**english phonetics and phonolgy**

***A 2nd Semester Course Intended for 2nd Year Students***

**March 2022**

**Stress in Simple Words**

**The Nature of Stress**

 **Stress** is the relative emphasis that may be given to certain [syllables](http://wapedia.mobi/en/Syllable) in a word. It refers to the degree of force with which a speaker pronounces a syllable or a word. It is almost certainly true that in all languages, some **syllables** are in some sense stronger than other syllables; these are syllables that have the potential to be described as stressed.

 Stress, as a sound phenomenon, can be studied from two points of view: production and perception. The production of stressed syllables is said to imply a greater muscular energy than the production of unstressed syllables. From the perceptive point of view, stressed syllables are prominent. Prominence is produced by four main factors: loudness, length, pitch and quality.

**Levels of Stress**

 One of the areas in which there is little agreement is that of *levels* of stress: some descriptions of languages manage with just two levels (stressed and unstressed), while others use more. In English, one can argue that if one takes the word 'indicator' as an example, the first syllable is the most strongly stressed, the third syllable is the next most strongly stressed and the second and fourth syllables are weakly stressed, or unstressed. This gives us three levels: primary, secondary and unstressed.

**Placement of Stress within a Word**

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

1. Whether the word is morphologically simple, or whether it is complex as a result either of containing one or more affixes (suffixes and prefixes), or of being a compound word.
2. The grammatical category to which the word belongs.
3. The number of syllables in the word.
4. The phonological structure of those syllables.

**Single-syllable words**

Single syllable words present no problem. If they are pronounced in isolation, they are said with primary stress.

**Two syllable words**

-The basic rule for verbs is that if the second syllable contains a diphthong or a long vowel, or if it ends with more than one consonant, the second syllable is stressed.

ap'ply ar'rive at'tract as'sist

If the final syllable contains a short vowel and one (or no) final consonant, the first syllable is stressed.

'enter 'envy 'open 'equal

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

Most two syllable-words that seem to be exceptions to the above rules might be interpreted as being morphologically complex (e.g. permit )

-two syllable adjectives are stressed according to the same rule:

'lovely 'even 'hollow // di'vine cor'rect a'live

Exceptions: 'honest / 'perfect

* nouns require a different rule: if the second syllable contains a short vowel, the stress is usually on the first syllable. Otherwise, it will be on the second syllable.

'money 'product 'larynx // es'tate bal'loon de'sign

* Other two syllable words as adverbs and prepositions seem to behave like verbs and adjectives.

**Three syllable words**

**-**In verbs, if the last syllable contains a short vowel and ends with no more than one consonant, the syllable will be unstressed, and stress will be placed on the preceding ( penultimate) syllable.

en'counter de'termine

- If the final syllable contains a long vowel or a diphthong, or ends with more than one consonant, that final syllable will be stressed.

 enter'tain resur'rect

- Nouns require a different rule. If the final syllable contains a short vowel or / /, it is unstressed; if the syllable preceding this final syllable contains a long vowel or diphthong, or if it ends with more than one consonant, that middle syllable will be stressed.

 mi'mosa di'saster po'tato

If the final syllable contains a short vowel and the middle syllable contains a short vowel and ends with not more than one consonant, both final and middle syllables are unstressed and the first syllable is stressed.

 'quantity 'emperor 'cinema 'custody

- If the final syllable contains a long vowel or diphthong or ends with more than one consonant, the stress is on the first syllable.

'intellect 'marigold 'alkali 'stalactite

**Complex Word Stress**

Complex words are of two major types: words made from a basic stem word with the addition of an affix (a prefix or a suffix), and compound words, which are made of two (or occasionally more) independent English words.

**Affix Words**

Affixes will have one of three possible effects on word stress:

1. The affix itself receives the primary stress (semicircle / personality).

2. The word is stressed just if the affix was not there (unpleasant / marketing).

3. The stress remains on the stem, but it is shifted to a different syllable (magnet / magnetic)

1. **Suffixes**
* **Suffixes carrying primary stress themselves:**
	+ **-ee**: refu'gee , tru'stee -**eer**: mountai'neer, volun'teer
	+ -**ese**: Portu'guese, chi'nese -**ette**: ciga'rette, cas'sette
	+ - -**esque**: pictu'resque
* **Suffixes that do not affect stress placement:**
	+ -**able**: 'comfort - 'comfortable -**age**: 'anchor - 'anchorage
	+ **-al**: re'fuse - re'fusal **-en**: 'wide - 'widen
	+ -**ful**: 'wonder - 'wonderful -**ing**: a'maze - a'mazing
	+ -**ish**: 'devil" - 'devilish -**like**: 'child - 'childlike
	+ -**less**: 'power - 'powerless -**ly**: 'hurried - 'hurriedly
	+ -**ment**: e'stablish - e'stablishment -**ness**: ' careless - 'carelessness
	+ -**ous**: 'poison - 'poisonous -**fy**: 'glory - 'glorify
* **Suffixes that influence stress in the stem:**
	+ -**eous**: advan'tageous -**graphy**: pho'tography -**ial**: com'mercial **-ic**: cli'matic -**ion**: per 'fection -**ious**: lu'xurious
	+ -**ty**: tran'quility -**ive**: re'flexive

**Other useful rules**

**1.** Words ending in  ***-ic***  or  ***-ics*** have their main stress on the syllable before the last one ( or   penultimate syllable).

**Examples**: spe'cific  -  diplo'matic  -  idio'matic  -  demo'cratic  -  au'thentic  -  fan'tastic  -  pho'netics  -  re'public  -  scien'tific  -  pessi'mistic  -  sta'tistics  -  ritua'listic  -  mathe'matics  -  sympto'matic

The most common **exceptions** are: 'Arabic  -  a'rithmetic  -  'arsenic  -  'catholic  -  'lunatic- 'politic(s)  -   'rhetoric.

**2.** Words ending in  -***ical*** have their main stress on the second syllable before the last. **Examples:** e'lectrical  -  me'chanical  -  eco'nomical  -  paren'thetical  -  psycho'logical

**3.** When a word in  -***i****c* generates a word in  -***icist,  -icize*** or  -***icism***, then the main stress remains on the same syllable. This means that these words behave accentually like words in  -***ical*** *.*

**Examples** : ro'mantic   **>**   ro'manticism                   'Critic        **>**   'criticism

                   'Classic     **>**    'classicist                    I'talic        **>**     I'talicize

       **But** :    'politic      **>**     po'liticize                    'Catholic   **>**    ca'tholicism)

**4.** Words ending in  *-****ion*** are stressed on the syllable before*-ion***.**

**Examples** : sus'picion  -  'legion  -  'cushion  - 'tension  -  'caption - vari'ation  - exploi'tation  - excla'mation -  consti'tution  - compen'sation  -      di'mension  - trans'lation  -  satis'faction  -  suppo'sition  -  me'dallion  -  pre'caution

**5-** Final  -***ional***  words are stressed in the same way as  -***ion*** words.  The same applies to  final   -***ionist***,  ***-ionism*** and  *-****ionize*** derived words.

                 Sen'sation      **>**  sen'sational          Tra'dition      **>**   tra'ditional

                 ' Fraction        **>**   'fractional      'Nation      **>**  'national

                  Abo'lition     >    abo'litionist        Edu'cation  **>**    edu'cationist

                  Im'pression    **>**    im'pressionism     Per'fection   >    per'fectionism

                   Revo'lution    **>**    revo'lutionize          'Union    **>**    'unionize

**6.** The rule for  **-*ion*** ( see above )  also applies to words ending in the following:

**-*io*** :  port'folio, 'ratio, 'patio, 'radio. **-*ior*** : 'senior, su'perior, 'junior.

**-*ious*** : sus'picious, har'monious, a'trocious. **-*uous*** : con'temptuous, con'tinuous, 'virtuous.

**-*eous*** : spon'taneous, advan'tageous, cou'rageous.

**2. Prefixes** Prefixes in English are not usually stressed

 **un-**: unhealthy,unwise,unnecessary
    **in-**: intolerant, insufficien, indifferent     **mis-**: misplace, misrepresent, misunderstand

**dis-**: discourage, disintegrate, discolour **il-**: illegal, illiterate, illegible

**Compound Words**

 Compound words may receive stress either on the first or the second element. Words which do not receive primary stress normally have secondary stress. The most familiar type of compound word is the one which combines two nouns, and normally has stress on the first element:

'classroom 'car-ferry ' sunrise 'suitcase 'tea-cup 'orange juice 'airport 'sitting room 'dressing gown 'cheesecake 'lipstick 'newspaper

However, a variety of compounds receive stress on the second element:

 - Most adjective+ noun compound nouns have main stress on the second part and secondary stress on the first part:

social se'curity hot po'tato absolute 'zero central 'heating split in'finitive inverted 'commas

* adjectives with an adjectival first element and the –ed morpheme at the end

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

* compounds in which the first element is a number

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

**Word-Class Pairs**

 There are several dozen pairs of two-syllable words with identical spelling which differ from each other in stress placement, depending on what word class they belong to. Normally, one of these pairs is a verb and the other is either a noun or an adjective. The stress will be placed on the second syllable if the word is a verb, but on the first syllable if the word is a noun or an adjective.

abstract 'æbstrækt (A) æb'strækt (V)
conduct 'kɒndΛkt (N) kən'dΛkt (V)
contract 'kɒntrækt (N) kən'trækt (V)
contrast 'kɒntraːst (N) kən'traːst (V)
desert 'dezət (N) dɪ'zɜːt (V)
escort 'esk ɔːt (N) ɪ'sk ɔːt (V)
export 'eksp ɔːt (N) ɪk'sp ɔːt (V)
import 'ɪmp ɔːt (N) ɪm'p ɔːt (V)
insult 'ɪnsΛlt (N) ɪn'sΛlt (V)
object 'ɔbdʒɪkt (N) əb'dʒekt (V)
perfect 'pɜːfɪkt (A) pə'fekt (V)
permit 'pɜːmɪt (N) pə'mɪt (V)
present 'preznt( N, A) prɪ'zent (V)
produce 'prɒdjuːs (N) prə'djuːs (V)
protest 'prəʊtest (N) prə'test (V)
rebel 'rebl (N) rɪ'bel (V)
record 'rek ɔːd (N) rɪ'k ɔːd (V)

 subject 'sΛbdʒɪkt (N) səb'dʒekt (V)

# Strong & Weak Forms

 In connected speech, many of the ‘small’ words we use very frequently tend to take on a different ‘shape’ from the one listed in the dictionary. All of these words belong to the category of function words, i.e. they are words that have little semantic content of their own, but tend to have more grammatical or referential function in relating content words to one another. Function words include pronouns, prepositions, conjunctions, and auxiliaries.

 Weak forms are usually distinguished by a change in vowel quality from a border position on the vowel quadrilateral to a central position. The vowel in a weak form is usually the schwa (ə). Weak forms are pronounced more quickly and at lower volume in comparison to the stressed syllables.

  There is a logical explanation behind the occurrence of weak forms: they are present in words which are necessary to construct a phrase, yet, at the same time, they do not communicate a large quantity of information, in other words, they are not content words. For example in the following sentence:

     *I went to the hotel and booked a room for two nights for my father and his best friend.*

  The most important words, those that are central to the message, can be emphasised:

*I* ***went*** *to the* ***hotel*** *and* ***booked*** *a* ***room*** *for* ***two nights*** *for my* ***father*** *and his* ***best friend****.*

   The words which we emphasised would bear the stress, while many of those which we eliminated would become weak forms, simply because they are less important in the conveyance of the message. Look at the sentence in transcription:

/aɪ went tə ðə həʊ tel ən bʊkt ə ru:m fə tu: naɪts fə maɪ fɑ:ðər ən hɪz best frend/

You will notice that most of the unstressed words are pronounced with the sound /ə/.

## What happens when a strong form becomes weak?

This is a detailed review of the different types of changes which function words undergo when they become weak.

### Words which change their strong vowel to http://www3.hi.is/~peturk/KENNSLA/02/CHARS36/schwa.GIF

* **Prepositions:** *at for from of to*
* **Aux verbs:** *am are can do does had has have must shall should was were will would*
* **Adverbs conjunctions articles:** *a an and as but some than that the*
* Pronouns: *her them us you your*

- **Words which change their strong vowel to ():** *be been he him his she we*

*-*  **Words which change their vowel before vowels**



### H-dropping

* Weak forms which drop their initial h (except at the beginning of utterances): *had has had have he her him his*

# When strong, when weak ?

The following is a summary of when strong forms are likely to occur.

## **Normally weak, but strong when stressed**

* **comparative stress** : 

**citation forms** **:**         

      

## **Weak forms which become strong when final**

* **Prepositions and auxiliary verbs are strong at the end of utterances; pronouns remain weak:**

 
  
 

## **Different part of speech**

Some words occur as different parts of speech with different stress and vowel quality:

* **that**: weak when relative, strong when demonstrative:

  
  -
  

* Some verbs can be both **auxiliary** (weak forms) and **main** (strong forms):

 
 

## **h-dropping**

* **Words beginning with h**- drop the h when weak, but retain them at the beginning of a sentence

            ()

* If dropped h leads to V-V, it may reappear:

            

## **Auxiliary verbs**

can:  ()
 will does: 
 must was were: 

* **strong forms finally**, like prepositions:   
* **strong when main verbs:** 

## **Negatives are always strong**

        ()

## **Function words which do not have weak forms:**

**how if in on off then they up what when where**
         

  **Sentence Stress and Rhythm**
 **Sentence Stress**

Sentence stress is the relative degree of force or emphasis that words or parts of words have when they are used in connected speech.

**Functions of Sentence Stress**

Sentence stress has two main functions. Its first function is to indicate the important words in the sentence. For example:

I could **'**hardly **'**believe my **'**eyes.

In this sentence, the words “hardly”, “believe” and “eyes” are stressed because they are important for the meaning of the sentence.

The second function of sentence stress is to serve as the basis for the rhythmical structure of the sentence.

**The Nature of Rhythm**

 The notion of **rhythm** involves some noticeable event happening at regular intervals of time. One can detect the rhythm of a heart-beat, of a flashing light or of a piece of music. It has often been claimed that English speech is rhythmical, and that the rhythm is detectable in the regular occurrence of stressed syllables. However, this regularity of occurrence is only relative. The theory that English has stress-timed rhythm implies that stressed syllables will tend to occur at relatively regular intervals whether they are separated by unstressed syllables or not. An example is given below. In this sentence, the stressed syllables are given numbers: syllable 1 and 2 are not separated by any unstressed syllables, 2 and 3 are separated by one unstressed syllable, 3 and 4 by two and 4 and 5 by three.
 1 2 3 4 5
 **'Walk 'down the 'path to the 'end of the ca'nal**

 The stress-timed rhythm theory states that the time from each stressed syllable to the next will tend to be the same, irrespective of the number of intervening unstressed syllables. The theory also claims that while some languages (such as English) have stress-timed rhythm, others (such as French) have a different rhythmical structure called syllable-timed rhythm. In these languages, all syllables, whether stressed or unstressed, tend to occur at regular time-intervals and the time between stressed syllables will be shorter or longer in proportion to the number of unstressed syllables.

**The foot**
 Some writers have developed theories of English rhythm in which a unit of rhythm, called the **foot**, is used. The foot begins with a stressed syllable and includes all following unstressed syllables up to (but not including) the following stressed syllable. The example sentence given above would be divided into feet as follows:

 1 │ 2 │ 3│ 4 │ 5

**'Walk │ 'down the│ 'path to the│ 'end of the ca │ 'nal**

**Exercise 1:**
Divide the following sentences up into feet, using this separating mark │ as a boundary symbol. If a sentence starts with an unstressed syllable, leave it out of consideration – it does not belong in a foot.

Over a quarter of a century has elapsed since his death.

Computers consume a considerable amount of money and time.

Amanda is reading a very interesting novel.

He felt uneasy but the others were enjoying themselves.

She wanted to face the problems on Tuesday.

**Aspects of Connected Speech**

 When speaking in a rapid colloquial way with few gaps and without pausing, native speakers do not always confine to the rules of grammar. The result is a fast rhythmic speech referred to as connected speech which carries different processes like **assimilation, elision and linking**.

1. **Assimilation**

 Assimilation is a typical sound change process by which a sound is influenced by an adjacent one and so it changes to another one. It occurs mainly in rapid speech and less common in slow one.

If the phoneme changes to match the preceding phoneme, it is **progressive assimilation** ( also called left-to-right, perseverative ). If the phoneme changes to match the following phoneme , it is **regressive assimilation** (also right-to-left or anticipatory assimilation). If there is a mutual influence between the two phonemes, it is **reciprocal assimilation**. In the last case, the two phonemes can fuse completely and produce a different sound. This is called **coalescence**. Assimilation may result in the neighbouring sounds become identical, yielding a geminate consonant; this is **complete assimilation**. In other words, only some features assimilate, e.g. voicing or place of articulation; this is **partial assimilation**.

**Common types of assimilation**

1. **Place of articulation**

It is the most common and frequent type of assimilation. It refers to change in the place of articulation of the sound (usually a consonant). A well-known case is that of English word-final alveolar consonants such as /t, d, s, z /. If a word ending in one of these consonants and is followed by a word whose initial consonant has a different place of articulation, the word-final alveolar consonant is likely to change so that it has the same place of articulation. Thus the word / ðæt / may be followed by “boy” /bɔɪ / and become / ðæpbɔɪ/, or it may be followed by “girl” and become / ðækgɜːl /.

**Examples of Common Assimilation of Place**

**/ t / changes to / p / before /m/ / b / or / p/:** *that pen - that boy- that man - Great Britain- cat burglar right pair – sit back- white paper*

**/ d / changes to / b / before /m/ / b / or / p/:** *bad pain - red bag - good man - blood path*

 *food poisoning - good morning*

**/ n/ changes to / m / before /m/ / b / or / p/:** *ten players - brown bear - ten men - action planning iron man – green belt – question mark*

**/ t / changes to / g / before / k / or / g /:** *that cup - that girl - first class - fat girl - that cake*

 *flat cap - credit card*

### / d / changes to / g / before / k / or / g / Bad girl - hard cash - closed game- good cook - red carpet

**/ n / changes to /ŋ/ before / k / or / g /**Action group -open court -garden cress -golden gate- town clerk

**/ s / changes to /ʃ/ before /ʃ/ or / j /** Bus shelter - nice yacht - nice shoes - this year - dress shop

### / z / changes to /ʒ/ before /ʃ/ or / j / Cheese shop - is young - these sheep - rose show - where’s yours?

**/θ/ changes to / s / before / s /**  Bath salts - earth science - birth certificate - both sides - fifth set

1. **Manner of articulation**

 In this type of assimilation one sound changes the manner of its articulation to become similar in manner to a neighbouring sound. An English example could be a rapid pronunciation of “Get some of that soup”, where instead of the expected normal pronunciation, the speaker says Ges some of thas soup, with /s/ replacing /t/ in two words.

1. **Assimilation of voicing**

 Assimilation of voice is also found but only in a limited way. It may take the form of a voiced segment becoming voiceless as a consequence of being adjacent to a voiceless segment; alternatively, a voiceless segment may become voiced.

**Examples of common assimilation of voicing**

|  |  |  |  |
| --- | --- | --- | --- |
| Have to | /hævtu:/ labiodental, fricative, voiced /v/ | becomes | /hæftə/ (labiodental, fricative, voiceless /f/ when followed by a voiceless consonant /t/) |
| Has to | / hæz t u :/ | /hæstə/ |
| I have to go! |  /aɪ hæftə gəʊ/ |

|  |  |  |
| --- | --- | --- |
| Used to |  /ju:zd tu:/ becomes |  /ju:stə/ |
| I used to live near you / aɪ ju:stə l ɪv nɪə ju:/ |

|  |  |  |
| --- | --- | --- |
| Supposed to /səpəʊ zd tu:/ |  becomes | /s əp əʊstə/ |
| You were supposed to leave ! / j u wə səpəʊstə li:v/ |

**4. Yod coalescence**

 Yod coalescence is a form of assimilation which takes place when /j/ is preceded by certain consonants, most commonly /t/ and /d/:

|  |
| --- |
| **/t/ + /j/ = /tʃ/**  |
|  | What you need.           | /wɒtʃu ni:d/  |
|  |  The ball that you brought. | /ðə bɔ:l ðətʃu brɔ:t/  |
|  | But use your head! | /bətʃu:z jɔ: hed/  |
|  | Last year | /lɑ:stʃɪə/ |

|  |
| --- |
| **/d/ + /j/ = / dʒ/**  |
|  | Could you help me?       | /kʊdʒu help mi /  |
|  |  Would yours work? | /wʊdʒɔ:z wɜ:k/  |
|  | She had university students    | /ʃi hædʒu:nivɜ:səti stju:dənts/  |

**Exercise 1: Identify the different assimilations in the following:**

 Coconut butter old man Court martial good boy Command module old boy Command post first class Common Market pot plant hard court pen pal Cold call field glasses open prison both sexes post mortem second cousin cold cream ground cover fast motion cotton belt queen mother private parts pin money human capital old maid had come fourth summer slide guitar

**Exercise 2: Identify the places where yod coalescence may occur in the following:**

1. You told me that you had your homework done. 2. She didn’t go to France that year.

3. Could you open the window please? 4. You’ve already had yours!

**2) Elision**

Elision is a process where one or more phonemes are ‘dropped’ within a word or phrase, usually in order to simplify the pronunciation. Elision is normally unintentional, but it may be deliberate.

|  |  |  |
| --- | --- | --- |
| *comfortable*: | /kʌmfətəbəl/ |  → /kʌmftəbəl/ acts : /ækts/ → /æks/  |

## ***Common cases of elision in English***

## ***H-Dropping***

 Unstressed pronouns – as in *give her/give him*, /gɪvə/- /gɪvɪm/ or *tell her/tell him*, /telə/- /telɪm/ –, or forms of the auxiliary *have* – as in *would have*, /wʊdəv/, *should have*, /ʃʊdəv, etc. – exihibit h-dropping.

## ***Cluster Reduction***

 When two or more consonants, often of a similar nature, come together, there is a tendency in English to simplify such a cluster by eliding one of them. Cluster reduction can occur in between as well as inside words and mainly involves the deletion of voiceless oral plosives.

|  |  |  |
| --- | --- | --- |
| **word/combination** | **no elision** | **elision** |
| asked | /ɑ:skt/ | /ɑ:st/ |
| desktop | /desk tɒp/ | /des tɒp/ |
| hard disk | /hɑ:d dɪsk/ | /hɑ: dɪsk/ |
| kept quiet | / kept kwaɪ t/ | /kep kwaɪ t/ |
| Twetfth night | /twelfθ naɪt/ | /twelθ naɪt/ or /twelf naɪt/ |
| next to | /nekst tu/ | /neks tu/ |

**Loss of weak vowel after p, t, k**

 In English a short, unstressed vowel occurring between voiceless consonants or in general after p, t, k may disappear. This is the case, for example, with the first syllable of ‘potato’ /pəteɪtəʊ/, which becomes /pteɪtəʊ/, the second syllable of ‘bicycle’ /baɪsɪkl/ which becomes / baɪskl/.

**Loss of final v in ‘of’ before consonants:**

This is very common in English, and examples of these include ‘lots of them’/lɒts ə ðəm/ and ‘waste of money’ /weɪst ə mʌnɪ/.

 **3) Liaison**

 Liaison is a French word which refers to English word « Linking » or « joining together » sounds.

**Linking / r /**

 The linking r is a phonological phenomenon of most (but not all) dialects of English.  There are many words in English (car, here, tyre) which in a rhotic accent such as General American or Scots, would be pronounced with a final/r/ but which in non-rhotic accents end in a vowel when they are produced before a pause or a consonant. When they are followed by a vowel, RP speakers pronounce /r/ at the end (e.g the car is / ðəkɑ:**r**ɪz /).

**Intrusive / r /**

 Intrusive /r/, or the insertion of an r-sound where historically there was not any and present day spelling does not contain an <r> .That is to say that an ‘r’ which does not exist in spelling is produced in speaking , (to add an /r / at the end of a word which ends with a vowel or glide when the next word in the sentence begins with a vowel ).(e.g. the idea[r] of /ðiaɪdɪə**r**ɒv/ or law and order /lɔ:**r**ən ɔ:də/).