θ / bets, /bets/, beds/bedz/, backed /bækt/, bagged /bægd/, eighth /eitθ/. N/B. The post final consonant can be identified as separate morphemes (though not always, e.g axe /æks/ is a single morpheme, and its final /s/ has no meaning)

There are two types of final three consonant clusters:
A) The first is pre-final + final + post final:

	Pre-final	final	post-final	e.g
Helped h e	l	p	t	
Banks b æ	ŋ	k	s	
Bonds b ɒ	n	d	z	
Twelfth twe	l	f	θ	

B) The second type shows that more than one post-final consonant can occur in a final cluster, i.e. final + post-final + + post-final 2.
Post-final 2 can be one of / s, z, t, d, θ / e.g

Pre-final		final	post-final 1	post-final 2
Fifths fi	-	f	θ	s
Next ne	-	k	s	t
Lapsed l	-	p	s	t

C) Most four -consonant clusters can be said as consisting of a final consonant preceded by a pre-final and followed by post-final 1 and post-final 2 e.g

	Pre-final	final	post-final 1	post-final 2
Twelfths twe	l	f	θ	s
Prompts Prd	m	p	t	s

The below shows a final consonant with no pre-final but three post-finals

	Pre-final	final	post-final 1	post-final 2
Sixths sI	-	k	s	θ
Texts te	-	k	s	t

In the final analysis, English syllable may be described as having the following maximum phonological structure:

$$C^{0-3} V C^{0-4}$$

This specification states that the syllable structure in English can have an onset of no consonant at all or up to three consonants, an obligatory vowel as the peak, and a coda made up of no consonant at all or up to four consonants.

3.1.4 Syllable Strength (Weight)

Traditionally, a syllable could be said to be;

- Open syllable- syllables without a final consonant e.g to- //tu:/
- Closed syllable- syllables that end with consonants e.g rat / raet /

In contemporary linguistic syllables phonological system is described in terms of syllable weight. In many languages the factor that determines the applicability of certain phonological rules is the weight of the rhyme. Essentially, a syllable is light if it contains a non-branching rhyme. In a light syllable the rhyme contains a short vowel.
A syllable is heavy if it contains a branching rhyme. In a heavy syllable that rhymes contains either:

A) A long vowel or diphthong optionally followed by one or more consonants or
B) A short vowel followed by at least one consonant e.g.

Syllable weight forms the heart of poetry metre, which is written in verse.

4.0 CONCLUSION

You were exposed to the definition of syllable as the smallest unit of pronunciation in a word. We added that it can also be defined as the puff of air that accompanies the production of speech sounds. Scholars defined syllable differently based on individual conviction. Syllable has a structure made of onset, nucleus and coda. The onset and coda must be consonantal sounds, while the nucleus, otherwise called 'the peak' must be the vowels or syllabic consonants. The possible syllable structures in English are: v, cv, vc, cvc and cccvcccc. Syllable has weight and this forms the heart of poetry metre, which is written in verse.

5.0 SUMMARY

A syllable is the minimal pronounceable units in words. There are three types of syllables which are: monosyllabic, disyllabic and polysyllabic words. Every syllable must take a stress marker which could be primary, secondary and tertiary. Structurally, syllable comprises: the onset (the first consonant sound on a syllable), the nucleus (the element that takes the stress marker which syllabic sounds) and the coda (the last consonant on a syllable). The general formula for English syllable is C^{0-3} V $C^{0-4.}$ A syllable may not have any consonant at the initial position of words. It may have one and must not exceed three. At the final position, it may have none, may have one, two and must not exceed four. Syllable structure varies from language to language.

6.0 TUTOR-MARKED ASSIGNMENT

i. Define a syllable using any of the theoretical approaches.
ii. Divide the following words into syllable and the primary stress correctly: communication, aroma, university, open, television, facilitator, student, hospital, little, button, bottle, water, go, isolation, education, cup, house, soldier.
iii. With copious example, when is a syllable said to be light or heavy?
iv. Discuss the syllable structure using the Schema C^{0-3} V $C^{0-4.}$

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UNIT 3 SYLLABLE STRUCTURE/JUNCTURE

CONTENTS

1.0 INTRODUCTION

This unit exposes you to the nature of the syllable in English. It provides for you some of the key ways of considering the meaning of the term syllable and the issue of juncture.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- explain what a syllable is;
- illustrate how sounds are combined to bring about syllables (i.e. the structure of the syllable);
- appreciate the hypothetical or composite structure of the syllable; and
- explain juncture demarcation using specific words.

3.0 MAIN CONTENT

3.1 The English Syllable: Meaning

Many attempts have been made by many scholars in phonetics and phonology to explain the term syllable. Apparently, there is hardly any single satisfactory explication. In spite of this (or rather because of it), we are going to examine various views and approaches and then to help you to decide on the one that seems most nearly satisfactory.
We can attempt to explain the syllable from the viewpoint of phonetics and from the standpoint of phonology. With regard to phonetics, the attempts are in two parts – from the viewpoint of articulatory phonetics

and from the viewpoint of auditory phonetics. Connected with the articulatory phonetics is the pulse theory which states that when the pulmonic air stream mechanism is in action, the respiratory muscles alternately contract and relax so that the air is expelled in a succession of small puffs with each contraction.

The resulting puff air then constitutes the basis of the syllable. The syllable from this viewpoint then becomes an audible movement called a chest pulse, breath pulse or syllable pulse. Since at least one such movement must be involved in whatever we say, the syllable has been taken to be the minimum utterance or the smallest sound produced with one pulse of breath.

This is the explanation which is usually said to be universal: the pulse theory covers the syllable in all natural languages.

SELF-ASSESSMENT EXERCISE 1

Discuss the pulse theory as the basis of explaining the term syllable.

Secondly, from the viewpoint of auditory phonetics, there exists what has usually been referred to as the prominence theory. According to this theory, syllables may be distinguished in terms of their peaks and valleys of sonority, the peaks denoting the areas where the sound comes out most audibly, the valleys designating the areas of comparatively less audible sound produced. For example in the word caught /kɔ:t/, it is generally known that the sound [ɔ:] is more sonorous than either [k] or [t]. In the word remedy /'rImIdI/ we have three syllables with the vowels /e/, /i/ and /i:/ constituting the peaks; the /r/, /m/ and /d/ making up the valleys. Those who propounded the theory have, from their findings, come to the conclusion that plosives are the least sonorous of all sounds while the semi-vowels are the most sonorous of all consonants. The vowels, on the other hand, remain at the other extreme of being the most sonorous of all sounds.

Thirdly, from a specific, functional viewpoint, the syllable may be explained taking into account the phonological rank scale in the first instance. Since, in this scale, we have: "the tone group, the foot, the syllable and the phoneme" (cf. Halliday et al 1970: 45). We can say that the syllable is that unit of phonological description which comes between the phoneme and the foot.

Fourthly, from the specific functional viewpoint, the syllable may be explained from the viewpoint of structure. According to this viewpoint, the English syllable is describable as the linking of vowels and consonants with the vowels generally forming the nucleus or central part

of the syllable. In this explication, it is important to note such operational terms as the onset (the opening segment of a syllable) the centre or nucleus (the central segment of the syllable), and the coda (the closing or arresting) segment of the syllable. (cf. Crystal 1991: 339).

SELF-ASSESSMENT EXERCISE

Explain the syllable from the viewpoint of phonological rank scale and from the viewpoint of structure.

3.2 The Syllable in English: Its Structure

The last explication of the syllable that we have offered here (from the viewpoint of structure), seems most suitable and applicable for our purpose. It also leads us naturally to this second part of our description – the structure of the syllable in English. However, occasional references may be made to other explications.

As a starting point, we know that the vowel is the most sonorous part of a syllable and that it (the vowel), can stand on its own as a syllable. So, an English syllable can be made up of a vowel alone, as in the entries: are, our or air. To show that in this type of syllable there are no consonants (whether as onset or coda), we can represent this structure as: O V O or simply; V. Here "O" means no consonant at the syllable initial position and none at the final position; V means the presence of a vowel or nucleus. Very rarely, we have something like a consonant alone. For instance, in the utterance: sh! we can represent the syllable to show that it occurs as a consonant constituting the onset followed by nothing else (no nucleus and no coda). However, since utterances (interjections) like Sh! Ah! Oh! Mm! Are not language specific, (they occur across languages), we can exclude the occurrence of only a consonant in an English syllable, (except as it affects the foregone explication).

More usually however, we have English syllables which combine vowels and consonants.

For instance, we can have one onset combining with a nucleus as in the syllables: tea, fee, see, pear and sow. To demonstrate the presence of an onset and a nucleus and the absence of a coda, we can represent the structure thus: C V O.
Here, you are advised to note again that we are concerned with sounds (not letters), and that the syllables: tea, fee, see, and pear
Are of the CVO structure because they are transcribed as:

/ti:/, /fi:/, /si:/ and /pe↔/ respectively.

Also, it is worthwhile drawing your attention to the fact that tea, fee, see, pear and other items of a similar syllable structure are syllables which in morphological terms are of word status.

3.1.1 More Complex Structures

We can also have syllables in which the three components are present: the onset, the nucleus and the coda: CVC. A syllable of this nature can be found in items like: pet, set, read, pool

We can have a maximum of three initial consonants: CCC – and a maximum of four final consonants – CCCC in an English syllable. Of CCC initial, the following are examples of items: spread, street, spleen
of – CCCC final consonants we have the following examples: prompts, thousandths.

The information we have so far in relation to the structure of the English syllable can be summarised as in the following Table.

Table I Syllable Structure in English

Entry	Consonant (onset)	Vowel (nucleus)	Consonant (coda)
our	O	V	O
go	C	V	O
boat	C	V	C
clear	CC	V	O
clean	CC	V	C
cleans	CC	V	CC
straw	CCC	V	O
street	CCC	V	C
streets	CCC	V	CC
strengths	CCC	V	CCC
prompts	CC	V	CCCC

Taking into account the fact that the nucleus is the compulsory element in the structure of an English syllable and the fact that the consonants do occur along with the nuclei, we can indicate a composite or hypothetical structure of the English syllable thus; (C) (C) (C) V (C) (C) (C) (C)
Alternatively, the composite or hypothetical structure may be shown thus:

$$C_{0-3}\ V\ C_{0-4}$$

The first composite structure simply shows that the consonant-syllable initial and syllable final – are optional, the vowel is compulsory.

The second composite structure has the information that we can have an English syllable that has no initial consonant and none with more than three initial consonants. Also, we can have an English syllable that has no final consonant and none with more than four final consonants. In either case, the vowel remains constant: a required element.

3.2 Syllable Juncture

The term syllable juncture refers to the demarcation of a word of more than one syllable into its syllable components. In Eka (1992: 1-8; 1995 (1-29) this matter, along with relevant modifications – juncture raising, juncture lowering and juncture levelling – are discussed.

Here we consider it sufficient to indicate that juncture in English is a controversial matter. Abercrombie (1975: 36) for instance, indicates that the English word better which apparently has two syllables can be uttered as a word of one syllable. For many English words, scholars have tended to demarcate syllables of words differently. However, the following syllable demarcations are functional (attested), and so deserve your attention:

Dav-id
Jan-et
dis-trib-ute
mad-am
cal-en-dar
con-trib-ute
cav-al-cade
cir-cum-scribe
cir-cum-spect
dif-fer-ent
fes-tiv-ity
fet-ter
in-cho-ate
in-cli-na-tion
in-tel-lect
in-ter-act
in-ter-est
pol-ite
pon-der-ous
top-ping
vis-ible
writ-ing
hect-or
start-ed

You should also do yourself a favour by looking up English words in any good dictionary for the purpose of identifying syllable junctures.

4.0 CONCLUSION

In this unit, you have studied the word syllable and can explain it in four different ways. You have also studied the English syllable with attention to its three components and to its juncture.

5.0 SUMMARY

You have, in this unit learnt to explain the term syllable in four different ways. You have also understood the structure of the English syllable with attention to such important concepts as the onset, the nucleus and the coda. You have also been exposed to syllable juncture concept and can identify syllable juncture in some English words such as:

Dav-id;
Mad-am;
Pet-er.

6.0 TUTOR-MARKED ASSIGNMENT

Explain the composite or hypothetical structure: C_{0-3} V C_{0-4}

7.0 REFERENCES/FURTHER READING

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UNIT 4 ACCENTUATION/STRESS

CONTENTS

1.0 INTRODUCTION

This unit exposes you to a very important phonological issue-accentuation. The unit also explains the difference between accentuation and accent, accentuation and stress and points out for your attention generally acceptable accentual and stress patterns.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- explain the terms accentuation and accent; accentuation and stress and be able to differentiate between them;
- indicate general/common applications of the terms accentuation/stress; and
- apply the terms to specific words and utterances.

3.0 MAIN CONTENT

3.1 Accentuation/Accent: Difference

The terms accentuation and accent are not normally used interchangeably: accentuation refers to the emphasis or the totality of energy that makes a sound, a syllable, a word or even a stretch of utterance to stand out from the other sounds, syllables, words or stretches of utterances. Thus, an item such as a sound or a syllable that receives accentuation may be said to have been accented and such an accented syllable or sound naturally becomes prominent, (easily heard) by virtue of its being louder than the other sounds or syllables in the

specific environment. In this unit we are concerned with an introduction to the entire accentual system in the phonology of English.

Accent on the other hand refers to a variety of pronunciation associated with a particular person or group. It has practically nothing to do with variation in grammar or vocabulary. From a functional viewpoint, the term accent can be used by an L_1 speaker to single out and to characterise non native (L_1 or foreign) pronunciation as compared to the pronunciation of the given language by another L_1 speaker. Similarly, an L_2 or foreign speaker can single out and characterise native pronunciation as compared to the pronunciation of the given language by another L_2 or the foreign speaker. In each case, we can emphasis that the focus of attention is the pronunciation not the grammar or the vocabulary.

However, it is only the L_1 speaker or the L_2 or foreign speaker educated in the language that is often known to refer to others outside these categories as "having" or "speaking with" an accent. Having or speaking with an accent therefore implies a departure from L_1 norms or the norms of the standard variety of any language. With regard to the English language, L_1 speakers or educated L_2 or foreign speakers are often known to refer to others, particularly other speakers of the new English as "having" or "speaking with" an accent.

3.2 Accentuation and Stress

The terms accentuation and stress are quite often confused even by some who are above the foundation stage in their study of phonology. This situation is easy to appreciate when we consider the fact that many authorities in phonology have used the terms in different ways. We shall briefly consider a few of the diversifications in this connection.

Ward (1972:156) sees accentuation as prominence which can be achieved through a very intimate combination of two or more of length, stress, pitch and inherent sonority of sounds. Gimson (1977:33) sees accentuation in a way quite similar to the above: as prominence which can be achieved through any or all of four factors: stress, pitch, quality and quantity.

In this unit stress is indicated specifically as: "loudness for the listener" while pitch prominence associated with it (stress) is considered the most important correlate for the determination of the accentual system of the given language. Thus, we see that these two sources see accentuation as prominence – an embodiment with identifiable components. Clark and Yallop (1990:288) on the other hand, indicates that accentuation and stress are sometimes used as alternative terms, and in this rather loose

sense, what is referred to as word stress or lexical stress may, alternatively, be referred to as word accent or lexical accent. Sommerstein (1977:37-38) is apparently more specific on the matter: while considering both terms as embodying prominence, it shows stress as the actual realisation of prominence and accentuation as the objective realisation of the same phenomenon. In other words, we can analyse or describe stress in perceptual terms: the place that the hearer perceives prominence whether in the sound or the syllable or the word or a longer utterance. We can therefore analyse accentuation in phonological terms: the way prominence is organised in relation to sounds, syllables, words or other utterances. Where, therefore, we use the word accentuation in this unit the reader is free to think about stress… its component in perceptual or phonetic terms.

SELF-ASSESSMENT EXERCISE

Briefly distinguish between

a. accentuation and accent
b. accentuation and stress

3.3 General Use of Accentuation/Stress in English

When we pronounce English words in isolation, it is easy to notice that word accentuation is fairly regular, almost fixed. For example, in isolation the words: David, people, reason, teacher, Janet can be observed to have accentuation always on the first syllable. On the other hand, the words: forget, success, proclaim, decide, extend can be noted to have accentuation always on the second syllable.

As indicated in section 3.1 it is always useful to separate accentuation from stress as Gimson (1977) does. As a rough guide, whenever you pronounce a word and place prominence in it, you can be said to have employed accentuation. When your study partner pronounces a word, the part of it that sounds louder for you e.g. suc'cess, is the stressed part. When you analyse written texts, you can use the word stress. What follows is a general guide on the use of accentuation or stress as appropriate.

(i) Generally all English words of more than one syllable can be said to have stress at a particular place when the word is heard in isolation.
(ii) Words of one syllable are generally known to show stress if they are nouns, full verbs, adjectives or adverbs.
(iii) Interrogative pronouns are generally heard as stressed. Example: What are you doing?
(iv) Demonstrative pronouns are generally heard as stressed. Example: This is the teacher.

(v) Relative pronouns are generally heard as stressed if each is preceded by a preposition. Examples:

(a) The overhead bridge under which the beggar lives.
(b) The premise on which the conclusion rests.

Even though other words like pronouns, modifiers, conjunctions, prepositions (grammatical items) are not normally heard as stressed when in isolation, they can be accented and hence can be heard as stressed in connected speech for special purposes e.g. contrastive purposes.

3.4 Specific Words and their Accentual Patterns

As already stated, all English words of more than one syllable are normally accented in one (fixed) position when the words occur in isolation.

Also, words of one syllable (monosyllabic words) are generally given accentuation if they are open class items, i.e. if they are:

(i) nouns such as John, house, peace, tree, pen;
(ii) or they are full verbs such as sweep, dance, eat, read, sing;
(iii) or they are adjectives such as good, bad, prim, clean, poor;
(iv) or they are adverbs such as there, here, past, well, very.

All other monosyllabic words are generally observed to be unaccented and therefore heard as unstressed. For example:

(i) pronouns such as: I, we, he, you, she
(ii) specific and nonspecific modifiers (articles) such as: the, a, an
(iii) conjunctions such as: and, or.
(iv) Prepositions such as: in, on, at, from by.

As a further step in the provision of words and their accentual/stress patterns, you should note the following:

Pattern 1 Examples of words of two syllables with accentuation/stress on the first syllable only:

absent	antics	Agnes
ever	even	erring
fully	finger	fever
impress	instant	inches
passive	panther	pastor
zealous	zealot	zebra
zenith	zig-zag	zoning

Pattern 2 Examples of words of two syllables with accentuation/stress on the second syllable only:

admit	across along	
effect	event	erode
inform	impress	ignore
July	Japan	jocose
narrate	neglect	negate
without	within	whereas

Pattern 3 Examples of words of three syllables with accentuation/stress on the first syllable only:

abdomen	Abigail	afterward
janitor	juvenile	odorous
telephone	televise	talking-drum
uvular	upkeeping	varnishing
wonderful	willingly	yesterday

Pattern 4 Examples of words of three syllables with accentuation/stress on the second syllable only:

addition	abrasive	abundant
December	decision	develop
important	inferior	intrinsic
perfection	perennial	perception
tomorrow	taxation	volcanic

Pattern 5 Examples of words of four syllables with accentuation/stress on the first syllable only:

auctionary	dictionary
February	January
valuable	veterinary

SELF-ASSESSMENT EXERCISE

i. Select 20 words from your dictionary and indicate their stress patterns. Endeavour to avoid the words listed in this unit.
ii. Listen to the voice on your audio tape and practise the accentual positions indicated therein.

3.5 Accentuation of Words in Connected Speech

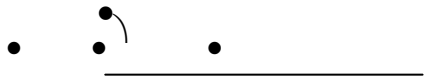
You studied in section 3.2 that every accent-able word in English has a specific accentual position which every speaker keeps to in order to ensure appropriateness in the phonological shapes of words.

In connected speech however, above information becomes modified in quite significant ways, the following being some of them:

(i) in connected speech, practically every English word has been known to be accented for specific reasons. For instance, in the sentence:
(ii) I think he wants to read;
only three words would be accented thus:
I ‘think he ‘wants to ‘read

If however, a speaker intends to emphasise his opinion and to contrast it with other people’s views, he can change the nucleus from read to I, thus leaving the sentence as:

I think he wants to read



The same speaker or another one, may decide to place the emphasis on the word he to draw attention to the fact that he means a particular person, not another, so the nucleus of the sentence could move to the word he thus giving it the shape:

I think he wants to read

Again, the speaker may have in mind a contrast between need and want. In that case, he may thus emphasise this fact that the person he is referring to wants to read, not that he needs to! So, the nucleus could then shift thus:

I think he wants to read

The second important point to note about accentuation in connected speech is that speakers generally tend to avoid “clashes” when two or three accented syllables come together in a stretch of utterance:

(i) good food;
(ii) beautiful girl;
(iii) honest intention;
(iv) heavy rain;

We notice that each word has or represents an accented syllable. To avoid two strongly accented syllables coming together, it has generally been observed that speakers tend to make some of the accented syllables

attain the status of weak syllables to ensure appropriate rhythmic patterning. Thus, in the four utterances here, it is generally observed that speakers tend to weaken the first otherwise accented syllable thereby retaining only the second in each utterance. This relates to the metrical theory of word stress which you will study in detail much later in your phonology course.

4.0 CONCLUSION

You have studied a number of matters relating to accentuation and stress. You should by now be better informed about accentuation and stress, accentuation and accent and the relationship which holds between each pair.

5.0 SUMMARY

You have in this unit studied accentuation and accent:
(i) accentuation and stress
(ii) specific words and their accentual patterns as well as
(iii) accentuation of words in connected speech

6.0 TUTOR-MARKED ASSIGNMENT

Briefly discuss accentuation pointing out how it features in English

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UNIT 5 RHYTHMIC PATTERNS

CONTENTS

1.0 INTRODUCTION

This unit exposes you to a composite discussion of melody in natural languages and specifically in English. It demonstrates the interplay of intonation, accentuation, duration and pausing in the achievement of rhythmic patterns in English.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- explain timing and variation in natural languages;
- identify the components of rhythmic; and
- demonstrate the combined effects of intonation, accentuation (stress, duration on rhythmic (melodic) patterns.

3.0 MAIN CONTENT

3.1 Timing and Variation in Natural Languages

Rhythm is sometimes known by another name – timing. This is because rhythmic patterns involve time sequences, which are very largely regular. The time sequences mentioned here obtain in practically all natural languages.

Because of their nature, rhythmic or timing patterns are also sometimes referred to as universal melodic or musical patterns.
There are many approaches to the study of rhythm depending on the theory one uses, and also the language involved. Generally however, scholars have tended to classify rhythms of natural languages into three:

stress-timed, syllable-timed and mora-timed. Languages which are stress-timed are generally said to be those whose utterances can be broken down into parts (or feet) which are isochronous i.e. of equal duration, the basis for the segmentation being the accented syllable together with any number of unaccented syllables before the next accented syllable. English, Russian, German and Arabic are usually known to be in this category. Syllable-timed languages are also said to be those which are isochronous, but unlike the situation with stress-timed languages, the basis for the segmentation is the syllable, whether accented or unaccented. The indication in this case is that the number of syllables in an utterance determines the duration of the utterance, as each syllable is accented. Examples of syllable-timed languages include French, Spanish, Italian, Telugu, and Nigerian Languages such as Hausa, Yoruba, Igbo, and Ibibio. With regard to moras-timed languages, syllable duration depends on the number of moras which themselves are usually said to be isochronous within the syllable. Such languages are known to include Japanese and Estonia. Thus, the concept of isochronism (equal time-ness) has stood out as the focal point in all analyses of rhythm so far in natural languages.

3.2 The Components of Rhythm

The components of the rhythm of any natural language depend on the theory used in the analysis. We have no intention of taking you into theories and controversies; rather, the task we present to you is that of analysing the usual composite categories of intonation, accentuation/stress, duration/quantity and pauses.

You are already familiar with the categories of intonation patterns of rising and falling tunes; accentuation/stress patterns of prominence; duration patterns of length and quantity and pauses – a tendency towards hesitation at both appropriate places (making both appropriate places (making fluency) and in inappropriate places (making jerkiness).

SELF-ASSESSMENT EXERCISE

i. Briefly distinguish between stress-timed and syllable-timed rhythms in natural languages
ii. What are the components of rhythm used in the analysis of the rhythm of English in this unit?

3.3 Rhythmic Patterns in English

The English of L_1 speakers as well as L_2 and foreign speakers educated in the language has generally been considered to be stress-timed. This description stems from the fact that there is generally a noticeable attempt by speakers to maintain some measure of equality in timing between one accented syllable and the next accented syllable in an utterance. Thus, for the utterance:

(i) "Peter thinks that he wants us to play"
a normal English speaker (the L_1 and the otherwise educated) is likely to spend approximately the same amount of time between the accented syllables thus:
// Peter / thinks that he / wants us to / play //.

This means that the speaker is likely to spend about the same amount of time to say each of:
// Peter //
// thinks that he //
// wants us to //
// play //

At the stage in which we are, any student who has paid attention to the relevant sections of this course will have come to the conclusion that syllable accentuation (stress, pitch placement, duration) and intonation all have a part to play in our description of rhythm: the melody of English. It is also likely that such student will have come to the conclusion that the melody of English can be described through intonation alone, through syllable accentuation alone or through both. In this unit we have combined accentuation (stress and duration in particular) and intonation to arrive at the rhythm of our illustrative utterances.

The following are the utterances:

(i) John wrote the letter in English
//'John/'wrote the/' letter in/'English// 

(ii) John wrote the letter in English?
//'John/' wrote the/'letter in/'English// 

(iii) I think it was an excellent affair….
//I' think it was an/' excellent af/fair…// 

(iv) I think it was an excellent affair
//' I think it was an 'excellent af/fair//

(v) Mary can go to school, can't she?
//'Mary/can' go to/'school//'can't she//

(vi) Mary can't go to school, can she?
//'Mary 'can't 'go to 'school/'can 'she//

(vii) What's your name?
//' what's your/' name//

(viii) Did you talk with Alice at the club?
//Did you' talk with/' Alice at the/'club//

(ix) Margaret bought books, pens, pencils and rulers
//'Margaret 'bought 'books/ 'pens 'pencils and/ 'rulers//

(x) Margaret bought books, pens, pencils and rulers
//'Margaret/'bought/'books /'pens /'pencils and/'rulers//

We can consider the rhythmic (melodic) patterning of the above utterances in pairs. In i and ii, the utterances have different phonological patterns (even though they have identical morphological shapes). Both have accentuation on four items: John, wrote, letter, English with the nucleus on English. The two show duration in one item – wrote /r↔,Yt/ - the diphthong being a long vowel. The main difference is that the first is a statement without implication; the second is a declarative (an indirect) question. The intonation on the first, as normally heard, is a fall. The intonation on the second, as normally heard, is a rise. Thus, while the first makes a simple statement of fact, the second indicates a doubt….as to whether the letter was written in English (or in some other language). It could even imply that the listener did not hear properly what the speaker said and so is requesting for a repetition of the statement.

In the second pair, i.e. iii and iv both have accentuation on three items: think, excellent, affair with the nucleus on the last: affair. However, the first ends on a low rise intonation to indicate additional information.
Such information could amount to the possibility that the affair was not excellent in any objective or unqualified sense; that there were problems in spite of the claim. The second indicates a falling intonation showing that no additional explication is necessary or intended by the speaker.

The next pair, i.e. v and vi, are tag questions – checking tag and copy tag. Each utterance has two information points: the first and the second parts of the tags. Whereas the first part in utterance v ends on a fall, the second ends also on a fall, giving the possibility that the answer could be positive: that Mary can go to school! In utterance vi, the first part ends

on a fall while the second part ends on a rise giving the impression that the answer could be negative: that Mary can't go to school! So the rhythmic patterning in these two shows a difference mainly in the second part of the tags, although the component – durational difference between can't and can also play a part. With regard to utterances vii and viii, we notice that both are questions of different morphological as well as phonological shapes. The first what's your name?
has a melodic pattern that ends on a falling intonation, being a question that requires information. The second
Did you talk with Alice at the club?
Has a melodic pattern that ends on a rising intonation being a question that calls for "yes" or "no" in answer. Also, while both have the nucleus on the last item, the first has the indicator of duration on your and name; the second has it on talk.

Next, utterances ix and x involve enumeration. In the first, the melody relies on consistent falls, leading to a final fall. In the second, the melody depends on low rises up to the penultimate then a final fall. Both however have those points making duration as an essential component: Margaret, bought and rulers.

Finally, in this section it should be noted that we are able to arrive at meanings and differences between pairs of utterances because all of them are fluent: they have pauses at appropriate information points. The contrary would have been the case if the rhythm had been jerky or largely so. This explains why the English of a number of speakers within the new Englishes (particularly that of speakers of non-standard sub varieties), is often difficult to understand. Poor rhythmic patterning almost certainly results in poor information distribution and hence difficulty in understanding the message communicated. For example, if the first utterance had a jerky rhythm like //John/wrote/the/letter/in English// or the fourth utterance had been: // I / think/it /was/an/excellent /affair//
Meaning would been totally obstructed.

SELF-ASSESSMENT EXERCISE
Listen to the voice on your audio tape in this unit, and practise as the voice directs.

4.0 CONCLUSION

You have learnt in this unit that there are many factors which contribute to the realisation of rhythmic patterns in English. You have also learnt that the factors can be combined together (and you have actually done so) to bring about a specific rhythmic pattern.

5.0 SUMMARY

From this unit you have studied the following among others:

(i) timing and variation in natural languages;
(ii) the components of rhythm;
(iii) how to analyse the rhythm of English utterances

6.0 TUTOR-MARKED ASSIGNMENT

Outline the components of rhythm and indicate how you may use those components to analyse any three utterances of your choice.

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