Auditory Phonetics:

It is the branch of phonetics which studies the perceptual response to speech sounds, as mediated by ear, auditory nerve and brain. It is a less well-studied field of phonetics because of the difficulties encountered as soon as one attempts to identify and measure psychological and neurological responses to speech sounds. However, anatomical and physiological studies of the ear are well advanced, and the clinical use of such study is now established under the heading of audiology and audiometry (Crystal, 1997).

When examining the action of the ear, it is convenient to consider separately the outer, middle and inner ears .The outer ear, consisting of the externally visible portions of the ear, and the ear canal plays a relatively minor role in the hearing process. The ear canal is an air-filled passage way, about an inch long, closed at one end to the outside. Because the ear canal is an acoustic resonator, it amplifies sound waves at frequencies near its resonant frequencies . Its position inside the head also serves to protect the sensitive eardrum from physical damage, and to make the temperature and humidity in its vicinity relatively independent of external conditions.

The middle ear contains the auditory ossicles, three small bones:1)the malleus, 2) the incus, and 3)the stapes that form a mechanical linkage between the ear-drum and the inner ear. The middle ear chamber is actually a cavity in the bones of the skull. The ossicles are suspended within the cavity by several ligaments attached to the cavity walls. Motions of the eardrum are transmitted by the malleus to the incus (anvil). The footplate of the stapes covers the oval window, which is the entrance to the inner ear.

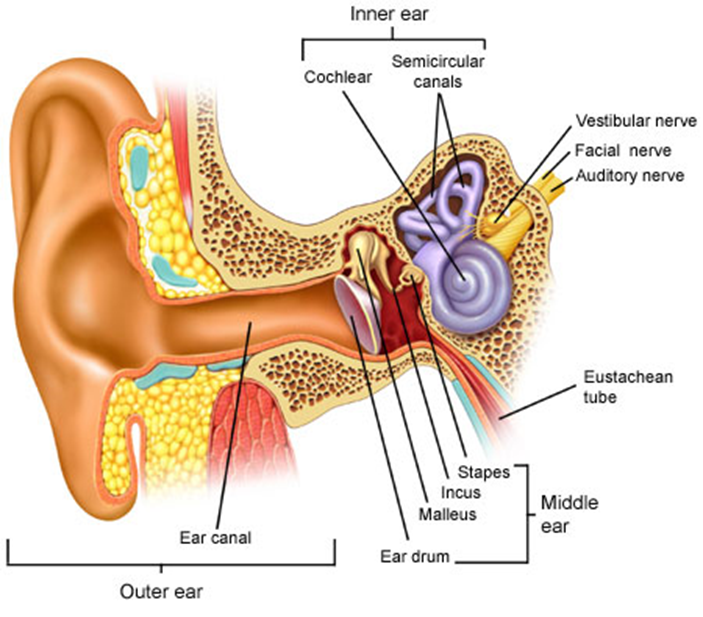
The Eustachian tube, running between the middle ear and mouth cavities effectively links the middle ear with the outside air. The Eustachian tube is normally closed, and pressure differences can build up between the middle ear and the surrounding air (Denes & Pinson, 1963).

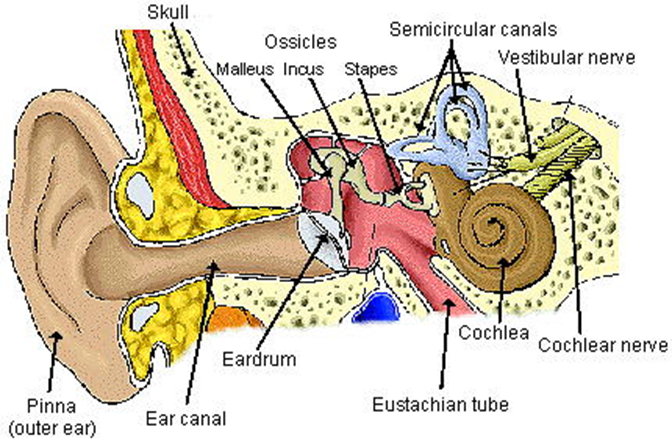
The Eustachian tube communicates with the nasopharynx. It is potentially patent and is opened by swallowing. It's function is to maintain the pressure of air inside the middle ear and mastoid system approximately equal to the external atmospheric pressure(Coleman, 1992).

The middle ear performs two major functions:1)it increases the amount of acoustic energy entering the fluid-filled inner ear. To increase the efficiency with which sound energy is transmitted to the inner ear, it is necessary to increase the amplitude of the pressure variations at the oval window.

The middle ear accomplishes this amplification in two ways: 1)the ossicles behave like a lever mechanism, producing greater force at the stapes footplate than the forced applied at the malleus.2) more important, the total force at the stapes is applied only over the area of the oval window, which is much smaller than the eardrum.

The middle ears' second function is to protect the inner ear from extremely loud sounds. One protective mechanism is that two small muscles, one connected to the eardrum and the other to the stapes , work in reflex response to loud sounds ; one of them pulls in the drum, while the other draws the stapes away from the oval window. Both motions reduce the efficiency of the middle ear as a sound transmitter.





The inner ear is a small, intricate system of cavities in the bones of the skull .One cavity, coiled like a snail's shell, is called the Cochlea . The important transformation from mechanical vibrations to nerve impulses takes place in the cochlea.

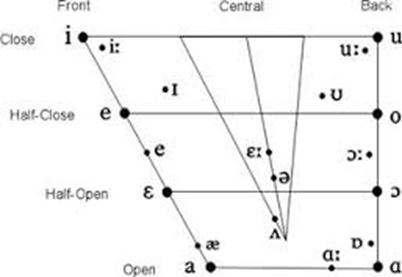
Snell (1958) shows that the cochlea opens into the anterior part of the vestibule. Basically, it consists of a central pillar, the modulus, around which a hollow bony tube makes two and two and one- half spiral turns. Each successive turn is of decreasing radius so that the whole structure is conical. The first basal turn of the cochlea is responsible for the promontory seen on the medial wall of the middle ear.

Denes and Pinson (1963) eliminate that the cochlear structure is existed through the oval window by motions of the stapes footplate. When the window moves inward, fluid is displaced toward the apical end of the cochlea. If the motion is slow, fluid passes through the helicotrema ( an opening between two cavities: 1) scala vestibule and 2) scala tympani, it lies at the apical end of the cochlean and allows fluid to pass freely between the cavities) and back along the other side to the basal end of the cochlea, where the rondo moves outward to accommodate the flow:.

The most frequently cited theories of auditory phonetics are:1) Motor Theory: a theory developed in the 1960s which argued that listeners are able to reconstruct messages from the process of smearing by reference to their own speech production. In other words, because I also smear the sounds in Cat when I pronounce them, I am able to use that knowledge, albeit subconsciously, in interpreting the same sounds when I hear them.

2)Analysis by Synthesis Theory: a more complex theory, again developed I the 1960s. According to this, listeners analyze speech sounds for their Distinctive Features. These features are the product of the articulation processes involved in speech production. Each sound has its own distinctive frequency and its own distinctive method of articulation. As native speakers possess that knowledge and are able to use it in decoding incoming signals linguistically.

3)The Associative Store Theory of Speech Perception: it is a theory inspired by the development of computers in the 1970s and 1980s. Phoneticians using this model see the brain as a processor. An incoming sound wave is scanned by this processor, which automatically has access to a lexicon of words stored in our memory banks. The processor simply looks for a best "fit" between the sound wave and items in the lexicon. When a match is found, the item is pulled from the memory and handed on for further processing to other modules, whilst the original sound stimulus is discarded.



Consonants:

Consonants are speech sounds having the phonological characteristics of their initiality to be at the beginning and end of syllables. To classify sounds as consonants; however , an articulatory phonetic description is generally needed with reference to six main factors:

1)Air-stream: the source & direction of air –flow identifies the basic class of sounds .The vast majority of speech sounds are produced using pulmonic aggressive air.

2)Vocal folds :voiced sounds are produced when the vocal folds vibrate, whereas voiceless sounds are produced when there is no vibration& the folds remain open.

3)Soft palate: when the soft palate is lowered, air passes through the nose and the sound is described as nasal or nasalized ; when it is when it is raised, air passes through the mouth and the sound is oral.

4)lips: the position of the lips is an important feature of the description of certain sounds (especially vowels) , such as whether they are rounded or spread, closed or open.

5)Manner of articulation: it is a major descriptive parameter ,referring to the type of constriction or movement that happens at any place of articulation, such as the marked degree of narrowing, or a closure with slow release.

: 1)Total Closure

1-Plosive sounds: in the articulation of stops, the velum must be fully raised to allow adequate build-up of intra-oral air- pressure during the stoppage with a complete closure at some point in the vocal tract. A plosive sound is then :articulated with the following characteristics:

1)One articulator is moved against another, or two articulators are moved against each other, so as to form a total stricture & this is called the closure phase,2 )The air is compressed in the vocal tract & this called the hold phase,3 )The compressed air is allowed to escape with an audible sound called "plosion'. & 4)There may be voicing during part or all of the plosive articulation this is called the post-release phase. English plosives are / p, b, k, g, t, d/.

2-Nasal sounds:

A complete closure is made at some point in the mouth& the soft palate is lowered so that air escapes through the nose. Nasal sounds are: bilabial m /, alveolar / n / and velar/ ŋ/./

3-Affricate sounds:

A complete closure is made at some point in the mouth and the soft palate is raised. Air pressure builds up behind the closure and is then released relatively slowly. The first element of the sound has a sharp plosive character followed by an element of audible friction, as in /ʧ/ and / ʤ/.Affricates are usually described as complex consonants since they begin practically the same as the closure & hold phases of /t /,but instead of a rapid release with plosion & aspiration, the tongue moves to the position of the fricative / ʃ/.

: 4-Intermittent Closure

Roll or Trill: one articulator taps rapidly against another typically the tongue-tip against the uvula in the different kinds of trilled / r/.

Partial Closure: -3

Lateral: a partial closure is made at some point in the mouth in such a way that the air –stream is allowed to escape around the sides of the closure as in / l /.This sound has three allophones:1)dark /l/ which occurs after a vowel as in milk /mIlk/ and before a consonant as in eels /i:lz/, 2)light (clear) /l/ which occurs before a vowel as in like/laIk/, 3)devoiced /l/ after /p, t, k/.

4-Narrowing

Fricatives: in the production of these sounds, two vocal organs come so close together that the movement of air between them causes audible friction as in / f, v, s, z, ʃ, Ʒ, j, Ɵ/.

When fricatives are produced, the air escapes through a small passage and makes a hissing sound. Fricatives are continuant sounds as one can continue making them without interruption.

6-Place of Articulation: this refers to the point in the vocal tract at which the main closure is made, such as the lips, the teeth or hard palate. In accordance we have:

-Bilabial: both lips are involved .as in / p, b, m/.

Labio-dental: the lower lip touches the upper teeth, as in / f, v/.-

3-Dental: the tongue-tip touches the inside of the lower front teeth & the blade touches the inside of the upper teeth, as in/ð, Ɵ/.

Alveolar: the blade touches the alveolar ridge , as in /t, d , n/. -

-Palato- alveolar: the blade articulates with the alveolar ridge with a simultaneous raising of the front of the tongue towards the hard palate, as in/ʃ, Ʒ, ʧ, ʤ/.

Palatal:the blade touches the hard palate as in / s, z/.-

-Velar: the back of the tongue articulates with the soft palate, as in / k ,g, ŋ/. -

8--Glottal: the vocal folds come together to cause a closure or friction, as in /h/.

Vowels:

Vowels are speech sounds found in the mid of the syllable . They are normally described with reference to four criteria:1)The part of the tongue raised; front, center , back,2) The kind of the opening made at the lips: rounding & spreading, 3) The position of the soft palate raised for oral vowels and lowered for vowels which have been nasalized,and 4) The extent to which the tongue rises in the direction of the palate: high, mid and low.

Cardinal Vowels:

These are a set of standard reference points devised by Daniel Jones (1881-1967) to provide a precise means of identifying the vowel sounds in a language. The cardinal vowel system is based on a combination of articulatory and auditory judgments. Four theoretical levels of tongue-height are recognized:1)The highest position to which the tongue can be raised without producing audible friction, 2)The lowest position the tongue is capable of achieving,3 &4 are two intermediate levels which divide up the intervening space into areas that are articulatory and auditorily equidistant.

Using the front of the tongue, and without rounding the lips, four primary vowel types are produced, and these are given the symbols (from high to low) [i], [e], [Ɛ] and [a]. Using the back of the tongue, four more primary vowel types are recognized, symbolized as (from low to high) [ɒ], [ɔ], [ʊ],and [u:], the last three involving lip-rounding. In addition, each of these primary values is coded numerically, from 1 to 8 respectively.

By reversing the lip-position, a secondary series of vowel types is produced, rounding the lips for the front vowels produces(from high to low) [y], [ϴ], [ӕ] and [œ], [ɒ] is the rounded equivalent of cardinal 5, and [^ ] , [ȣ] and [ɰ] are the unrounded equivalent of cardinals 6, 7 and 8 respectively. The numerical code for the secondary series runs from 9 to 16. Once learned, the cardinal vowels can be used by phoneticians to locate the position of the vowels of a language or to compare the vowels of different languages or dialects. They can be pure that the vowels will fall somewhere within the boundaries of the cardinal area (Crystal, 1997:52).

There is some divergence of opinion among phoneticians as to whether the system of cardinal vowels (CVS) should be regarded primarily as an articulatory or as an auditory scale of reference- vowels. From the practical point of view, however, it is best to proceed as if the system is basically an articulatory one, and to familiarize oneself thoroughly with the "feel'- the proprioceptive and tactile sensations of the CVS. (Catford, 1988: 138).

Phoneticians have always needed some way of classifying vowels which is independent of the vowel system of a particular language. With most consonants, it is quite easy to observe how their articulation is organized, and to specify the place and manner of the constriction formed; vowels, however, are much less easy to observe. Early in the 20th century, the English Phonetician Daniel Jones worked out a set of " Cardinal Vowels" which would serve as reference points that other vowels could be related to. From the beginning it was important to locate the vowels on a chart or four-sided figure, the exact shape of which has changed from time to time.

The cardinal vowel diagram was used both for rounded and unrounded vowels, and Daniel Jones proposed that there should be a primary set of cardinal vowels and a secondary set. The primary includes the front unrounded vowels [ i, e , Ɛ, a], the back unrounded vowel [a] and the rounded back vowels [y,ϴ, œ, ], the back rounded [^, ȣ ,u]. For the sake of consistency it would be better to abandon the "primary/ secondary' division and simply give a 'rounded' or 'unrounded' label (as appropriate to each vowel on the quadrilateral (Roach, 2002:11).

Cardinal vowels have the following characteristics:

1-They are universal and language-independent.

2-They are monophthongs (each vowel has a single perceived auditory quality).

. -They are peripheral3

4-They are articulatory as well as auditorily equi-distant and of constant values.

In his A Practical Introduction to Phonetics(1988:130) Catford proposes the idea that the Jones system of cardinal vowels is based upon the idea of a "vowel limit", and of a "vowel space". He further adds (p:138) that there is some divergence of opinion among phoneticians as to whether the system of CVS should be regarded primarily as an articulatory or as an auditory scale of reference-vowels. From the practical point of view, however, it is best to proceed as if the system is basically an articulatory one.

The cardinal vowel diagram in this sense is a hybrid, to a large extent reflecting the relative tongue positions of the vowels, with front vowels down the left side, back vowels on the right side, and with its vertical spacing reflecting equal articulatory steps of tongue-lowering in going from [i] to [a] or from [u] to [a], but at the same time reflecting the different acoustic distances between [i] and [u], and between [a] and [ɑ] in the different lengths of the upper and lower horizontal lines.

Catford (1988:139) expounds that there are two characteristics of the CVS must be emphasized at the outset:1)they should all be pronounced in a rather energetic, tense manner, 2)they are the monophthongs-that is, they are simple or pure vowels that can be prolonged for as long as possible with absolutely no change of tongue- (or lips- ) position, and consequently no change of quality.

Finch(2000:40) explains that it is important to bear in mind that the vowels indicated on the system are "idealized", i.e. that they are phonetic symbols, not phonological ones.

Suprasegmental Phonology:

It is a type of Phonology whose domain extends over more than on successive minimal element. Thus, stress is a Suprasegmental feature whose domain is a syllable. This type of Phonology is also known as Prosodic Phonology.

Syllable:

There is a general agreement among phoneticians and phonologists that the syllable is a unit that is easy to identify but hard to define (Roach, 2000:70).

To the learner, the syllable proves to be useful in practicing pronunciation, and in recovering the phonotactic rules that underlie the arrangement of the phoneme in a particular language system. What increases the importance of this unit is its relevance to determining the correct position of stress within polysyllabic words .The syllable is a unit of pronunciation typically larger than a single sound and smaller than a word. The vowel usually forms the nucleus of the syllable (Crystal, 2008:467).Ladefoged (2010:248) , on his part, defines the syllable as the smallest possible unit of speech, which consists of segments (vowels and consonants).

Phonetically, syllables "are usually described as consisting of a center with little or no obstruction to airflow and which sounds comparatively loud. Before and after that center there will be greater obstruction to airflow and / or less loudness” (Roach, 2000: 70).In the monosyllable [one – syllable word] 'cat ' / kæt/ the vowel is the center at which little obstruction to the airflow for the surrounding plosives /k/ and /t/.

Articulatorily speaking, to produce a syllable involves complicated and rapid movements of different organs and muscles of the vocal tract and the respiratory system. The complexity of the movements of these parts stems mainly from its overlapping nature and contiguity, i.e., neighborhood, so that it becomes difficult to decide where one movement ends and the next one starts (Abercrombie, 1967:38).

There are many theories that deal with this point, i.e., the production of syllables, yet one theory will be especially reviewed, that is the acoustic theory since some linguists agree that the syllable is best accounted for in terms of this theory [see for instance Selkirk, 1982].

In terms of sonority theory, Katamba (1989: 158) believes that there is sonority in all segments, yet some have greater sonority than others, which is in effect, affects their distribution in the syllable.

Phonetically, a syllable is usually described as consisting of a centre which has little or no obstruction to the flow of air out of the mouth and which sounds comparatively loud and before and after this centre. (Roach, 2002:67).In this case, syllables are described as consisting of a centre which has little or no obstruction to air-flow and which sounds comparatively loud; before and after this centre, there will be greater obstruction to air flow.

Segments can be described as intrinsically more sonorous than marginal, or non-syllabic elements . Languages that allow more than one segment in the onset or coda [the marginal elements] do not usually allow any segment to freely coexist in these slots. Various restrictions are imposed that depend on the relative sonority of the sounds (Answers. com. 2005:20). It can be noted that segments can be ranked in terms of decreasing [=increasing strength] roughly as follows: (Ladeforged, 1993:246):

Vowels (low to high) > glides > liquids > nasals > voiced obstruent<

voiceless obstruent.

As such, the sonority approach enables one to account for the exact number of syllables in a polysyllabic word, by counting the number of the sonority peaks, so that each sonority peak is associated with a syllable. The disyllable word 'painting ' / peintiŋ/ can be plotted onto the sonority scale as an example. As it can be seen from the chart, there are two peaks of sonority in the phoneme string / p-ei – n – t- i-ŋ / , namely, the vowels /ei/ and / i/. This is to indicate that the number of syllables is (2) as well.

The phonological syllable can be defined as a “complex unit made up of nuclear and marginal elements” (Shane, 1975:23). Nuclear elements are the vowels or syllabic segments; marginal elements are the consonants or non-syllabic segments. For example, in the syllable ' paint' / peint/, the diphthong /ei/ is the nuclear element, while the initial consonant /p/ and the final / nt/ are marginal elements.

However, the maximum number of consonants that may occur at the margins of the syllable, the type of consonants that may occur in the position, plus the position of the boundary that separates one syllable from the next is the major concern of the phonological approach (Hyman, 1975: 192).

For Katamba (1989:164), the basic function of the syllable is to regulate the way in which lower level units (consonant & vowels) of the phonological hierarchy can combine. As such, the syllable is an important unit in the organization, production, and comprehension of speech (Ladeforged, 1993: 248).

Phonologically, a syllable is defined by Ladefoged(2010:248) as divided into onset and rhyme, the rhyming part of syllable consist of vowel and any consonant that come after it. Any consonant before the rhyme form the onset of the syllable. i.e. syllables involve looking at the possible combinations of English phonemes . It is simplest to start by looking at what can occur at the beginning of the first word when we begin to speak after a pause. In the same way, we can look at how a word ends when it is the last word spoken before a pause.

According to (Davenport and Hannahs,2005:74) the typical syllable is made up of vowel segment preceded and \ or followed by zero or more consonantal segments:

Nucleus :Refer to the vowel is also known as the peak of the syllable.

Onset : Any consonant preceding the nucleus.

Coda : Consonants following the nucleus.

Rhyme: Is a constituent which is formed by the nucleus and coda.

The syllable, conventionally marked as small Greek sigma: Ơ, has two immediate constituents; i.e., it branches into two elements: the onset (o), which includes any consonant that precedes the nuclear element [the vowel] , and the rhyme (R), which subsumes the nuclear element as well

as any marginal elements [consonants] that might follow it. The rhyme, in turn, further branches into peak (P), also known as nucleus (N), and coda (CO) .The peak [nucleus], as the designation suggests, represents the ' nuclear ' or the most sonorous element in a syllable; the coda includes all consonants that follow the peak in a syllable (Katamba,et al., 1996: 86).

Syllable structure may be represented graphically by means of a 'tree diagram’. This is what almost all phonologists agree on (Hyman, 1975: 188); (Crystal, 1989: 72); (Katamba, et al., 1996: 86); and (Roach, 2000: 70).

Let us consider the word ‘cat’ / kæt/, the onset, peak, and coda each consists of one segment: the consonant (C) /k/ occupies the onset, the vowel /æ/ the peak, the consonant sound /t/ is the coda of this syllable. However, there are syllables in English where either or both marginal elements are absent and only the peak is an obligatory element in all languages and in English both the onset and the coda are optional. But there are languages where the onset is obligatory, such as, Arabic. Consider the following examples:

Onset peak coda

Sea /si:/ /s/ /i:/ Ø (none)

On /on/ Ø /o/ /n/

Eye /ai/ Ø /ai/ Ø

The first example, /si:/, and all words that end in a vowel, are called open syllables; while those ending in consonants are traditionally known as closed.

The rhyme constituent in the previous example is non–branching, and therefore described as a simple rhyme. In a word like ‘belt’ the rhyme is complex as it is shown.

The first example, /si:/, and all words that end in a vowel, are called open syllables; while those ending in consonants are traditionally known as closed. /ai/ on the other hand is called a minimum syllable (Roach, 2000:83).

The rhyme constituent in the previous example is non–branching, and therefore described as a simple rhyme. In a word like ‘belt’ the rhyme is complex as it is shown:

Syllable

onset rhyme

peak coda

vowel consonant

However not all languages allow complex onsets, but rather, they tend to have syllables beginning with a single consonant (Carr, 1993:195).

Arabic, for example, comes under this group of languages, where it tends to consider all words to begin with consonants. Even words in Arabic, which begin with vowels, are seen to start with a consonant, which is the glottal stop /? /. Thus, /?um / (mother) have a single consonant onset.

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As a result, whereas in English the only obligatory element in the structure of the syllable is the nucleus; in Arabic it is the nucleus and the onset that are obligatory. There is also a general preference, in Arabic, for closed syllables (cf. Anees, 1975:162).

Concerning consonant clusters, the sequence of consonants, the number of consonants and their arrangement are something that is determined by the phonological rules of the language in terms of which they are studied (Ohala and Kawasaki, 1984:114). English allows a wide range of consonant sequences before and after the syllabic element. Before the vowel, the maximum number of consonants in sequence is three, and after it [the vowel], the maximum number is four (Abercrombie, 1967:74). Thus, a generalized formula for the structure of the English syllable, showing the number of permissible consonants at the onset and coda would be:

( c ) ( c ) ( c ) v ( c ) ( c ) ( c ) ( c )

Stress:

Ladefoged(2010) refers to stress as a Suprasegmental feature of utterances. It applies not to individual vowels and consonants, but to whole syllables. A stressed syllable is pronounced with greater amount of energy than an unstressed syllable and is more prominent in the flow of speech.

Davenport & Hannahs(2005:78) in “Introducing phonetics and Phonology” define stress as the degree of prominence a syllable has. i.e. when a sequence of syllable making up a word, one syllable is always more prominent than the others, this syllable involved more muscular effort in its production; it is louder , longer , and shows more pitch variation than surrounding syllables.

Roach (2001:150) argues that stress is used to refer to the degree of force used in producing a syllable. We can study stress from the point of view of production and of perception ; the two are obviously closely related, but are not identical. The production of stress is generally believed to depend on the speaker using more muscular energy than is for unstressed syllables, i.e. stress is the muscular energy used by the speaker when producing a stressed syllable.

From the perceptual point of view, all stressed syllables have one characteristic in common, that is “prominence”, i.e. stressed syllables are recognized as stressed because they are more prominent than unstressed syllables. Stress in this case is the prominent items as perceived by the listener. Stressed syllables have the following characteristics:1) Stressed syllables are louder than unstressed syllables,2) Stressed syllables are longer than unstressed syllables,3) Stressed syllables are high-pitched and different in quality than neighboring vowels. Prominence then is produced by four main factors:1) loudness, 2)length, 3)pitch, and 4)quality.

Levels of stress:

There are certain factors determining stress placement:

1-Whether the word is simple or complex as a result of containing one or more affixes or of being a compound word.

. 2-The grammatical category to which the word belongs

. 3-The number of syllables in a word

4-The phonological structure of those syllables.

Ladefoged(2010) states that there are two types of theories attempting to define syllables:

First, theories in which the definition are in term of properties of sounds, such as sonority (acoustic energy) or prominence ( some combination of sonority , length , stress, and pitch. Second, theories based on the notion that a syllable is a unit in the organization and planning of the sounds of an utterance.

The pulse theory is a more fundamental approach to syllable which tackles the syllables in the context of muscular activities and lung movements in the process of speech. It claims that in any utterance there are a number of chest pulses ,accompanied by increase in air pressure, which determine the number of syllables uttered. This theory, however, cannot account for cases when two vowels occur one after another, for example, in the juxtaposition of two vowels, the second vowel being weakly stressed as in the case of ‘seeing ‘ /siːɪŋ / ,it is doubtful whether a double chest pulse will be evident, although it is clear that the word is to be divided linguistically in two unit.

The prominence theory is another well-known theory which divided the syllable from a phonological point of view and depends on auditory judgments, i.e., the number of syllables in a word is determined by the number of peaks of prominence. In the word beautiful, [ˈbjuː.tɪ.fəl ], for example, the peaks of prominence are represented by the vowel phonemes /u: , I , ə/, respectively. Syllable boundaries occur at the points of weak prominence , i.e. at \ b , t , f \.( Gimson , 1980:56). Peaks are best illustrated by more sonorous sounds like vowels, whereas less sonorous sounds such as stops mark the valleys of prominence.

In a more recent formulation of the theory Ladefoged (1982) defines sonority as the loudness of a sound relative to that of other sounds with the same length, stress and pitch. This theory which is based mainly on auditory judgment doesn't determine to which syllable the weak sound, constituting the boundary between two syllable , is to be attributed. so, this theory does not help much in the problem of division of the syllable.

In linguistics, however, stress is the relative emphasis that may be given to certain syllables in a word, or to certain words in a phrase or sentence. Stress is typically signaled by such properties as increased loudness and vowel length, full articulation of the vowel, and changes in pitch. The terms stress and accent are often used synonymously, but they are sometimes distinguished, with certain specific kinds of prominence (such as pitch accent, variously defined) being considered to fall under accent but not under stress. In this case, stress specifically may be called stress accent or dynamic accent.

The stress placed on syllables within words is called word stress or lexical stress. Some languages have fixed stress, meaning that the stress on virtually any multisyllable word falls on a particular syllable, such as the first or the penultimate. Other languages, like English, have variable stress, where the position of stress in a word is not predictable in that way. Sometimes more than one level of stress, such as primary stress and secondary stress, may be identified. However, some languages are considered to lack lexical stress entirely.

The stress placed on words within sentences is called sentence stress or prosodic stress. This is one of the three components of prosody, along with rhythm and intonation. It includes phrasal stress (the default emphasis of certain words within phrases or clauses), and contrastive stress (used to highlight an item − a word, or occasionally just part of a word − that is given).

Stress has: 1) the delimiting function: It exists in languages where stress always falls on the same syllable within a word; in Czech, for example the first syllable of the ward always bears main stress. In Turkish , is the final syllable of the word which bears syllable. Here the stress identifies word boundaries, so if we hear a stressed syllable in Czech , we know that we are at the beginning of a word , whereas if we hear a stressed syllable in Turkish , we know we are at the end of a word.

2)Differentiating Function :it exists within English language, here stress function to distinguish between words. If we take the words ‘insult’, ‘compound’ each of these has two different readings depending on the position of the main stress, if the first syllable is stressed we have a noun ‘to insult’ ‘a compound.'

If the second syllable is stressed we have a verb to insult to compound the third word invalid is either a noun .invalid with antepenultimate stress or an object with penultimate stress.

3)Stress can be used to mark contrast as in ‘I said a big farm not a pig farm"