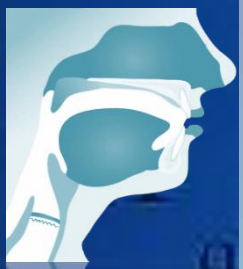

COURSE HANDOUT OF ARTICULATORY PHONETICS

By Dr. HEMAIDIA Mohamed, for 1st Year, L. students, 1st & 2nd Semester 2020-2021, Faculty of Letters & Languages, Department of Letters & Foreign Languages, University of Ibn Khaldoun-Tiaret

ENGLISH ARTICULATORY PHONETICS

For
Second Year English Students

By Dr. HEMAIDIA Mohamed

Holder of a doctorate in Linguistic & Phonetics of English

Time Allotted to Phonetics Subject Teaching:

First Semester: 21 hours
Second Semester: 21 hours

September 2021

COURSE HANDOUT

For 2nd Year, L. Students, 1st & 2nd Semester 2019-2020, Faculty of Letters & Languages, Department of Letters & Foreign Languages, University of Ibn Khaldoun-Tiaret

ENGLISH CORRECTIVE & ARTICULATORY PHONETICS

BLENDED COURSE

FOR

SECOND YEAR ENGLISH DEGREE

By Dr. HEMAIDIA Mohamed

Holder of a doctorate in Linguistic & Phonetics of English

Time Allotted to PHONETICS Subject Teaching: 42 hours

First Semester : 21 hours
Second Semester : 21 hours

2020-2021

Course Information

1. Course General Information

Course Title	English Corrective & Articulatory Phonetics
Course Format (Delivery	Blended (Hybrid)
Mode) Access to the Course	https://moodle.univ-tiaret.dz/phonetics course
Target Audience	Second Year (LMD) Students of English
o *Credit(s)*	2
o *Coefficient(s)*	1
o *Semester hourly volume*	21 hours
o *Contact hours per week*	1h30
o *Evaluation/Assessment*	Quizzes, Assignment and written Exam
Methods ***Class Type***	Tutorial (Theory and Practice)
Course Developer	Dr. HEMAIDIA Mohamed Section of English, Faculty of Letters & Foreign Languages, Ibn Khaldoun University of Tiaret, Algeria
Holder of Doctorate Degree in	Linguistics & Phonetics of English
Period of Teaching	September 2012-2021 (1st year) September 2019-2022 (2nd Year)
Contacts	
o *Personal- email*	hem11@live.com
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Course Coordinator	Dr. Hemaidia Mohamed Ibn Khaldoun University of Tiaret, Algeria

2. Course Description

English Corrective and Articulatory Phonetics is a course designed for second-year university students and is a continuation of what was taught during the first year. It is to explain more how English, namely the standard British accent is spoken among the natives in a natural way according to the rules governing RP English sound articulation. This course starts with the identification and description of how phonemes function within a language or across languages. After the phonemes of English have been introduced, the course goes on to look at what is called 'Phonotactics', which deals with restrictions 'constraints' in a language on the permissible combinations of phonemes and consonant clusters. This is followed by the study of larger units of speech such as the 'syllable' and all aspects of speech such as 'stress', which could be roughly described as the relative strength of a syllable, and intonation, the use of the pitch of the voice to convey meaning. All are dealt with in a big part called supra-segmental phonetics, also known as 'prosodic features', including speech features such as stress, tone, or word juncture that accompanies or is added over consonants and vowels; these features are not limited to single sounds but often extend over syllables, words, or phrases. Part of the course deals with strong and weak syllables with much focus on the use of schwa vowel / **ə** /use as an alternative to a number of sounds. Stress is also presented as the basic factor in determining whether a syllable will be strong or weak. Points like Rhythm, assimilation, elision, and linking are included in other rubrics. These all are different aspects at the connected speech level.

Because languages have different accents, they are pronounced differently by people from different geographical places, different social classes, of different ages, and different educational backgrounds. Accordingly, a lesson is devoted to the comparison of the notion 'accent' with that of 'dialect' from a phonetic point of view with a certain emphasis on some British regional accents and the possible change occurring at the level of vowels and consonants. The Brummies' English accent is taken as a model for more illustration.

Practice activities are provided at regular intervals to ensure, consolidate and extend what has been learnt. To save time and effort for learners, elucidated words, accompanied by their phonemic transcriptions are presented nearly after each illustrated linguistic point to ease their understanding. Finally, samples of tests are given: this includes different activities meant for summative and formative evaluation of what has been dealt within phonetics during the first and second semester of the academic year. A sample correction of an official examination is then given as a final work for the evaluation of students' papers.

Though these original views and observations crystallize in both the material and its presentation, much of the information given is derived from the numerous sources quoted in the bibliography.

3. Course Content

English Corrective and Articulatory Phonetics hybrid course designed to be fully taught to second year university students of 'Licence'. It is made up of six big sections. Each section includes interrelated lessons. Section one deals with how phonemes function within a language or across languages. Section two is about Phonotactics, which deals with restrictions in a language on the permissible combinations of phonemes and consonant clusters. Section three is concerned with 'syllable' and all aspects of speech such as 'stress', intonation, and pitch, all parts of supra-segmental phonetics, also known as 'prosodic features'. Section four the course is devoted to the study of strong and weak syllables with much focus on the use of schwa vowel / **ə** /. Section five provides illustration of points like rhythm, assimilation, elision, and linking. Section six is devoted to the comparison of the notion 'accent' with that of 'dialect' from a phonetic point of view with certain emphasis on some British regional accents and the possible change occurring at the level of vowels and consonants.

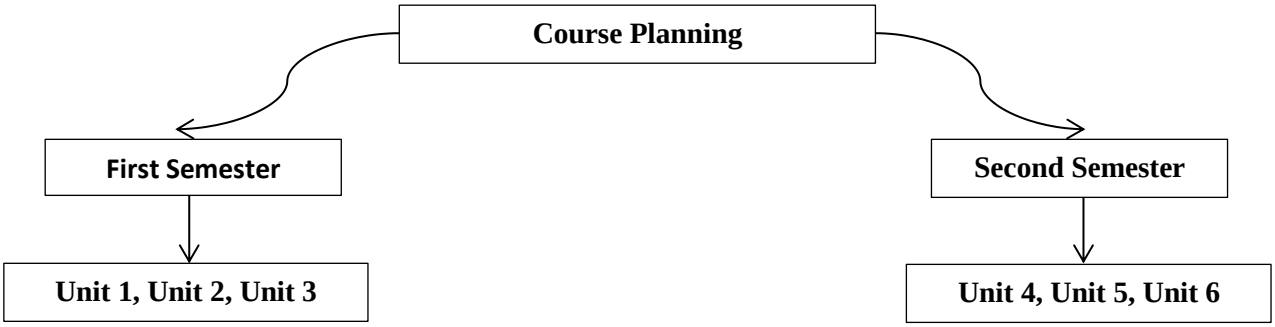


Figure 1. English Corrective & Articulatory Phonetics Course Planning

4. Course Objectives

This course is designed for 2nd year university students who wish to study the articulation of RP British English sounds, the accent used by most announcers and

newsreaders on serious national and international BBC broadcasting channels. In this course students will be able to:

1) Learn a number of technical terms when dealing with the study of phonemes phonetics and phonology and their related aspects.
2) Understand the system of sound and sound combinations in English phonetics, in general
3) Understand how sounds are produced, how they are transmitted, and how they are perceived (Phonetics), and distinguish phonemes and allophones.
4) Pronounce English sounds in isolation and in connected speech.
5) Know the structure of the English syllable.
6) Know pitch and the different types of stress in English.
7) Know variations in stress and pitch, tone and intonation
8) Distinguish strong and weak forms.
9) Know the move from single segments to consonant cluster to whole syllables
10) Know the different intonation patterns of English
11) Know different aspects of connected speech processes, such as assimilation, elision, linking…
12) Know the difference between accent and dialect from a phonetic point of view.

In a nutshell, Second Year University students will be able to develop the ability to identify and produce English key sounds as well as its basic rhythm, loudness, length, timing, meter, stress, and intonation patterns in context, increase self-confidence in the way they speak, and develop speech-monitoring abilities for use outside of the classroom.

5. Course Monthly Schedule

1) This course is written in **126** (one hundred and twenty six) **pages**
2) These pages carries **04** (four) **Sections**
3) These units are divided into **28** (twenty eight) **lessons**
4) Each lesson is dealt with in **01.50** (one hour & a half)
5) All lessons are dealt with in **42** (forty two) **hours**, as scheduled in the **Canvas** of **1st** year '**Licence'**
6) The 42 hours cover 28 (twenty eight) **weeks**
7) The time allotted to the achievement of this phonetics course is divided into **21** (twenty one) **hours** in the first semester & **21** (twenty one) **hours** in the second semester, which provides a total of **42** (forty two) **hours** in al

Univrersity of Ibn Khaldoun -Tiaret

Faculty of Letters & Foreign Language

Department of Letters & Foreign Languages

English Phonetics for 2nd Year English Degree

English Section

COURSE MONTHLY SCHEDULE

No	Month	Lesson	Phonetic Items	Illustrations	Length
01	October	- Phonetics - Phonology - English Phonotactics	* Sound/phone/voice * Phoneme (Mental representation of speech sounds * phoneme/ contrastive function * Consonant clusters * Constraints in Phonotactics * Language Syllables * English Syllable	- sound/allophones of the same phoneme - Study of the function of sounds in a language or across languages - No physical reality - Phoneme's contrast in all environments * /s/ + stop + approximant * /s/ + /t/ + /ɹ/ (as an approximant) * /s/ + /t/ + /j/ (as an approximant) * /s/ + /p/ + /j ɹ l/ in *sputum*, *sprawl*, *splat* * /s/ + /k/ + /j ɹ l w/ *in skew*, *scream*, *sclerosis*, *squirrel* * mono-syllabic word * Disyllabic word * Trisyllabic word *Polysyllabic words	**6 hours**
02	**November**	**Suprasegmental (Prosodic) features (2)** Word stress (1)	* English Syllable Structure * Stress in Disyllabic words * Stress in Trisyllabic words	* Onset: Initial consonant(s) * Body/core: Onset & Nucleus * Rime: Nucleus /Vowel + Coda * Coda: Consonant(s) after the nucleus * Tone carried by all the syllable or by the rime * In verbs: a'pply, a'ttract, 'enter, 'follow * In adjectives: di'vine, co'rrect 'lovely, 'hollow * In nouns: 'money, 'product, es'tate, * In verbs: en'counter , de'termine enter'tain, resu'rrect	**3 hours**

03	**November (follow)**	Word stress (2)	* Stress in Trisyllabic words (follow) * Stress in 4 Syllable words	* In nouns: di'saster, po'tato, re'searcher 'quantity, 'emperor * In nouns: di'saster, po'tato, re'searcher, 'quantity, 'emperor * Second syllable is stressed if the word ends in: **__cy, __ty, __phy, __gy, or __al:** de'mocra**cy,** a'nalo**gy,** e'lectric**al** ***** Third syllable is stressed if the word ends in: **__tion**, **__sion**, **__ic:** decla'ra**tion,** super'vi**sion,** unrea'list**ic**	**3 hours**
04	**December**	Word Stress (3)	* Stress in 5/6 Syllable words	* Forth/penultimate syllable is stressed if the word ends in: **__tion**: conside**'ra**tion ***** Second or third syllable is stressed if the word ends in: **__cy:** con**'sti**tuency ***** Third syllable is stressed if the word ends in: **__ity**, **__ate:** flexi'bility, diffe'rentiate *Stress in 6 syllable words is not stable: responsibility, discriminatory**,** unimaginable, reliability, idiosyncratic, disciplinarian, superiority, extraterrestrial, autobiography * Complex word-stress: Suffixes / Prefixes * Compound words * Variable stress * Word-class pairs	**3 hours**

05	**January**	**Suprasegmental (Prosodic) features (2)**	* Pitch - Pitch in Paralanguage * Pitch & Loudness of sounds	* Highness & Lowness of tone/ voice * Frequency of vibration of the sound waves - highness/ lowness of voice - Volume: how loudly/softly one speaks - rate: the speed at which one speaks - voice quality: how pleasant/unpleasant one's voice sounds * Amplitude of sound waves * Pitch of sound - Difference between pitch & loudness - Amplitude of vibration - Normal breathing, soft whisper, normal conversation…. * Rhythm	**6 hours**
06	**February**	**Suprasegmental (Prosodic) features (2)**	* Intonation (**1**)	* Form & function in intonation - falling /rising/partial intonation * Tone & Tone languages * Complex tones & pitch height * Harmonic complex tones * Some functions of English tones * The Tone-Unit - The structure of the tone-unit - Tone change * Tonic syllables and changing emphasis	**6 hours**
07	**March**	**Suprasegmental (Prosodic) features (3)**	* Intonation (**2**)	* Fall-rise and rise-fall tones followed by tail - Tone unit: High and low heads * Functions of intonation: * Attitudinal, accentual, sequential, grammatical paralinguistic, discourse, psychological, lexical	**3 hours**

08	**April**	**Connected Speech (1)**	* Aspects of Connected speech (**1**)	* Assimilation: in words or word-boundaries - Partial/Complete assimilation - Progressive / Regressive assimilation - Contiguous/ Non-contiguous assimilation - Assimilation of intensity /Assimilation of place - Assimilation of manner * Assimilation rules : -Voicing /Alveolar nasal / Palatalization Assimilation	**6 hours**
09	**May**	**Connected Speech (2)**	* Aspects of Connected speech (**2**)	* Elision: loss of one or more sounds (v. or cons.) * Nature of Reduced Articulation * Historical Elision * Contractions * Deletion * More examples of elision in English * Connected speech * Linking: sounds at word-boundaries * Blending Overlapping sounds * Changing sounds * Adding sounds * Double sounds * Consonant to vowel linking * Juncture - Plus juncture - close juncture - terminal juncture	**4 hours**
10	**May (follow)**	**Social Speech**	**Accent & dialect**	- Accent in linguistics & sociolinguistics: definition - Accent in Phonetics - Dialect: Definition - Accent Vs. dialect	**2 hours**

SECTION ONE

PHONETICS & PHONOLOGY

SOUND & PHONEME

Subject: English Phonetics Taught by Dr. Mohamed HEMAIDIA

Lesson 01: Notions of { Phonetics & Phonology / Sound & Phoneme

1.1. Phonetics: Definition

Phonetics /fə'netɪks/ is the subfield of linguistics that studies the physical properties (aspects/characteristics) of human sounds/ phones, and the processes of their physiological production. The minimal linguistic unit in phonetics is the 'phone'__ a speech sound in a language. Any utterance is produced using the different organs of speech 'passive & active articulators', such as the teeth, tongue, the velum, etc.

1.2. Phonology /fə'nɒlədʒi/ is grounded in phonetics and is a subfield of linguistics that studies the sound system of a specific language or languages. Phonology describes the way sounds function within a given language or across languages. In other words, phonology is the abstract study of sounds and how these sounds are used to convey meaning. The minimal functional distinctive unit of phonology is **the phoneme** /'fəuni:m/**.** In other words, a phoneme is the mental representation of a speech sound or different sounds (no physical reality). It is a meaningful unit. By meaningful unit, we mean that it has a contrastive function (it is responsible for the change of meaning). It is a unit of sound that can distinguish one word from another in a particular language. For example, if we substitute the consonant phoneme /**f**/ for /**r**/ in a word like 'rat' /**r**æt/, it would result in 'fat' /**f**æt/. Similarly, the sound pattern /si**n**/ 'sin' and /sɪ**ŋ**/ 'sing' are two separate words that are distinguished by the substitution of one phoneme, /**n**/ for /**ŋ**/. Similarly, the world 'l**e**t' can be distinguished from 'l**i**t' just by substituting /**ɪ**/ for /**e**/ in word-medial position. In this situation, when two words differ in meaning through the contrast of a single phoneme, these words form what is referred to as '***minimal pairs'***. More accurately, they can be classified as '***minimal pairs'*** in the ***phonology of English***. For (Gimson 1989), they are pairs of words which are different in respect of only one sound segment. This difference which may occur in one of the three positions in words will lead to a change of meaning.

Phonemes usually fall into two classes: consonants and vowels. Differences in words may depend on differences between these classes in different environments. Phonemes are conventionally placed between slashes in transcription / /.

Examples of the contrast of phonemes in different environments are as follows:

In monosyllabic words:

1. Initially: 'bat' /**b**æt/ and 'rat' /**r**æt/ differ in only one consonant, i.e., /**b**/ and /**r**/ . (Initial phonemes are in contrast)
2. Medially: 'h**i**t' /h**ɪ**t/ and 'h**a**t' /h**æ**t/ differ in only a vowel, i.e., /**ɪ**/ and /**æ**/. (medial phonemes are in contrast)
3. Finally: 'rin**g'** /riŋ**g**/ and 'rin**k'** /riŋ**k**/ differ in only one consonant, i.e., /**g**/ and /**k**/. (final phonemes are in contrast).

In disyllabic words:

1. Initially: 'harden' /**h**a:dən/ and 'garden' /**g**a:dən/ differ in only one consonant, i.e., /**h**/ and /**g**/ . (Initial phonemes are in contrast)
2. Medially: 'rider' /'raɪ**d**ə/ and writer /'raɪ**t**ə/ differ in only a vowel, i.e., /**d**/ and /**t**/. (medial phonemes are in contrast)
4. Finally: 'riddle' /rid**l**/ and 'ridden' /rid**n**/ differ in only one consonant, i.e., /**l**/ and /**n**/. (final phonemes are in contrast).

Note: All of the possible minimal pairs in different languages can be set out in this way.

1.3. Sounds in RP English

Speech sounds that differ but do not create a change in meaning in words are known as '**allophones**' /ælə'fəunz/. Allophones, which are placed between square brackets **[ ]** represent the different realizations of the same phoneme in a certain phonetic environments, yet not all speakers produce them similarly. They may be free and vary in the articulation of different speakers of languages or dialects, yet this variation in sound production would have no effects on word meaning. Allophones belonging to the same phoneme result in great phonetic differences in different environments, the /p/, for example, is articulated initially as **[**p^{h}**]**, aspirated initially, yet weakly aspirated **[**p**']** in word-final position or before a vowel in unaccented syllables, as successively in: 'important', and 'polite'. 'Similarly, /l/ in 'legal' is initially clear **[l]**, yet dark **[ɫ]** and velarized in final position. The long vowel /i:/ is fully long before a final voiced consonant as in the case for **[i:]** in 'seed', yet is submitted to reduction in length **[i·]** before a voiceless consonant as in 'seat'**.** The difference in quality is related both to the position of the phoneme in the word or syllable and the adjacent sounds, i.e., phonetic context. In the case of the stated examples, the allophones of the same phoneme which occur in different situations are said to have a '***complementary distribution'***: when one never occurs in the same phonetic

environment of the other, i.e., they are mutually exclusive. An example of that is the unaspirated [p⁼], when preceded by initial [s], as in ‘spark’ [sp⁼a:k'], and the aspirated **[p^{h}]** initially in accented syllables, as in the case of ‘park’ **[p^{h}ɑ·ʔk'].** In this case we say that ‘unaspiration’ and ‘aspiration’ are mutually exclusive in the two environments.

Sometimes speakers of English do not give the same quality to the same sound according to the contexts it is in, i.e., they produce slightly different pronunciations of the sound. In this case no effect would be made on meaning, and the different realizations of the phonemes are said to be in ‘***free variation’***. Free variation can be found between the realizations of separate phonemes, which is referred to as ‘phonemic free variation’, as in /i:/ & /aɪ/ of ‘either’, and between the allophones of the same phoneme, ‘allophonic free variation’, as in the choice of /ɪ/, or /i/ in final position of the word ‘happy’, which is transcribed either as /hæp**ɪ**/ or /hæp**i**/. In actual speech, the initial vowel of the verb ‘affix’ is in free variation between the schwa /**ə**/ and the full vowel /**æ**/; thus this word can be pronounced by some speakers as /ə'fıks/, and by others as /æ'fıks/.

In Algerian Arabic, for example, the **[د]** /**d**/ and **[ض]** /ɖ/ are allophones of the phoneme / ض / articulated in the word **'ضو'** ‘light’. In Oran, speakers produce it as 'دو' **[**dʌw**]**; while speakers in other Algerian regions produce it as 'ضو'. **[**ɖʌw**]**. The French sounds [ʁ] and [r] are pronounced alternatively by French speakers in some parts of France. The same case is for some of the Algerian speakers of French who use this language in their daily speech or at work. The choice of the articulated sound is an indication of the identity of the speaker. Labov (1963) says that “free variation has sociological parameters”, i.e., through his pronunciation, we can identify the social origin of the speaker.

SECTION TWO

ENGLISH PHONOTACTICS

Lesson Two: English Phonotactics

2. 1. English Phonotactics: Definition

Phonotactics is a branch of phonology that deals with restrictions in a language on the permissible combinations of phonemes. Phonotactics defines permissible syllable structure, consonant clusters, by means of ***phonotactic constraints***; i.e., what is permitted and what is not permitted as consonant clusters, onsets, and codas in syllables in any language. What is allowed in a language syllable may not be allowed in another. Phonotactic constraints are then language specific. For example, in Japanese, the /**st**/ as a consonant cluster does not occur in all environments. Similarly, in English /**tl**/ and /**pw**/ are not permitted initially in accented syllables.

2.1.1. English Consonant clusters:

The English monosyllabic word *twelfths* /twelfθs/ is divided into the onset /**tw**/, the nucleus /**e**/ and the coda /**lfθs**/; thus, its structure can be formed as CCVCCCC, where (C = consonant, and V = vowel). On this basis, it is possible to form rules for which representations of phoneme classes may fill the cluster before and after the vowel. This means that a vowel is not counted in the cluster, yet it is the part which, in some cases, separates the onset from the coda, form the syllable by its own.

RP English allows at most three consonants in an '***onset***' (initial consonants before the vowel), provided that they are structured as follows:

/s/ + stop + approximant:

- /s/ + /t/ + /ɹ/ in : *stream*
- /s/ + /t/ + /j/ (not in most accents of American English) in: *stew*
- /s/ + /p/ + /j ɹ l/ in : *sputum, sprawl, splat*
- /s/ + /k/ + /j ɹ l w/ in : *skew, scream, sclerosis, squirrel*

https://en.wikipedia.org/wiki/Phonotactics

2.1.2. English Phonotactics constraints: RP English Phonotactics has some restrictions in the formation of syllables and consonant clusters. They are referred to as '***constraints'***. They can be summarized as follows:

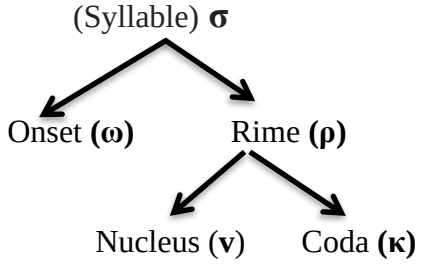
- All syllables require a vowel / nucleus
- No onset starting with /**ŋ**/ ,i.e., /**ŋ**/ does not occur in word-initial position
- /**h**/ does not occur in word-final position
- No consonant clusters + an affricate or /h/ in word-initial position, as in: /sjdʒ/ or /sph/.
- The initial consonant in a complex onset must be an obstruent, such as /s/ in: (***s****till*). Sequences such as */**nt**il*/or /***rk****ip/*, with a sonorant, are not permitted)
- A voiced obstruent, such as /**d**/ is not permitted as a second consonant in a complex onset, as in: */s**d**æd/*
- If the first consonant in a 'complex onset' (sequence of an obstruent & a liquid) is not /s/, the second must be a liquid or a glide, as in: quarrel, proud, trouble
- /**r**/, /**ŋ**/, /**ʒ**/, or /**ð**/ do not occur as second consonants in a complex coda as in the word "*asthma"*, basically articulated as /ˈæzmə/ or /ˈæsmə/.
- If two obstruents occur in the same coda, they must share the same voicing feature, as in: f*rien**ds*** /fren**dz**/, as compared with *paren**ts*** /'peərən**ts**/.

2.2. English Syllable Structure:

A syllable is formed through a sequence of speech sounds, namely one or more consonants and a vowel only. For example, the word '*teacher'* is composed of two syllables: '*tea'* and '*cher'*. A syllable is then split into a vowel, referred to as (nucleus), with initial and final consonants as optional margins.

Phonologically, a syllable is considered as the rhythmic part in a word. It can influence the prosodic features of any language. This may include pitch and stress patterns.

A word that consists of a single syllable is called a **monosyllabic** word. A word with two syllables is referred to as **disyllablic** word; and the one with three syllables is called **trisyllablic** word, which may refer either to a word of more than three syllables or to any word of more than one syllable. Linguists like to use the Greek Letter sigma (**σ)** to label the whole syllable. In most theories of phonology, the general structure of a syllable consists of three segments:



a) Onset (ω): (optional)

The ***onset*** is the consonant sound or sounds that form a cluster at the beginning of a syllable, occurring before the nucleus. Most syllables have an onset. Some languages restrict onsets to be only a single consonant; while others allow multi-consonant onsets according to various rules. For example, in English, onsets such as *pr-*, *pl-* and *tr-* are possible but *tl-* is not, and *sk-* is possible but *ks-* is not. In Greek, however, both *ks-* and *tl-* are possible onsets, while contrarily in Classical Arabic no multi-consonant onsets are allowed at all, as in: 'كتب' /kataba/ CVCVCV. In English, except for /**ŋ**/, all consonants can appear as onsets. In the following examples the onsets are in bald type: **f**at, **sp**eak, **str**ing.

Note: If the first syllable of a word begins with a vowel, this syllable has a **zero** onset, as in '**a**pply', '**a**rtist'

b) Nucleus (ν): (obligatory)

The ***nucleus*** is the **vowel** usually seen as the core (body) and essential part of a syllable, which is obligatory, as in: 'm**a**d' /m**æ**d/, 'm**a**te' /m**eɪ**t/, 'st**a**rt'/st**a:**t/. Generally, every syllable requires a nucleus (sometimes called the '***peak'***), and the minimal syllable consists only of a nucleus, as in the English words "eye" /**aɪ/** or "owe" /**əu**/. The syllable nucleus is usually a vowel, in the form of a monophthong, diphthong, or triphthong, but sometimes is a syllabic consonant when the schwa vowel is dropped due to a sort of assimilation made by the influence of sonorants following obstruent consonants. The most common syllabic consonants n RP English are [m], [n], [ŋ] and [l].

c) Coda (κ): (optional)

The **coda** comprises the consonant sound or sounds that follow the nucleus in a syllable. The coda may exist in some syllables, as in: 'mea**n**' /**n**/, 'figh**t**' /**t**/, 're**d**' /**d**/; 'roa**ds**' /rəu**dz**/, 'pare**nts**' /peəre**nts/**. There are syllables which consist of only an onset and a nucleus with no coda, as in: 'high' /haɪ/, 'star' /sta:/, 'hay' /heɪ/; while others are represented only by a nucleus, as in: 'are' /**a:**/, and 'owe' /**əu**/. Some languages' Phonotactics, such as Arabic limit syllable codas to a small group of single consonants, whereas RP English allows a number of consonant clusters stretching to four consonants.

In English syllables, a coda can be in the form of V, in 'are'; CV, in 'high', and CCV, in 'plough', etc. , where **V** stands for 'vowel', and **C** for 'consonant'. These kinds of syllables in the stated examples are referred to as **open syllables** (or *free syllables*), while syllables that have codas: VC in 'all', CVC, 'take', CVCC, in 'build', etc.) are called **closed syllables** (or *checked*

syllables). Contrary to most languages that allow open syllables, there are only a few, such as Hawaiian, which lack closed syllables. As opposed to the coda, the body is the left branch, and splits into onset and nucleus.

Here are some English single-syllable words that have both a nucleus and a coda (i.e. closed syllables), where ν denotes "nucleus" and κ "coda":

* i*n*: ν = /ɪ/, κ = /n/ * cu*p*: ν = /ʌ/, κ = /p/ * ta*ll*: ν = /ɔ:/, κ = /l/
* mi*lk*: ν = /ɪ/, κ = /lk/ * ti*nts*: ν = /ɪ/, κ = /nts/ * fi*fths*: ν = /ɪ/, κ = /fθs/
* si*xths*: ν = /ɪ/, κ = /ksθs/ * twe*lfths*: ν = /e/, κ = /lfθs/ * stre*ngths*: ν = /e/, κ = /ŋθs/

(Wikipedia 1: 2020)

d) Rime (Rhyme) (ρ) (obligatory)

Contrasting with the onset, the rime/rhyme can be explained as the part on the right which contains the nucleus and an optional coda. In other words, the rime is the part of a syllable stretching from the first vowel to the end. For example, /æt/ is the rime of all of the words *at* /æt/, *pat* /pæt/, and *plat* /plæt/.

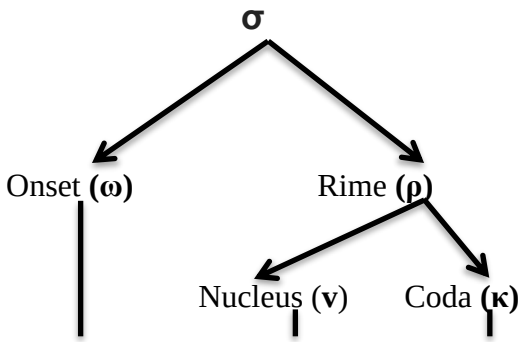
Although the two are variants of the same word, "Rime" is more suggested in phonetics to mean specifically "syllable rime» than "rhyme" usually used in poetry.

In riming, it is worth mentioning a useful concept, namely the **'tone'**, which enters into the construction of intonation for more emphasis on the distinction between lexical and grammatical meaning. The tone may constitute a whole syllable or the part after the nucleus (rime)

Syllable tree diagrams

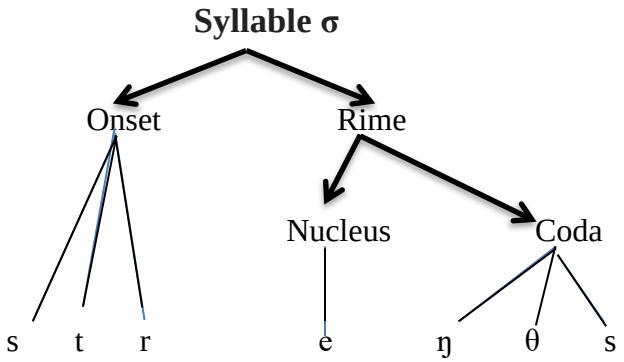
In some theories of phonology, these syllable structures are displayed as **tree diagrams** (similar to the trees found in some types of syntax).

In the one-syllable English word '*mat'*, the nucleus is / **æ** /, the onset / ***m*** /, the coda / ***t*** /, and the rime / **æt** /. This syllable can be abstracted as a ***consonant-vowel-consonant*** syllable, abbreviated ***CVC***. The syllable structure of the word 'mat' can be structured as follows:



m æ t

The diagram below shows the structure of the word ‘strengths’



Hierarchical model for ‘strengths’

ENGLISH PHONOTACTICS

WORD TRESS

Lesson Three: English Word Stress

3.1. Word Stress: Definition

When we talk about stress, we talk about the intensity of the syllable. It means that there is more air in the syllable. The syllable on which there is stress is perceived as a greater loudness. The two parts of speech of the word 'insult' (n) /'ɪnsʌlt/ and 'insult' (v) /ɪn'sʌlt/ are distinguished by pitch pattern. Pitch means high and low frequency. It is the sensation of sound. It is with stress that pitch is rendered. Stress and pitch make the syllable prominent. We have stress when we have energy. The voiced sounds, for example, result in a great intensity of sound on syllables. Such intensity is perceived by the listener as greater loudness. In all, a stressed syllable should be louder, higher and longer in duration than the remaining unstressed syllables.

3.1.1. Stress in disyllabic Words: Either the 1st or the 2nd is stressed

3.1.1.1. in Verbs:

1) 2nd syllable is stressed if it → contains a long vowel or diphthong
→ ends with more than 1 consonant

In these examples, the 2nd syllable is stressed

apply / ə'pl**aɪ** /

attract / ə'træ**kt** /

2) Final syllable is not stressed if → it contains a short vowel
→ there is 1 or no final consonant
→ It contains the diphthong /**əʊ**/

In these examples, the 1st syllable is stressed

enter / 'ent**ə** /

open / 'əʊpən /

follow / 'fɒləʊ /

3.1.1.2. in Adjectives:

1) 2nd syllable adjective is stressed if → it contains a long vowel or diphthong
→ ends with more than 1 consonant

In these examples, the 2nd syllable is stressed

divine / dɪ 'v**aɪ**n /
correct / kə're**kt** /
alive / ə 'laɪ**v** /

2) Final syllable is not stressed if → it contains a short vowel
→ there is 1 or no final consonant
→ It contains/ends with the diphthong /**əʊ/**

In these examples, the 1st syllable is stressed

lovely / 'lʌvl**ɪ** /
even / 'i:və**n** /
hollow / 'hɒlə**ʊ** /

3.1.1.3. in Nouns:

1) If the second syllable contains a short vowel, stress is put on the 1st syllable

money / 'mʌnɪ /
product / 'prɒdʌkt /

2) The second syllable is stressed if it contains a long vowel or diphthong.

estate / ɪs'te**ɪt** /
balloon / bə'lu**ː**n /

3.1.2. Stress in 3 Syllable words:

3.1.2.1. in Verbs:

1) Final syllable is unstressed if it contains a short vowel and ends with no more than one consonant. Stress will be placed on the penultimate (preceding) syllable.

encounter / ɪŋ'kaʊntə /
determine / dɪ'tɜ:mɪ**n** /

2) Final syllable is stressed if
- it contains a long vowel or diphthong
- it ends with more than 1 consonant

entertain / intə'**eɪ**n /
resurrect / rɪzə'rekt /

3.1.2.2. in Nouns stress requires different rules.

1) Final syllable is unstressed if It contains a short vowel or the diphthong /**əu/.** Stress will be put on the preceding syllable.

disaster / dɪ'za:stə **/**
potato / pə'teɪtə**ʊ /**

2) Middle syllable preceding the final syllable is stressed if
- it contains a long vowel or diphthong
- it ends with more than 1 consonant

researcher / rɪ'sɜ:tʃə /
mimosa / mɪ'məʊzə /
postgraduate / pəʊst'grædjuət /

3) First syllable is stressed if both middle & final syllables
- contain a short vowel
- end with no more than 1 consonant

quantity / 'kwentɪtɪ /
emperor /'empərə /
custody / kʌstədɪ /

3.1.3. Stress in 4 Syllable words:

1) Second syllable is stressed if the word ends in: **__cy, __ty, __phy, __gy, or __al**

emergen**cy** /ɪ'mɜ:ʤənsi /

celebri**ty** /sə'lebrəti/

philoso**phy** / fɪ'lɒsəfɪ/

geolo**gy** /ʤi'ɒləʤi /

symmetri**cal** /sɪ'mektrɪkəl/

2) Third syllable is stressed if the word ends in: **__tion**, **__sion**, **__ic**

infiltra**tion /**ɪnfɪlt'reɪʃən/

televi**sion /t**elə'vɪʒən/

scienti**fic** /saɪən'tɪfɪk/

IV.1.4. Stress in 5 Syllable words:

1) Forth/penultimate syllable is stressed if the word ends in: **__tion**

alliteration /əlɪtə'reɪʃən/

imagination /ɪmæʤə'neɪʃən/

2) First, second or third syllable is stressed if the word ends in: **__cy**

independency /ɪndɪ'pendənsi/

insufficiency /ɪnsə'fɪʃənsi/

3) Third syllable is stressed if the word ends in: **__ity**, **__ate**

probability /prɒbə'bɪlɪti/

instability /ɪnstə'bɪlɪti/

indiscriminate /ɪndɪ'skrɪmɪnɪt/

unaffectionate /ʌnə'fekʃənɪt/

3.1.5. Stress in 6 Syllable words:

Stress in 6 syllable words change from word to another, there are not any precise rules: here are some examples:

instrumentality /ɪstrəmen'tæləti/

discriminatory /dɪ'skrɪmɪnətəri/

incommunicable /ɪnkə'mju:nɪkəbəl/

electromagnetic /ɪlektrəumæg'nətɪk/

extraterrestrial /ekstrətəˈrestriəl/

parliamentarian / pa:ləmənˈteərɪən/

emancipationist / ɪmænsɪˈpeɪʃənɪst/

materialism / məˈtɪərɪəlɪz(ə)m/

indiscrimination / ɪndɪskrɪmɪˈneɪʃn/

superiority /su:pɪərɪˈɒrɪtɪ/

bibliography /bɪbliˈɒgrəfi/

sarcastically /sa:ˈkæstɪk(ə)lɪ/

SECTION THREE

SUPRASEGMENTAL PHONETICS (1)

PROSODIC FEATURES

Lesson Four: Pitch

4. 1. Pitch

How do you use pitch to communicate? What does tone mean in English? Is English a tone language? What's the difference between pitch, stress and intonation? Sudden changes and how one can use his/her voice can affect how clearly one communicates meaning of what s/he wants to say in English.

What is Pitch? When we talk about languages, pitch is the highness or the lowness of one's voice. In other words; it's the frequency of the sound waves one produces when speaking. We often talk about pitch when we're talking about singing, or playing a musical instrument. It's also extremely important when you're speaking English. In RP / American English we use changes in pitch to emphasize keywords through words in sentence stress. By stepping up to a higher stress, we emphasize a specific syllable of a word. Pitch is one of the key elements that we need in order to emphasize a syllable with word stress. Native English speakers are listening for this higher pitch in order to hear us pronounce a word correctly. For example when we say: In the words: **note**book, ge**o**graphy, communi**ca**tion, to**day**, **li**sten, voice steps up to a higher pitch. (Repetition of 5 word articulation with much emphasis on pitch). Pitch is also used to highlight

the most important words in the entire sentence. In other words, we focus attention on the keywords using our pitch. We stress or emphasize key syllables of these keywords to indicate that they are the most important ones. When we move up and down between these pitch levels when speaking, we create the natural melody of English in terms of waves. We rise up to a higher pitch and then we fall afterwards. We can hear these up and down, then up and down, then up and down. There's a high and fall of pitch between stressed syllables of stressed words and unstressed or reduced syllables that seem to become less obvious. If we listen closely, we can hear a consisting rise and fall of pitch; a kind like of our breathing or watching waves crash on the beach. We also use changes and pitch to communicate meaning through intonation. So how do we find our pitch? How do we use pitch in our voice? We may not be able to hear pitch changes in our voices. The most important thing to understand we talk about pitch in English is that the pitch we use is relative to each one of us and to each of one's own voice. The pitch levels available to one and his/her own voice will be different from the ones others can use. One may have a broader pitch range than another can have, or may have a smaller one. That's why it's so important that it would explore what is possible for one in his/her own voice. To sum up, pitch, in speech, is the relative highness or lowness of a tone as perceived by the ear. It is the main acoustic correlate of tone and intonation. It is governed by the rate of vibrations producing it. While high pitch has a high frequency, a low pitch has a low frequency. Frequency indicates how often vibrations occur. In music, pitch describes how high or low a note is. Pitch is also a major auditory element in musical tones, along with timbre, duration, and loudness. However, the pitch can be determined only if the sounds have a frequency that is clear and stable enough to differentiate from noise. In spoken language, pitch indicates the degree of highness or lowness with which one speaks. Some people naturally speak in a high-pitched voice. Emotions can also affect the pitch of someone's voice. For instance, sudden emotions like anger, surprise or joy can make a person speak in a higher pitch than usual. Likewise, a tired person may speak in a lower pitch.

In the work of the linguists Trager and Smith there are four contrastive levels of pitch: - **1**- low, **2**- middle, **3**- high, **4**- very high

4.2. Pitch & Loudness of sound

In our day-to-day life, we come across different types of sound, and we are well-equipped with a mechanism to understand different types of variations in the sound pattern. A mother talking to her kid has a different voice compared to that of the kid. Did you ever think why every

person has a different voice? Let’s learn about the loudness of sound, the pitch of the sound, and their difference.

4.2.1. Pitch of Sound

This category is made by the frequency of vibration of the sound waves. We say that the sound is intensive with a high pitch when the frequency of vibration reaches a higher degree. Contrarily, the sound gets a lower pitch when it has a lower frequency of vibration. This may be explained by the difference which exists between a woman’s voice having a higher pitch than that of a man. Similarly, a bird produces a high-pitched sound; whereas, a lion, when roaring, has a low-pitched sound.

4.2.2. Loudness of Sound

Loudness is usually measured by the amplitude of the sound wave. If it is large, the sound reaches its great loudness and can even be quadrupled, especially if the amplitude of the sound wave is doubled. Loudness which is expressed in decibel (dB) is directly proportional to the amplitude of vibration. According to different experiments, human ear does not support sounds on top of 80 dB, because in this case it becomes very noisy.

Various sources of sounds are illustrated in the following table:

Normal Breathing	10 dB
Soft Whisper (at 5 m)	30 dB
Normal Conversation	60 dB
Busy Traffic	70 dB
Average Factory	80 dB

https://byjus.com/physics/loudness-of-sound/

The loudness of a sound wave is determined by its association with the amplitude, all types of waves have certain amplitude. For example, a height of a wave on a calm ocean will be

less than 1 foot whereas good surfing waves might be 10 feet or more in amplitude. During a storm, the amplitude might increase to 40 to 50 feet.

4.2.3. Difference between Pitch and Loudness

Phoneticians often consider pitch and loudness as two sides of the same coin, yet the only difference is in term of tone quality. The pitch of a sound is when the ear responds to the frequency of sound; while loudness s related to the energy of the sound wave. In general, the pitch is the reason behind the difference in voice quality of different individuals.

4.6. Pitch in paralanguage

Pitch is determined by vocal characteristics and vocal interferences, which are the two main classes of paralanguage. Vocal characteristics represents the pitch (the highness or lowness of one's voice), volume (how loud or soft one's voice is when speaking), rate (the speed at which one's speaks) and voice quality (how pleasant or unpleasant one's voice sounds)

4.4. Volume

As referred to above, volume can be explained by the degree of loudness or softness of one's voice when speaking. This very often depends on the state that the speaker is in. In normal speech, there may be a balance between the two-volume rates, i.e., loudness and softness, and hence, extremes of being too loud or too soft are sometimes avoided to get an acceptable middle range volume. The volume rate in communication depends on to whom one's speech is addressed. It can be loud, quiet, or both at a given time. For example, if you want to call out someone who is standing at somewhat a long distance, then you need to project your voice (call higher); so that s/he can hear you well. However, there is no need to call high (make your voice high) if the person is sitting next to you. This is how loud or quiet your voice is. Varying volume is very important to communicate a range of emotions and situations. Anger or excitement, for example, can be communicated with a loud volume whereas fear could be shown by using a quiet voice.

4.5. Voice quality in volume

Voice quality is that component of speech where pitch and loudness are excluded and in which the primary distinction to a given speaker's voice is given. This quality involves **both phonatory and resonatory characteristics**. Some of the elements of voice quality are harshness, breathiness and nasality

4.6. Amplitude of a sound wave

The amplitude of a sound wave can be interpreted as the loudness of the vibrating particles of the medium from their mean position when producing the sound. Frequency is the number of vibrations made by a sound wave per second. The intensity of a sound depends on its loudness. When the amplitude rises, the sound is **perceived as louder**, whereas, if it decreases, the sound is perceived as softer. The degree of loudness then depends on the degree of intensity. In other words, the sound is perceived as louder if the amplitude increases, and softer if the amplitude decreases. The amplitude of a wave is explained by how much energy it carries. Thus, we say that when we have a large amount of energy, we get a high amplitude wave; contrarily, we get a low amplitude wave when we have a small amount of energy. The intensity of a wave can be defined as the average amount of energy passing through a unit area per unit of time in a specified direction. Relative sound intensities are often given in units named decibels (dB).

4.7. Rhythm

In phonetics, rhythm is what we feel in the movement of speech. It is usually marked by the stress, timing, and quantity of syllables (the time occupied in its pronunciation). In poetry, rhythm is the recurring alternation of strong and weak elements in the flow of sound and silence in sentences or lines of verse. "*It is the musical quality produced by arrangements of accented and unaccented sounds and pauses. It is the repetition of the final accented vowel and following consonant. Usually, the rhyming words are at line ends"* (Colwell: 1973:28). In speech, rhythm is how words alternate according to their stressed and unstressed syllables. It shapes prosody and constructs the patterns of stress and intonation in a language. Rhythm is an indispensable element of all music whatever other elements a given piece of music may have (e.g., patterns in pitch or timbre). Rhythm can exist without melody, as in the drumbeats, but the melody cannot exist without rhythm.

4.8. Timber

In phonetics, timber is the quality sensations produced by the tone of a sound wave, mostly during the perception of musical notes. In dealing with timber, we distinguish three kinds of sound production, namely choir, voices and different musical instruments, such as the 'clarinet' and woodwind instruments.

4.9. Melody of speech

Melody in speech enters in the way we express our feelings and emotions. It includes the falls and rises of the pitch of voice. When we say: 'Yes', for example with a rising pitch, we imply a question rather than a declarative statement. Melody is one of the main aspects of communication in social interactions.

SECTION FOUR

SUPRASEGMENTAL PHONETICS (2)

PROSODIC FEATURES

Lesson Five: Intonation (1)

5.1. Intonation

Intonation, in phonetics, is the melodic model of an utterance. It is primarily a matter of varying the pitch of the voice to indicate the attitude and emotions of a speaker. In languages like English, intonation is often accompanied by stress and rhythm to produce meaning. In other words, it is the way the tone of voice rises and falls when speaking or reciting something while singing it. An example of intonation is how one's voice rises at the end of a question, showing the difference between statements and questions, and between different types of questions themselves. With the variation of pitch, one focuses attention on correctly transmitting spoken messages so as verbal interactions are well regulated. Linguistically speaking, it is the use of pitch characteristics of a speaker of a language or dialect to convey syntactic information.

The term tone is used by some British linguists to describe intonation in referring to the pitch movement found on the nucleus or tonic syllable in an intonation unit.. Intonation serves: 1) to

form sentences and tone-units; 2) to define communicative types of sentences (statements, questions, commands, exclamations); 3) to express the speaker's thoughts and attitudes.

Intonation primarily concerns pitch variation, whose functions are attributed to the speakers' expression of attitudes and emotions, help to determine the difference between statements and questions and highlight the importance of the verbal message uttered by the interlocutors.

English language has three basic intonation patterns as falling intonation, rising intonation, and partial/fall-rise intonation.

1- **Falling Intonation:** depicts how a person's falling voice on the position where it is final in stressed syllables of a phrase or group of words. This usually occurs when one expresses a definite thought, or asks wh-questions.

- Where's the b↘ us station?
- What time do we l↘ eave?

2- **Rising intonation:** describes one's rising voice at the end of a sentence. This is expressed mostly in yes-no questions or in showing surprise.

- Is she c↗oming?
- Are you r↗eady?

3- **Partial Intonation**: This kind of intonation includes both (fall-rise tones). It shows how voice rises then falls. The use of this intonation is when one doubts about something, or has more to add to a sentence. It is also used when asking polite requests.

- I do↘n't have any fans at the m↘om↗ent. (but I may have some in the future).
- It trained very hard during the firs↘t w↗eek. (but we reduced the tone in the coming days).

In asking questions, the use of fall-rise intonation is essential, especially when we ask for information or invite somebody to do or to have something. It is with this intonation patterns that the questions sound more polite:

- *Would you like another co↘ff↗ee?*
- Tell me! Is this your pen↘cil↗?

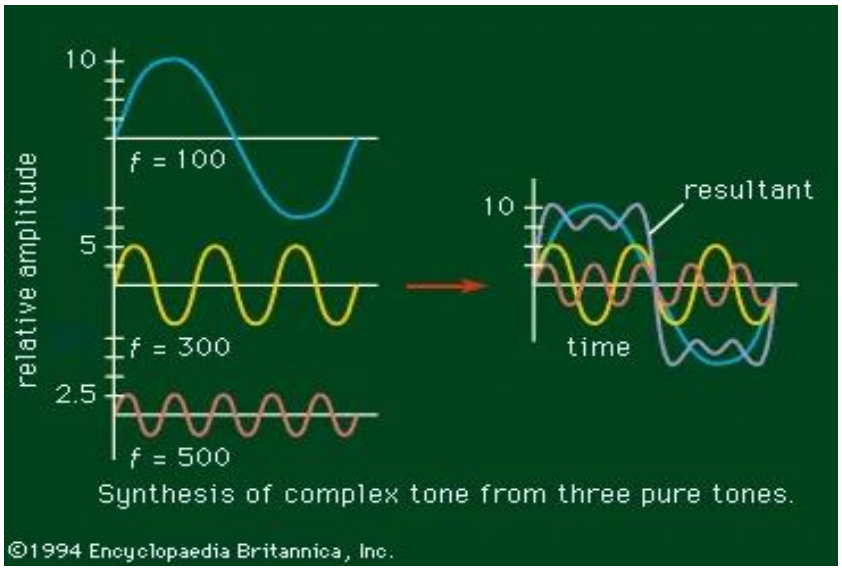
5.2. Tone Language

A **tone language**, also **tonal language**, is a language in which there is a harmony in uttering words. This language can differ in falling and raising tones (like pitches in music) on word syllables. Difference in tone may result in a complete change of meaning.

However, pitch accent is different from tones. In some languages, it is pitch accent that is important instead. Sometimes pitch accent and tone accent may sound alike to people who do not speak a tone language.

5.3. Complex tones and pitch height.

Tone, in acoustics is a sound that can be recognized by its regularity of vibration. A simple tone has only one frequency, although its intensity may vary. A complex tone consists of two or more simple tones, called overtones. The tone of lowest frequency is called the fundamental; the others, overtones. The frequencies of the overtones may be whole multiples (*e.g.*, 2, 3, 4, etc., of the fundamental frequency, in which case they are called the second, third, fourth, etc., harmonics of the fundamental tone, itself known as the first harmonic). A combination of harmonic tones is pleasant to hear and is therefore called a musical tone.



Encyclopædia Britannica, Inc.

Other tones are more complex which occur more frequently. One of them is is the "*fall-rise tone*", where the pitch falls and then rises again.

The second which is much less frequently used is the «*rise-fall*» tone, where the pitch rises and then descends.

5.3. Harmonic complex tone

A harmonic complex tone refers to a sound including frequency components that are all integer multiples of a common fundamental (F0). The pitch evoked by a harmonic complex tone is normally very close to that of a pure tone at the fundamental frequency.

Pitch of harmonic complex tones is of great importance for a variety of reasons. Changes in pitch convey melody in music, and the superposition of different pitches is the basis for harmony. “Pitch has an important role in speech, where it carries prosodic features and information about speaker identity. In tone languages such as Mandarin Chinese, pitch also cues lexical contrasts. Pitch plays a major role in auditory scene analysis: differences in pitch are a major cue for sound source segregation, while frequency components that share a common fundamental tend to be grouped into a single auditory object” (Bregman 1990; Darwin and Carlyon 1995).

5.4. Tone unit

Tone unit can be described as a string of speech uttered under a single coherent intonation contour. “It tends to be marked by cues such as a pause and a shift upward in overall pitch level at its beginning, and a lengthening of its final syllable.” Du Bois et al (1992:17). In other words, “tone is a general tendency of the change of the pitch and tones that are identified to have effects in utterance as a group rather than separate tones in an intonation language such as English” (Roach 2000). Thus this sort of group is called *tone unit* which can be defined as 'a stretch of speech identified as the domain of a unit of intonation' (Mathews 1997: 379).

5.5. Structure of the Tone Unit

The structure of the tone unit is as follows: The tonic syllable (TS) is obligatory but all other parts are optional. The nucleus or tonic syllable is the most significant syllable in the TU (not necessarily the loudest or most prominent stress). It is the syllable where the main intonation "tune" of the TU, the 'nuclear tone' STARTS. Each TU has one nucleus and one nucleus only.

(PH) (H) TS (T)
(pre-head) (head) tonic syllable (tail)

- tonic syllable: ‘carries’ the tone. Is obligatory
- head: all stressed syllable up to (but not including) tonic syllable
- pre-head: any unstressed syllables before the head
- tail: any unstressed syllables that follow the tonic

Examples of Tone Units:

Some examples of tone units are given below. In the first example, the tone unit is a single syllable ‘those’. This is the tonic syllable and in this cases has been given a falling intonation denoted by \

1.| \those |
2.| 'give me \those |
3.| in a 'little 'less than an \hour |
4.| and then 'I said my \father was here |

In the second example, the tonic syllable is preceded by a head ‘give me’. ‘Give’ is stressed so is the start of the head. In the third example, the tonic is ‘hour’, the head is ‘little less than an’ and the pre-head is ‘in a’. Note the pre-head does not contain any stressed syllables. In example 4, the tonic ‘father’ is followed by a tail ‘was here’.

5.6. Tone Change

Every tone unit has a single intonational contour. In other words, the listener will perceive a major change in tone (pitch of voice) somewhere within the tone unit. This change of tone occurs on the tonic syllable and thus we say that the ‘tonic carries the tone’. However, if there is a tail, then the change in the tone may continue over the tail.

A speaker can change the tonic syllable to emphasize different words in the unit. In the following examples the change in tone occurs on different syllables within the tone unit and thus the listener perceives a different emphasis on each one.

| and then I \said my father was here |
| and then I said my \father was here |
| and then I said my father was \here |

Key:

A further notion is the idea of key. Key is a feature of the head of the tone unit. The key can be high, medium or low. A high key tone unit means that the head starts at a high pitch before changing on the tonic. High pitch is relative here and depends on the speaker’s voice and also the surrounding context.

5.7. Tonic Syllable and Changing Emphasis

In the speech of any language, the actual words being used are not *all that the speaker actually means*. Humans communicate more when speaking together than simply the information contained in the words they use. There's body language, facial expression, tone of voice (dealt with in great detail in later articles) and of course, *the relative importance of the information contained in the words*. In spoken English, as already established, information of this kind is conveyed through vocal *emphasis* and the relative strength / stress of syllables within words and of words within utterances. Important words (and therefore information) is conveyed in relatively stronger syllables (and the words they comprise) – and the *most important information word* of all gets the *strongest syllable*.

That strongest syllable will not only be louder and very often longer, but *it will mark the beginning of whatever tone is being used*. With a Falling tone, the Tonic Syllable will be at a higher pitch than whatever comes before, in preparation for the fall itself. With a Fall-Rise Tone, the same will happen; in fact the *high syllable* may be even higher before a Fall-Rise. And with a Rising Tone, the strongest syllable will usually be at a slightly *lower* pitch than what came before, in preparation for the Rise.

This strongest syllable where the tone begins is called the *Tonic Syllable*. It normally falls on the *Last New Information*; indeed, in many languages, just the same thing happens – the most important information word takes extra emphasis over others in the same utterance.

In Tone Notation to show the stress and tone changes three symbols used, they are as follows:

^ signifies a *high pitched* syllable

\ signifies a *falling tone*

/ signifies a *rising tone*

Therefore, ^ followed by / signifies a *Fall-Rise tone*.

Say the following out loud and then answer the questions:

1. I didn't ^**think** that was going to **/work** (Fall-Rise, Tonic Syllable on *think*)
2. I didn't think ^**that** was going to **/work**. (Fall-Rise, Tonic Syllable on *that*)
3. I didn't think that was going to **work**.(Fall, Tonic Syllable on *work*)

a. Which expresses the most surprise?

b. Which expresses a prior certainty?

c. Which expresses a feeling of vindication that the speaker's prediction was correct?

[highlight text for the answers: a2 b3 c1]

1. I'd ^**like** to go **/with** you (Fall-Rise, Tonic Syllable on *like*)
2. I'd like to go **with** you (Fall, Tonic Syllable on *with*)
3. I'd like to go with **you** (Fall, Tonic Syllable on *you*)

a. Which expresses a firm decision already made?

b. Which expresses a specific preference?

c. Which expresses uncertainty?

[highlight text for the answers: a2 b3 c1]

1. How much time **have** we got? (Fall, Tonic Syllable on *have*)

2. How much **time** have we got? (Fall, Tonic Syllable on *time*)

3. How **much** time have we **got**? (Fall, Tonic Syllable on *much* or *got*)

a. Which expresses a need for an honest answer?

b. Which expresses simple, general curiosity?

c. Which expresses a desire to know a specific detail?

[highlight text for the answers: a1 b2 c3]

As you can see, *where* we say the Tonic Syllable affects how we want our words to be understood – and this is *in addition to* a change in tone to signify doubt, politeness etc. However, though the change of tone may affect how certain or how polite we sound, *what we're specifically talking about* is indicated by *stress*, and the *position* of the Tonic Syllable. A great way to practice this kind of stress shift is by counting numbers, as described elsewhere.

Now, say the following utterances out loud, carefully following the stress and tone notation, and try to think of a response to each version of the same utterance. (If you can't think of anything, highlight the line below each sentence for a couple of suggestions)

[A]

1. I'd **like** to know what you think about that.

*"**Well** then, I'll **tell** you" – "I'm not sure you really ^**wo/uld**…"*

2. I'd like to know what **you** think about that.

*"Are you asking everybody ^**e/lse**, ^**to/o**?" – "I'd rather keep my name **out** of it"*

3. I'd like to know what you **think** about that.

*"I think it was a mis**take**" – "I don't really **know** what I think about it"*

[B]

1. Have ^**you** asked everybody to **/be** there tomorrow?

*"**No**, I didn't think I was **meant** to." – "^**Ye/s**, but I wasn't the **best** person to do it."*

2. Have you asked ^**e**verybody to be there to**/mo**rrow?

*"I **have**, but not everybody has con**firmed**." – "I couldn't find ^**e**very/**bo**dy…"*

3. Have you asked everybody to be ^**there** to/**mo**rrow?

*"Yes I **have** – at six o'clock e**xact**ly" – "No, I asked them to stay at **home** tomorrow."*

[C]

1. He ^**said** he'd wait for us outside the **the**atre

"You mean you don't think he'll really ^**sho/w***?" – "But* **\look** *– he isn't* **\here***!"*

2. He said he'd wait for us out**\side** the theatre*'*

'But it's **\rain***ing!" – I'm sure he'll check* ^**in**/side, *when he sees we're not* ^**the/re***."*

3. He said he'd wait for us outside the **\the**atre.

"Then we'd better hurry **\up***!" – "But we just passed* **\by** *and he wasn't* **\there***."*

[D]

1. She ^**might** not want to see us straight a**/way**.

"But then again, she ^**mi/ght***..." – "***\No***, I expect she* **\will***"*

2. She might not **\want** to see us straight away.

"^**Luck***ily for* **/us***, it's not* **\up** *to her" – "In* ^**that /case,** *we'll wait till she* **\does***"*

3. She might not want to see ^**us** straight a**/way**.

"Who do you think she'll want to see **\first***?" – "Do you think she's still* ^**an/gry***?"*

[E]

1. Do ^**you** know why they want us to **/go** there?

"Why would **\I** *know that?" – "You mean,* ^**you /don't** *know why?"*

2. Do you know ^**why** they want us to **/go** there?

*"I have no i***\dea***, I just do as I'm* **\told***." – "It's probably best not to* **\ask***..."*

3. Do you know why they want ^**us** to **/go** there?

"I expect it's about what we did **\last** *time." – "I guess they need our* **\skills***."*

4. Do you know why they want us to go ^**the/re**?

"Probably because it's close to their **\o***ffice" – "Because* ^**last /time**, *they came* **\here***."*

There are obviously *no definitive answers* to these questions and statements because *everything we say and hear is context-specific*. What I recommend is noting down *real-life examples* of this kind of thing (either from *actual* real life, or from radio / TV / film dialogues) and practising them as often as possible, copying the stress and tone as closely as you can.

Changing emphasis is only about *specifying what you mean* – if you're already confident that in English you *can* specify what you mean, then what you'll be practising here is *making your voice respond to what your mind tells it to do* – which is not always as simple as it sounds!

SECTION FOUR

SUPRASEGMENTAL PHONETICS (2)

PROSODIC FEATURES

Lesson Six: Intonation (2)

6.1. Fall-rise and rise-fall tones followed by tail

The most basic distinction among English nuclear tones is that between falling and non-falling.

The various different kinds of falling tone (high fall, low fall, rise-fall) evidently have some degree of meaning in common. There is also something in common in all the various kinds of non-falling tone (high rise, low rise, mid-level, fall-rise), which we refer to as non-falls. However, here it is often necessary to distinguish between rises on the one hand and fall-rises on the other.

A popular idea among language students is that statements are said with a fall, questions with a rise. Also there is an element of truth in this generalization, it is very far from the complete truth. In English, at any rate, statements may have a fall – but they may also have a non-falling tone (a fall-rise or a rise). Questions may have a rise – but they may also have a fall. In general there is no simple predictable relationship between sentence type and tone choice. Nevertheless it is useful to apply the notion of a default tone (= unmarked tone, neutral tone) for each sentence type. As we shall see the default tone is

- a fall for statements, exclamations, *wh* questions and commands;
- a rise for *yes-no* questions.

Another useful generalization is that the default for utterances involving two intonation phrases is to have

- a fall on the main part, and
- non-fall on the subordinate or dependent part.

In a **falling** nuclear tone the pitch of the voice starts relatively high and then moves downwards. The starting point may be anywhere from mid to high. The endpoint is low. There may be some upward movement before the pitch moves downwards.

In the simplest causes the fall takes place on a single syllable. We see this in causes where the nuclear syllable is the only syllable in the IP, or where the nuclear syllable is the last syllable in the IP. The fall then happens on that syllable.

In identifying the nuclear tone we must disregard all the pitch levels and possible pitch movements that are found earlier in the intonation phrase, i. e. before the nucleus.

There is very often a step up in pitch as we reach the beginning of the nuclear fall. Do not let this mislead you into thinking that the tone is rising.

There may even be some upward movement at the beginning of the nuclear syllable. But as long as the pitch then comes down, it is a falling tone.

Often there are syllables after the nucleus, i. e. a tail. After a falling nucleus, the tail is always low. The fall (= the downward pitch movement) happens on or from the syllable that bears the nucleus (the lexically stressed syllable). The syllable(s) after the nucleus are low pitched.

If the vowel in the nucleus syllable is short, or if this vowel is followed by voiceless consonant, there may be insufficient time for the fall to be heard on the nuclear syllable itself. The effect is then one of a jump from higher pitched syllable (the nucleus) to one or more low-pitched syllables (the tail). The overall pitch pattern is still a fall.

Again, in identifying a nuclear tone (in this causes is falling) we disregard any prenuclear pitch pattern.

In a **rising** nuclear tone the pitch of the voice starts relatively low and then moves upwards. The starting point may be anywhere from low to mid, and the endpoint anywhere from mid to high.

If the nucleus is on the last or only syllable in the intonation phrase, then the rise takes place on the syllable.

Again, in identifying the nuclear tone we must disregard any prenuclear pitch pattern.

There is often a step down in pitch as we reach the beginning of the nuclear rise. Do not let this mislead you into thinking that the tone is falling.

If there is a tail (= syllables after the nucleus), the rising pitch movement does not happen whole on the nuclear syllable, as in the cause of a fall. Rather the rise is spread over the nuclear syllable and all the falling syllables – over the whole of the nucleus + tail.

This means that the last syllable is actually the highest pitched, even though it is unaccented. Some people find this difficult to perceive, and instead tend to hear the nucleus later in the intonation phrase than it really is. In fact, if there is no prenuclear material the nucleus, perceptually the most salient syllable for native speakers, is actually the lowest-pitched syllable in the IP.

In the **fall-rise** nuclear tone, the pitch of the voice starts relatively high and then moves first downwards and then upwards again. The starting point may be anywhere from mid to high, the midpoint is low, and the endpoint is usually mid.

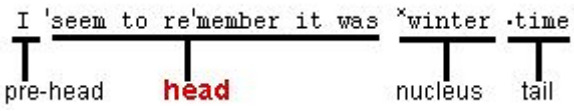
If the nucleus is on the last or only syllables in the intonation phrase, then the entire fall-rise movement takes place on that syllable.

As usual, in identifying the nuclear tone we must disregard any pre-nuclear pitch pattern.

If there is a tail (= syllables after the nucleus), the falling-rising pitch movement is spread out over the nucleus and tail. The falling part takes place on the nuclear syllable, or between that syllable and the next. The rising part takes place towards the end of the tail and extends up to the last syllable of the IP.

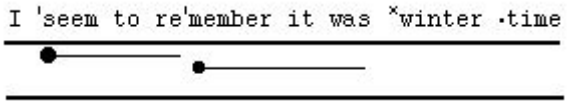
6.1. Tone unit: high & low heads

The head of the TU consists of everything from the FIRST STRESSED SYLLABLE in the TU up to the nucleus.

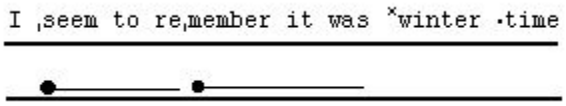


Heads can come in various shapes and sizes: HIGH heads, LOW heads, mixed heads.
We'll concentrate on the two main types, high and low.
HIGH HEADS are shown by using the normal stress symbol in front of the stressed syllables of the head.

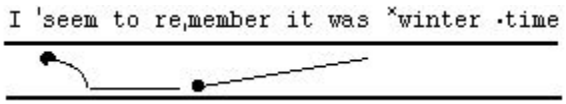
High heads tend to fall on each stress: each stress is lower than the one before it, but all the weak syllables following the stress are on the same level as the stress:



LOW HEADS are shown by using a lowered stress symbol in front of the stressed syllables of the head. Low heads tend to start low and stay low:

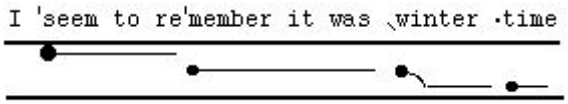


These are the basic patterns. But heads can be of many shapes and sizes. Here's a mixed head:

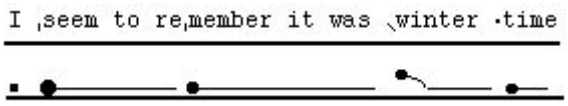


The point to remember is that the HEAD and the NUCLEUS are independent of each other. Here are some examples of various combinations:

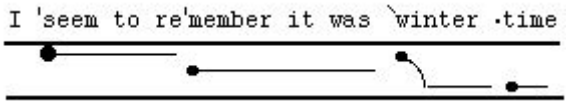
High head, low fall on the nucleus:



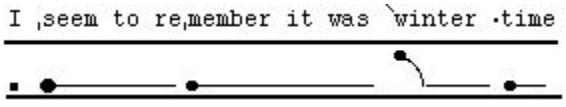
Low head, low fall on the nucleus:



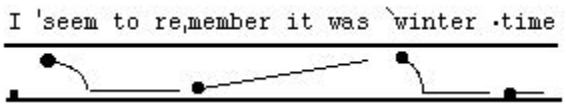
High head, high fall on the nucleus:



Low head, high fall on the nucleus:



Mixed head, high fall on the nucleus:



6.2. Functions of intonation

Intonation is variation in spoken pitch when used, not for distinguishing words as sememes (a concept known as tone), but, rather, for a range of other functions such as indicating the attitudes and emotions of the speaker, signaling the difference between statements and questions, and between different types of questions, focusing attention on important elements of the spoken message and also helping to regulate conversational interaction. (The term *tone* is used by some British writers in their descriptions of intonation but to refer to the pitch movement found on the nucleus or tonic syllable in an intonation unit.)

Although intonation is primarily a matter of pitch variation, it is important to be aware that functions attributed to intonation such as the expression of attitudes and emotions, or highlighting aspects of grammatical structure, almost always involve concomitant variation in other prosodic features. David Crystal for example says that "intonation is not a single system of contours and levels, but the product of the interaction of features from different prosodic systems – *tone*, *pitch-range*, *loudness*, *rhythmicality* and *tempo* in particular.

Most transcription conventions have been devised for describing one particular accent or language, and the specific conventions therefore need to be explained in the context of what is being described. However, for general purposes the International Phonetic Alphabet offers the two intonation marks shown in the box at the head of this article. Global rising and falling intonation are marked with a diagonal arrow rising left-to-right [↗] and falling left-to-right [↘], respectively. These may be written as part of a syllable, or separated with a space when they have a broader scope:

He found it on the street?

[hiː ˈfaʊnd ɪt | ɒn ðə ↗ ˈstɹiːt ‖]

Here the rising pitch on *street* indicates that the question hinges on that word, on where he found it, not whether he found it.

Yes, he found it on the street.

[↘ˈjɛs ‖ hi ˈfaʊnd ɪt | ɒn ðə ↘ ˈstɹiːt]

How did you ever escape?

[↗ ˈˈhaʊ dɪdjuː | ˈɛvəɚ | ə↘ ˈˈskeɪp]

Here, as is common with *wh-* questions, there is a rising intonation on the question word, and a falling intonation at the end of the question.

In many descriptions of English, the following intonation patterns are distinguished:

- *Rising Intonation* means the pitch of the voice rises over time.
- *Falling Intonation* means that the pitch falls with time.
- *Dipping* or *Fall-rise Intonation* falls and then rises.
- *Peaking* or *Rise-fall Intonation* rises and then falls.

It is also common to trace the pitch of a phrase with a line above the phrase, adjacent to the phrase, or even through (overstriking) the phrase. Such usage is not supported by Unicode as of 2015, but the symbols have been submitted.

All vocal languages use pitch pragmatically in intonation—for instance for emphasis, to convey surprise or irony, or to pose a question. Tonal languages such as Chinese and Hausa use intonation in addition to using pitch for distinguishing words. Many writers have attempted to produce a list of distinct functions of intonation. Perhaps the longest was that of W.R. Lee, who proposed ten. J.C. Wells and E. Couper-Kuhlen both put forward six functions. Wells's list is given below; the examples are not his:

* **Attitudinal function** (for expressing emotions and attitudes)

Example: a fall from a high pitch on the 'mor' syllable of "good morning" suggests more excitement than a fall from a low pitch

* **Grammatical function** (to identify grammatical structure)

Example: it is claimed that in English a falling pitch movement is associated with statements, but a rising pitch turns a statement into a yes–no question, as in *He's going ↗**home**?*. This use of intonation is more typical of American English than of British.

focusing (to show what information in the utterance is new and what is already known)

Example: in English *I saw a ↘**man** in the garden* answers "Whom did you see?" or "What happened?", while *I ↘**saw** a man in the garden* answers "Did you hear a man in the garden?"

* **Discourse function** (to show how clauses and sentences go together in spoken discourse)

Example: subordinate clauses often have lower pitch, faster tempo and narrower pitch range than their main clause, as in the case of the material in parentheses in "The Red Planet (as it's known) is fourth from the sun"

* **Psychological function** (to organize speech into units that are easy to perceive, memorize and perform)

example: the utterance "You can have it in red blue green yellow or ↘black" is more difficult to understand and remember than the same utterance divided into tone units as in "You can have it in ↗red | ↗blue | ↗green | ↗yellow | or ↘black"

* **Indexical function** (to act as a marker of personal or social identity)

Example: group membership can be indicated by the use of intonation patterns adopted specifically by that group, such as street vendors or preachers. The so-called high rising terminal,

where a statement ends with a high rising pitch movement, is said to be typical of younger speakers of English, and possibly to be more widely found among young female speakers.
It is not known whether such a list would apply to other languages without alteration.

SECTION FIVE

PROSODIC FEATURES

Connected Speech (1)

Aspects of Connected speech

Lesson Seven: Assimilation

7.1. Assimilation

Assimilation is a general term in phonetics for the process by which a speech sound becomes similar or identical to a neighboring sound. In the opposite process, dissimilation, sounds become less similar to one another. The term "assimilation" comes from the Latin meaning, "make similar to." "Assimilation is the influence of a sound on a neighboring sound so that the two become similar or the same. For example, the Latin prefix *in-* 'not, non-, un-' appears in English as *il-*, *im-*. and *ir-* in the words *illegal*, *immoral*, *impossible* (both *m* and *p* are bilabial consonants), and *irresponsible* as well as the unassimilated original form *in-* in *indecent* and *incompetent*. Although the assimilation of the *n* of *in-* to the following consonant in the preceding examples was inherited from Latin, English examples that would be considered native are also plentiful. In rapid speech native speakers of English tend to pronounce *ten bucks* as though it were written *tembucks*, and in anticipation of the voiceless *s* in *son* the final consonant of *his* in *his son* is not as fully voiced as the *s* in *his daughter*, where it clearly is [z]."

(Zdenek Salzmann, "Language, Culture, and Society: An Introduction to Linguistic Anthropology. Westview," 2004)

"Features of adjacent sounds may combine so that one of the sounds may not be pronounced. The nasal feature of the *mn* combination in *hymn* results in the loss of /n/ in this word (progressive assimilation), but not in *hymnal*. Likewise, the alveolar (upper gum ridge) production of *nt* in a word such as *winter* may result in the loss of /t/ to produce a word that sounds like *winner*. However, the /t/ is pronounced in *wintry*." (Harold T. Edwards, ″Applied Phonetics: The Sounds of American English.″ Cengage Learning, 2003)

Assimilation then is a sound change in which some phonemes (typically consonants or vowels) change to become more similar to other nearby sounds. A common type of phonological process across languages, assimilation can occur either within a word or between words, i.e., in word-boundaries.

It occurs in normal speech but becomes more common in more rapid speech. In some cases, assimilation causes the sound spoken to differ from the normal pronunciation in isolation, such as the prefix *in-* of English *input* pronounced with phonetic [m] rather than [n]. In other cases, the change is accepted as canonical for that word or phrase, especially if it is recognized in standard spelling: *implant* pronounced with [m], composed historically of *in* + *plant*.

English "handbag" (canonically /ˈhændbæg/) is often pronounced /ˈhæmbæg/ in rapid speech because the [m] and [b] sounds are both bilabial consonants, and their places of articulation are similar. However, the sequence [d]-[b] has different places but similar manner of articulation (voiced stop) and is sometimes elided, which sometimes causes the canonical [n] phoneme to assimilate to [m] before the [b]. The pronunciations /ˈhænbæg/ or /ˈhændbæg/ are, however, common in normal speech.

In contrast, the word "cupboard", although it is historically a compound of "cup" /kʌp/ and "board" /bɔːrd/, is always pronounced /ˈkʌbərd/, never */ˈkʌpbɔːrd/, even in slow, highly-articulated speech.

7.1.1.Partial Assimilation and Total/Complete Assimilation

"[Assimilation] may be *partial* or *total*. In the phrase *ten bikes*, for example, the normal form in colloquial speech would be /tem baiks/, not /ten baiks/, which would sound somewhat 'careful.' In this case, the assimilation has been partial: the /n/ sound has fallen under the influence of the following /b/, and has adopted its bilabiality, becoming /m/. It has not, however, adopted its plosiveness. The phrase /teb baiks/ would be likely only if one had a severe cold! The assimilation is total in *ten mice* /tem mais/, where the /n/ sound is now identical with the /m/

which influenced it."

Johnston (2016: 40) explicates that there are special types of assimilation which are historical assimilation and contextual assimilation. Historical assimilation indicates the development of a language so that a word is now produced distinguishably than it was earlier. It is observable in the high amount of words that are articulated contradictorily to how they are written, as well as the presence of silent letters, for instances, handsome /hænsəm/, handkerchief /hæŋkəʧıf/. As opposed, contextual assimilation refers to transformations in pronunciation because of the effect of surrounding words that it takes place in such instances as, horse shoe /hɔːʃ ʃuː/, whereby /s/ is substituted by /ʃ/; does she /dʌʒ ʃi/, whereby /z/ is substituted by /ʒ/ and don't you /dəʊnʧ juː/, whereby /t/ is substituted by /ʧ/.

7.1.2. Direction of Influence

"Features of an articulation may *lead into* (i.e. anticipate) those of a *following* segment, e.g. English *white pepper* /waɪt 'pepə/ → /waɪp 'pepə/. We term this *leading assimilation*.

"Articulation features may be held over from a *preceding* segment, so that the articulators *lag* in their movements, e.g. English *on the house* /ɑn ðə 'haʊs/ → /ɑn nə 'haʊs/. This we term *lagging assimilation*.

"In many cases, there is a two-way exchange of articulation features, e.g. English *raise your glass* /'reɪz jɔ: 'glɑ:s/ → /'reɪʒ ʒɔ: 'glɑ:s/. This is termed *reciprocal assimilation*." (Beverley Collins and Inger M. Mees, "Practical Phonetics and Phonology: A Resource Book for Students," 3rd ed. Routledge, 2013)

7.1.3. Progressive assimilation vs. Regressive assimilation

Regressive assimilation (anticipatory assimilation) is an assimilation in which the sound that undergoes the change (the target) comes earlier in the word than the trigger of assimilation, i.e., the change operates backwards. Besides, Lorenz (2013:86) affirms that in English, regressive assimilation is frequent for syllable – final alveolar plosives and nasals [t, d, n]. For instance, the phrase good morning is /gʊd mɔ:nɪŋ/ when it is articulated carefully. But in connected, everyday speech, /gʊb mɔ:nɪŋ/ can be heard instead, where alveolar /d/ has been substituted by bilabial /b/ because of the following sound that is also bilabial. Similarly ten coins may not in fact be articulated as /ten kɔɪnz/, but rather as /teŋ kɔɪnz/ with a regressive assimilation of /n/ to /ŋ/.

In case of **progressive** assimilation the trigger comes before the target so that the assimilation operates forwards. In rare cases of *reciprocal assimilation* there is a mutual influence between

the two sounds. Regressive assimilation is also called ‘anticipatory assimilation’ or ‘right-to-left assimilation.’ Progressive assimilation is also known as ‘perseveratory assimilation’ or ‘left-to-right assimilation.’ In other words, regressive assimilation **happens when the following sound in a word influences the preceding sound as in light** blue /lait blu:/ pronounced rapidly as /laip blu:/; whereas progressive assimilation happens when the preceding sound influences the following sound since the preceding sound is too dominant such as in the words: "handbag", which is often pronounced [ˈham'bag], and "hot potato" as [ˈhɒppə'teɪtəʊ].

7.1.3. Contiguous assimilation Vs. Non-contiguous assimilation

7.1.3.1. Contiguous assimilation (contact assimilation) can be expressed by the following instances ten pigs /tem pɪgz/ and pigs /pɪgz/. It is so much more widespread in English that assimilation establishes one sound more like an adjacent sound, indicating that assimilation is always contiguous, (Skandera and Burleigh, 2011:90).

7.1.3.2. Non-contiguous assimilation (distance assimilation) is so exceptional in English that it can safely be ignored. For instancee, turn up trumps /tɜːm ʌp trʌmps/, in which the /n/ in turn is supposedly sometimes pronounced bilabially, as /m/, under the effect of the later bilabial segments /p/ and /m/,(ibid.).

2. The second categorization differentiates between (a) assimilation is occurred by the effect of a preceding sound that is known as progressive assimilation or preservative assimilation, (b) assimilation is occurred by the effect of a following segment which is called regressive assimilation or anticipatory assimilation, and (c) assimilation is again occurred by the effect of two segments upon each other which is named as coalescent assimilation, or reciprocal assimilation.

7.1.3. Assimilation of intensity Vs. Assimilation of place

7.1.3.1. Assimilation of intensity across word boundaries always results in a fortis and is typically regressive, as in have to /ha:v tu:/, where the lenis /v/ can transform to fortis /f/ under the effect of the following fortis /t/, and I've seen /aɪv si:n/, where the lenis /v/ can transform to fortis /f/ under the effect of the following fortis /s/. But it can also be progressive, as in, shut your mouth /ʃʌt jɔ: maʊθ/, where the lenis /j/ can transform to fortis /ʃ/ under the effect of the preceding fortis /t/. This type of assimilation is often not very observable since some lenis sounds are at least partly devoiced in word-initial and word-final positions anyway. The word

have, for instance, is often completely devoiced at the end even when it is articulated in isolation, (Skandera and Burleigh, 2011:92).

7.1.3.2. Assimilation of place: Roach (2009:111) indicates that assimilation of place is most obviously noticeable in some cases where a final consonant with alveolar place of articulation is followed by an initial consonant with a place of articulation that is not alveolar. For instance, the final consonant in that /ðæt/ is alveolar /t/. In rapid, casual speech the /t/ will become /p/ before a bilabial consonant, as in: that

person /ðæp pɜ:sn̩/, that man /ðæp mæn/, meat pie /mi:p paɪ/. Before a dental consonant, /t/ will transform to a dental plosive, for which the symbol is /t/, as in: that thing /ðæt θɪŋ/; get those /get ðəʊz/; cut through; /kʌt θru:/. Before a velar consonant, the /t/ will become /k/, as in: that case /ðæk keɪs/; bright colour /braɪk kʌlə/; quite good /kwaɪk gʊd/. In similar contexts /d/ would become /b/, /d/ and /g/ respectively, and /n/ would become /m/, /n/ and /ŋ/. Instances of this would be: good boy /gʊb bɔɪ/, bad thing /bæd θɪŋ/, card game /ka:g geɪm/, green paper /gri:p peɪpə/, fine thought /faɪn θɔ:t/, ten girls /teŋ gɜ:lz/. Nevertheless, the same is not true of the other alveolar consonants: /s/ and /z/ behave distinguishably, the only observable alter being that /s/ becomes /ʃ/, and /z/ becomes /ʒ/, when followed by/ ʃ/ or /j/, as in: this shoe /ðɪʃ ʃuː/; those years /ðəʊʒ jɪəz/. It is important to note that the consonants that have undergone assimilation have not disappeared, (ibid.).

7.1.4. Assimilation of manner is much less observable, and is only discovered in the most rapid and casual speech; broadly speaking, the tendency is again for regressive assimilation and the alternation in the manner is most likely to be towards an easier consonant (one which makes less obstruction to the airflow). It is thus possible to observe cases where a final plosive becomes a fricative or nasal , as in, that side /ðæs saɪd/, good night /gʊn naɪt/, but most unlikely that a final fricative or nasal would become a plosive. In a particular case, one can find progressive assimilation of manner, when a word-initial /ð/ follows a plosive or nasal at the end of a preceding word: it is very common to observe that the initial consonant C i becomes alike in manner to the final consonant C f but with dental place of articulation. For instance: in the /ɪn ðə/ /ɪn nə/ get them /get ðəm/ /get təm/ read these /ri:d ði:z/ /ri:d di:z/ (ibid:111-112)

7.1.5. Assimilation Rules: Minkova and Stockwell (2009:108) describe assimilation rules as replacement rules which have the influence of making one vowel or consonant more alike, or even similar with another. Basically, assimilation can influence both vowels and consonants. In this regard, Fromkin, et al. (2015: 236) maintain that assimilation rules in languages show coarticulation-the spreading of phonetic characteristicseither in the anticipation or in the

perseveration (the hanging on) of articulatory processes. The auditory influence is that words sound smoother. However, assimilation rules can be discussed as follows:

7.1.5.1. Voicing assimilation. In many languages, it is impossible to pronounce a consonant cluster (more than one consonant) with different voicing values for the consonants, especially if the consonants are obstruents. This is surely the case for English if the two (or more) consonants are both in the coda (any consonant sound that ends a syllable). Thus, the form that stands for, simultaneously, the noun plural marker, the singular present tense and the possessive always concords in voicing with the preceding obstruent consonant, as in: dogs /dɒgz/, cats /kæts/, plays /pleɪz/, (Nathan, 2008:78).

7.1.5.2. Alveolar nasal assimilation Many humans, particularly in casual speech, and most non adults assimilate the place of articulation of the nasal to the following labial consonant as in the word sandwich /sænwɪʧ/ that transform into/sæmwɪʧ/. In this example, the alveolar nasal /n/ assimilates to the bilabial /w/ by altering the alveolar to a bilabial /m/, (Denham and Lobeck, 2010:107).

7.1.5.3. Palatalization They (ibid.:108) describe palatalization as a widespread process which is caused by an interaction between either front vowels or a /y/ glide and a neighbouring alveolar consonant, effecting in affricate or a fricative palatal consonant. This phonological change distinguishes across dialects as well as across careful versus casual speech. In this rule, Hazen (2015:92) mentions that "speakers make alveolar sounds more palatal when they come before the palatal glide /j/. In the following combinations from US English, the alveolar stops [t] and [d] become the palatal affricates [ʧ] and [ʤ] by absorbing the [j]". For instance: It hit you /ɪthɪtju/ /ɪthɪʧu/ Did you /dɪdju/ /dɪdʒu/

PROSODIC FEATURES

Connected Speech (2)

Aspects of Connected speech

Lesson Eight: Aspects of Connected speech

8.1. Elision

In linguistics, an **elision** or **deletion** is broadly defined as the omission of one or more sounds (such as a vowel, a consonant, or a whole syllable) in a word or phrase. However, it is also used to refer more narrowly to cases where two words are run together by the omission of a final sound. An example is the elision of word-final /t/ in English if it is preceded and followed by a consonant: ‘first light’ is often pronounced /fɜ:s laɪt/. Many other terms are used to refer to particular cases where sounds are omitted.

When words are spoken in context, it often happens that some sounds that belong to the citation form are omitted. Elision is not an all-or-nothing process: elision is more likely to occur in some styles of speaking and less likely in others. Many writers have described the styles of speech in which elision is most commonly found, using terms such as ‘casual speech’, ‘spontaneous speech’, ‘allegro speech’ or ‘rapid speech'. In addition, what may appear to be the disappearance of a sound may in fact be a change in the articulation of a sound that makes it less audible.

"Elision of sounds can be seen clearly in contracted forms like *isn't* (is not), *I'll* (I shall/will), *who's* (who is/has), *they'd* (they had, they should, or they would), *haven't* (have not) and so on. We see from these examples that vowels or/and consonants can be elided. In the case

of contractions or words like *library* (pronounced in rapid speech as /laibri/), the whole syllable is elided."

8.2. Nature of Reduced Articulation

"It is easy to find examples of elision, but very difficult to state rules that govern which sounds may be elided and which may not. Elision of vowels in English usually happens when a short, unstressed vowel occurs between voiceless consonants, e.g. in the first syllable of *p**er**haps, p**o**tato*, the second syllable of *bic**y**cle*, or the third syllable of *philos**o**phy."*

"It is very important to note that sounds do not simply 'disappear' like a light being switched off. A transcription such as /æks/ for *acts* implies that the /t/ phoneme has dropped out altogether, but detailed examination of speech shows that such effects are more gradual: in slow speech the /t/ may be fully pronounced, with an audible transition from the preceding /k/ and to the following /s/, while in a more rapid style it may be articulated but not given any audible realisation, and in very rapid speech it may be observable, if at all, only as a rather early movement of the tongue blade toward the /s/ position."

"An elision is the omission of a sound for phonological reasons ..: *'cause* (also spelled *'cos, cos, coz*) from *because*; *fo'c'sle* from *forecastle*; or *ice tea* from *iced tea* (in which *-ed* is pronounced /t/ but omitted because of the immediately following /t/)."

"[*Ice cream*] is an extremely common term and no one these days, I believe, would be tempted to describe the confection as *iced cream* — and yet this was its original description. . . . With time, however, the *-ed* ending eroded. In pronunciation, it would have been swallowed very early and eventually, this was reflected in the way it was written."

8.3. Historical Elision

There are various ways in which the present form of a language may reflect elisions that have taken place in the past. This topic is an area of Diachronic linguistics. Such elisions may originally have been *optional* but have over time become *obligatory* (or mandatory). An example of historical elision in French that began at the phrasal level and became lexicalized is preposition *de* > *d'* in *aujourd'hui* 'today', now felt by native speakers to be one word, but deriving from *au jour de hui*, literally 'at the day of today' and meaning 'nowadays,' although *hui* is no longer recognized as meaningful in French. In English, the word ‘cupboard’ would originally have contained /p/ between /ʌ/ and /b/, but the /p/ is believed to have disappeared from the pronunciation of the word about the fifteenth century.

8.4. Contractions

In many languages there is a process similar but not identical to elision, called **contraction**, where common words that occur frequently together form a shortened pronunciation. This may be a historical case (for example, French ‘ce est’ has become ‘c’est’ /se/ and it would now be incorrect to say ‘ce est’ /sə e/) or one that is still optional (in English, a speaker may say ‘that is’ /ðæt ɪz/ or ‘that’s’ /ðæts/). Contractions of both sorts are natural forms of the language used by native speakers and are not considered substandard. English contractions are usually vowel-less weak form words. In some cases the contracted form is not a simple matter of elision: for example, “that’s” as a contraction is made not only by the elision of the /ɪ/ of ‘is’ but also by the change of final consonant from /z/ to /s/; “won’t” for “will not” requires not only the elision of the /ɒ/ of ‘not’ but also the vowel change /ɪ/ --> /oʊ/ and in English RP ‘can’t’ and ‘shan’t’ change vowel from /æ/ of ‘can’ and ‘shall’ to /ɑː/ in /kɑːnt/, /ʃɑːnt/. In some languages employing the Latin alphabet, such as English, the omitted letters in a contraction are replaced by an apostrophe (e.g., *isn't* for *is not*).

8.5. Deletion

The term *deletion* is used in some modern work instead of *elision*. When contemporary or historic deletion is treated in terms of Generative phonology it is usual to explain the process as one of substituting zero for a phoneme, in the form of a phonological rule. The form of such rules is typically

X --> ∅ (i.e. the segment x becomes zero)

An example of a deletion rule (for /r/-deletion in English RP) is provided by Giegerich. If we start with the premise that the underlying form of the word ‘hear’ has a final /r/ and has the phonological form /hɪər/, we need to be able to explain how /r/ is deleted at the end of ‘hear’ but is not deleted in the derived word ‘hearing’. The difference is between word-final /r/ in ‘hear’, where the /r/ would form part of the rhyme of a syllable, and word-medial /r/ which would form the onset of the second syllable of ‘hearing’. The following rule deletes /r/ in ‘hear’, giving /hɪə/, but does not apply in the case of ‘hearing’, giving /hɪərɪŋ/.

rhyme

/r/ --> ∅/ _____

More examples of elision in English

Word	IPA before	IPA after elision

	elision	
natural	/ˈnætʃərəl/	/ˈnætʃrəl/
laboratory (British English)	/ləˈbɒrətəri/	/ləˈbɒrətri/
temperature	/ˈtɛmpərətʃər/	/ˈtɛmpərtʃər/, /ˈtɛmprətʃər/, sometimes /ˈtɛmpətʃər/
family	/ˈfæmɪli/	/ˈfæmli/
vegetable	/ˈvɛdʒətəbəl/	/ˈvɛdʒtəbəl/ or devoiced into /ˈvɛtʃtəbəl/
fifth	/ˈfɪfθ/	/ˈfɪθ/
him	/hɪm/	/ɪm/
going to	/ˈgoʊ.ɪŋ tuː/	/gənə/ (*gonna*)
it is, it has	/ɪt ˈɪz/, /ɪt ˈhæz/	/ɪts/ (*it's*)
I have	/aɪ ˈhæv/	/aɪv/ (*I've*)
is not	/ɪzˈnɒt/	/ˈɪzənt/ (*isn't*)

Most elisions in English are not mandatory, but they are used in common practice and even sometimes in more formal speech. This applies to nearly all the examples in the above table. However, these types of elisions are rarely shown in modern writing and never shown in formal writing. In formal writing, the words are written the same whether or not the speaker would elide them, but in many plays and classic English literature, words are often written with an elision to demonstrate accent.

Other examples, such as *him* and *going to* shown in the table above, are generally used only in fast or informal speech. They are still generally written as is unless the writer intends to show the dialect or speech patterns of the speaker.

The third type of elision is in common contractions, such as *can't*, *isn't*, or *I'm*. The apostrophes represent the sounds that are removed and are not spoken but help the reader to understand that it is a contraction and not a word of its own. These contractions used to be written out when transcribed (i.e. *cannot*, *is not*, *I am*) even if they were pronounced as a contraction, but now they are always written as a contraction so long as they are spoken that way. However, they are by no means mandatory and a speaker or writer may choose to keep the words distinct rather than contract them either as a stylistic choice, when using formal register, to make meaning clearer to

children or non-native English speakers, or to emphasize a word within the contraction (e.g. *I* am *going!*)

In non-rhotic accents of English, /r/ is dropped unless it's followed by a vowel, making *cheetah* and *cheater* completely homophonous. In non-rhotic accents spoken outside of North America, many instances of /ɑː/ correspond to /ɑːr/ in North American English as /æ/ and /ɒ/ are used instead of /ɑː/.

PROSODIC FEATURES

Connected Speech (2)

Aspects of Connected speech

Lesson Nine: Linking

9.1. Connected speech

When we speak naturally we do not pronounce a word, stop, and then say the next word in the sentence. Fluent speech flows with a rhythm and the words bump into each other. To make speech flow smoothly the way we pronounce the end and beginning of some words can change depending on the sounds at the beginning and end of those words.

These changes are described as features of connected speech.

Linking is a way of joining the pronunciation of two words so that they are easy to say and flow together smoothly. In English there are different ways that this happens.

9.2. Linking: sounds at word-boundaries

When we say English sentences, words are linked or joined to each other. This means words can actually sound different when we say them together. Linking is the merging of different words together until they sound like they're just one word.

Linking sounds are needed to make English sounds more fluent. Without linking sounds, there will be lots of awkward pauses or extra unnecessary sounds. This makes linking sounds really

important for ESL students because these extra pauses and noises will sound particularly foreign to a native speaker of English.

English is a language that sounds very smooth and one of the ways this smoothness is achieved is through linking sounds.

Linking sounds in English examples come in all different forms. The one most people are familiar with is blending, but other linking sounds in English examples include things such as changing sounds, omitting sounds and doubling sounds.

9.3. Blending

Blending is when one sound moves into another smoothly. It works particularly well for continuous consonants.

An example of this would be *"this morning" where the "s" from "this" and the "m" from morning blend together.*

9.4. Overlapping sounds

When sounds next to each other overlap one another it can change the way one or both of these sounds sound.

One of the ways this happens is something called nasal aspiration. This is where the flap in the back of the mouth is closed for "d" sounds but then opens for an "n" sound but the tongue stays in the same place.

An example of this would be "the girl did nothing wrong."

This would allow the flap to stay closed for the d and open for the n. It would stop air at the d but release it again at the d sound.

There is also something called lateral aspiration which links "d" and "l". The d would be said normally but the l would release the tongue.

An example of this would be "red light".

9.5. Changing sounds

Sometimes rather than sounds merging or altering due to different letters, this linking sound merges sounds into a totally new sound. This happens when either /d/ or /t/ come before y.

For example, "won't you", uses assimilation to make a different sound. The "t" and the "y" create a "ch" sound, that makes the phrase sound like "wonchu".

9.6. Adding sounds

Sometimes an additional sound is placed between others. When trying to pronounce vowels clearly, sometimes adding a "w" or a "y" sound can help.

For example, you might add a small y sound between two vowels such as "she asked". This adds the y between a 'long e 'and 'a short' a so both vowel sounds can be fully pronounced. Teach your class more about long and short vowel sounds with these fantastic display posters. A great reference point for vowel pronunciation.

9.7. Double sounds

Double sounds happen when a word finishes with a consonant and the next letter begins with the same one. These double consonants link by pronouncing one single sound but extending how long it is said for.

For example, "spring garden" uses an elongated g that is then released going into the word "garden".

Stopping holding and releasing signals the pronunciation of both sounds

9.8. Consonant to vowel linking - when the first word ends with a consonant sound and the second word begins with a vowel sound.

9.8.1. Weak form - schwa

This is a very common feature of spoken English which is often found in grammar words such as prepositions and articles and also in many words with more than one syllable. It is never stressed.

In the example sentence below the weak form schwa is shown by its phonemic symbol, which looks like an upside down 'e'.

I'm going tə the shop tə buy sə eggs

Getting the schwa sound correct is a good way of making your pronunciation more accurate and natural.

The phonemic symbol for this sound is /ə/.

9.8.2. In unstressed syllables

Any vowel letter can be pronounced as schwa and the pronunciation of a vowel letter can change depending on whether the syllable in which it occurs is stressed or not.

In the word 'man' the letter 'a' has its full sound - represented by the symbol /æ/.

In 'postman' the syllable 'man' is not stressed and the letter 'a' is pronounced as schwa, represented by the symbol/ə/. The sound schwa does not only represent a single letter. In some

words it is the sound of several letters or even a whole syllable.

This is often, but not only, seen in words which have a syllable made up of a vowel letter followed by the letter 'r'. Remember the schwa sound is only used if the syllable which it is in is not stressed.

The schwa sounds are marked in red:

This pres**e**nt is f**or** my broth**er**. It's **a** book **a**bout **a** boy wiz**ar**d.

To s**ur**vive th**e** cold weath**er** you have t**o** make thor**ough** prep**a**rati**o**ns.

9.9. Vowel to vowel linking - when certain vowels come next to each other an extra sound is added to make the link smooth.

9.9.1. Linking 'r'

In standard British English (RP) the letter 'r' after a vowel sound at the end of word is often not pronounced. However, when the following word begins with a vowel the /r/ sound is pronounced to make a smooth link.

9.9.2. Sounds disappear

When the sounds /t/ or /d/ occur between two consonant sounds, they will often disappear completely from the pronunciation.

9.9.3. Sounds and letters

Vowel sounds are not the same as vowel letters. The word European begins with the vowel letter 'E' but the first sound is actually a consonant sound /j/. So, when speaking the word European will be preceded by the article 'a' and not 'an'.

9.9.4. Linking 'r'

Those British speakers who don't pronounce final 'r' will reintroduce it when the next word begins with a vowel, as in: The ca**r i**s here (r is pronounced and links to the following word)

9.9.5. Connected Speech

Words are not always pronounced the same! In normal fluent speech the sounds can change when words bump into each other. The changes usually happen at the word boundaries, particularly at the end of words.

9.9.6. Sounds twinning (gemination)

When a word ends in a consonant sound and the following word begins with the same consonant sound or in a consonant which is homorganic with the first one, we don't pronounce two sounds - both sounds are pronounced together as one.

I'm a bi**t t**ired

We have a lo**t t**o do

Tell me wha**t t**o say

She'**s s**lept for three hours

I'**ve f**inished

9.9.7. Sounds disappear (elision)

When the sounds /t/ or /d/ occur between two consonant sounds, they will often disappear completely from the pronunciation.

I'm going nex(t) week

That was the wors(t) job I ever had!

Jus(t) one person came to the party!

I can'(t) swim

9.9.8. Sounds join together

When a word ends in a consonant sound and the following word begins with the same consonant sound, we don't pronounce two sounds - both sounds are pronounced together as one

9.10. Sounds change

When a word ends in a consonant sound and the following word begins with a consonant sound, depending on the particular sounds, the last sound of the first word or both the last sound and the first sound of the next word can change.

This programme looks at some more advanced features of connected speech when the pronunciation of words changes in everyday speech. These changes happen automatically when speaking fluently so they don't really need to be practised however being aware of them can improve listening comprehension.

Sounds change (assimilation)

When a sound at the end of a word takes on the quality of the sound at the beginning of the next word.

Good girl. She's a good girl. (goog girl)

Good boy. He's a good boy. (goob boy)

White paper. I only use white paper. (whipe paper)

Speed boat. I've never been in speed boat. (speeb boat)

Because of the place in the mouth where certain sounds are made, sometimes the sound at the end of the first word changes to a completely different sound.

Can go. We can go now. (cang go)

Can buy. We can buy it. (cam buy)

Green Park. I walked through Green Park. (greem park)

On Monday. He arrives on Monday. (om Monday)

Sometimes more than one feature of connected speech happens at the same time. When the sounds /t/ or /d/ occurs between two consonant sounds, they will often disappear completely

from the pronunciation. This means that the last sound of the word will be different and can be changed by the following word.

Hand bag. She couldn't find her handbag. (hambag)

Saint Paul's. I'm going to visit Saint Paul's Cathedral today. (Sem Paul's)

There is another common form of assimilation when both the last sound of the first word and the first sound of the following word change to a third sound.

Would you. Woul**d y**ou like some tea?

Did you. Di**d y**ou see it?

PROSODIC FEATURES

Connected Speech (3)

Aspects of Connected speech

Lesson Ten: Juncture

10.1. Juncture

In phonetics, juncture is the manner of moving (transition) between two successive syllables in speech. An important type of juncture is the suprasegmental phonemic cue by means of which a listener can distinguish between two otherwise identical sequences of sounds that have different meanings.

There are several kinds of juncture, the most widely used typology of which is:

10.1.1. plus juncture

Also known as **open juncture**, this is subdivided into **internal open juncture** and **external open juncture**. It is the juncture that occurs at word boundaries. In phonetic transcription open juncture is transcribed /+/, hence the name *plus* juncture.

10.1.2. Close juncture

Also known as a **normal transition**, this is a transition between segments (sounds) within a word.

10.1.3. Terminal juncture

Also known as **falling**, **clause terminal** or **terminal contour**, this is the juncture at the end of a clause or utterance with falling pitch before a silence.

Other less common typologies exist, such as the division (favoured by American Structuralist linguists in the middle twentieth century) into **plus**, **single bar**, **double bar**, and **double cross** junctures, denoted /+/, /|/, /||/, and /#/ respectively. These correspond to syllabification and differences in intonation, single bar being a level pitch before a break, double bar being an upturn in pitch and a break, and double cross being a downturn in pitch that usually comes at the end of an utterance.

Examples from English:

In English, a syllable break at the plus juncture sometimes distinguishes otherwise homophonic phrases.

- "a name" /ə.neɪm/ and "an aim" /ən.eɪm/
- "that stuff" /ðæt.stʌf/ and "that's tough" /ðæts.tʌf/
- "fork handles" and "four candles"

A word boundary preceded or followed by a syllable break is called an *external open juncture*. If there is no break, so that words on either side of the juncture are run together, the boundary is called an *internal open juncture*.

The distinction between open and close juncture is the difference between "night rate", /naɪt.reɪt/ with the open juncture between /t/ and /r/, and "nitrate", /naɪ.treɪt/ with close juncture between /t/ and /r/. In some varieties of English, only the latter involves an affricate.

10.2. Cases of Juncture

"**Linking**" and "**intrusive r**" are special cases of **juncture**; this name refers to the relationship between one sound and the sounds that immediately precede and follow it, and has been given some importance in phonological theory. If we take the two words 'my turn' /**maɪ tɜ**ː**n/**, the relationship between /**m/** and /**aɪ/**, between /**t/** and /**ɜ**ː**/** and between /**ɜ**ː**/** and /**n/** is said to be one of close juncture. /**m/** is preceded by silence and /**n/** is followed by silence, and so **m** and **n** are said to be in a position of external open juncture. The problem lies in deciding what the relationship is between /**aɪ/** and /**t/**; since we do not usually pause between words, there is no silence (or external open juncture) to indicate word division and to justify the space left in the transcription. But if English speakers hear /**maɪ tɜ**ː**n/** they can usually recognise this as 'my turn' and not 'might earn'. This is where the problem of internal open juncture (usually just

called “juncture” for short) becomes apparent. What is it that makes perceptible the difference between /**maɪ tɜ**:**n/** and /**maɪt ɜ**:**n**/? The answer is that in the one case the **/t/** is aspirated (initial in ‘turn’), and in the other case it is not (being final in ‘might’). In addition to this, the **/aɪ/** diphthong is shorter in ‘might’, but we will ignore this for the sake of a simpler argument. If a difference in meaning is caused by the difference between aspirated and unaspirated /**t/**, how can we avoid the conclusion that English has a phonemic contrast between aspirated and unaspirated /t/? The answer is, of course, that the position of a word boundary has some effect on the realisation of the /t/ phoneme; this is one of the many cases in which the occurrence of different allophones can only be properly explained by making reference to units of grammar (something which was for a long time disapproved of by many phonologists).

Many ingenious minimal pairs have been invented to show the significance of juncture, a few of which are given below:

* ‘might rain’ /**maɪt reɪn/** (**r** voiced when initial in ‘rain’ /**aɪ/** short)
* ‘my train’ /**maɪ treɪn/** (**r** voiceless following **t** in ‘train’)
* ‘all that I’m after today’ /**ɔ**:**l ðət aɪm ɑ**:**ftə tədeɪ/** (/**t/** unaspirated when final in ‘that’)
* ‘all the time after today’ **/ɔ**:**l ðə taɪm ɑ**:**ftə tədeɪ/** (/**t/** aspirated when initial in ‘time’)
* ‘he lies’ /**hi**: **laɪz/** (“clear **l**” initial in ‘lies’)
* ‘heal eyes’ **/hi**:**l aɪz/** (“dark **l**” final in ‘heal’)
* ‘keep sticking’ /**ki**:**p stɪkɪŋ/** (/**t/** unaspirated after /**s/; /i**:/ short)
* ‘keeps ticking’ **/ki**:**ps tɪkɪŋ/** (/**t/** aspirated in ‘ticking’)

Of course, the context in which the words occur almost always makes it clear where the boundary comes, and the juncture information is then redundant.

It should by now be clear that there is a great deal of difference between the way words are pronounced in isolation and in the context of connected speech. It would not be practical or useful to teach all learners of English to produce assimilations; practice in making elisions is more useful, and it is clearly valuable to do exercises related to rhythm and linking. Perhaps the most important consequence of what has been described in this chapter is that learners of English must be made very clearly aware of the problems that they will meet in listening to colloquial, connected speech.

PROSODIC FEATURES

Connected Speech (3)

Aspects of Connected speech

Lesson Eleven: Intrusion

11.1. Intrusion

Intrusion is a feature of **connected** speech. When two words are said together, an extra sound is sometimes placed between them in order to make them easier to say. When a native speaker says 'I am not happy' there is an intrusive /j/ sound between 'I' and 'am' /aɪ **j** əm/ which makes it easier to say the phrase quickly. It is the phenomenon by which a new sound appears at any position in a speech . According to its position it receives different names: liaison , prosthesis , epenthesis and paragoge .

11.2. Intrusion and linking

When two vowel sounds meet, we tend to insert an extra sound which resembles either **/ j /, / w / or / r** /, to mark the transition sound between the two vowels, a device referred to as intrusion. For example:

11.2.1. Intruding / r /: we sometimes add an imaginary '**r**' sound, even when there isn't an '**r**' at the end of the first word. This pronunciation technique is known as the **Intrusive R**.

Again, we do this to speak more fluently and to make one word transition more easily into the next. This **Intrusive R** is being used in the following sentences:

* The media [**r**] are to blame. /ðə 'mi:dɪə **R** tə 'bleɪm/

* Law [**r**] and order. /lɔ: **R** ɔ:də/

* The United States of America [**r**] is a big country.

* Donna [**r**] and her mother.

* A banana [**r**] is a yellow fruit.

* Pamela [**r**] Anderson.

* I want to visit China [**r**] and Vietnam.

11.2.2. Intruding / j /. We use the **linking /j/** sound in spoken English when one word ends in one of the following sounds:

- **/a**ɪ**/** (e.g. buy)
- **/i:/** (e.g. tea)
- /eɪ/ (e.g. today)
- **/ɔɪ/** (e.g. boy)

I / **j** / agree. /aɪ **j** ə'gri:/

They / **j** /are here! /ðeɪ **j** ə r hɪə/

say [sɛɪ] say it ['sɛɪ**j**ɪt]

The next word begins with a vowel sound (any vowel sound). We therefore hear the **linking /j/ sound** in sentences such as...

- I ate pizza last night
- I own a camera
- He always says that
- He always has his English classes on Tuesdays
- Day after day after day
- Monday and Thursdays
- Boy and girl
- There's a toy on the floor

We also use the **linking /j/** in English pronunciation when the word '**the**' is followed by a vowel sound, for example:

- The animal
- The elephant

- The igloo
- The owl
- The umbrella

11.2.3. Intruding / w / It is when we combine /u:/, /au/ and /əu/. So, what we do is to a vowel into another vowel.

- I want to / **w** /eat. /aɪ wɒnt tə **w** i:t/
- Please do / **w** /it. /pli:z d**ʊ w** ɪt/
- go [gəʊ] go away [gəʊ **w** ə'wɛɪ]

11.2.4. Linking at word-boundaries: Word boundaries involving a consonant and a vowel are also linked, as we tend to drag final consonants to initial vowels or vice versa. For example:

- Get on. (**geton**) /gɐ'tɒn/
- Not at all. (**notatall**) /nɒtə'tɔ:l/
- It´s no joke. (**snow joke**) /ɪt snə**ʊ** 'dʒəʊk/

Note: In non-rhotic types of English beer is NOT pronounced with a final "**r**". In casual, rapid speech when followed by a vowel some people pronounce the "**r**" as in beer or wine: /bɪərɔ:waɪn/. Others don't. To avoid linking sounds some speakers introduce a glottal stop before the vowel to avoid the linking sound: /bɪə ʔɔ: waɪn/.

The same thing happens with intrusive sounds like the intrusive "**r**", "**w**" or "**j**" as in comma or hyphen: /ˈkɒmə**r**ɔ:ˈhaɪfən/; you and I: /ju:**w**əndaɪ/; see or hear: /si:**j**ɔ:hɪə/. These intrusive sounds can also be avoided by inserting a glottal stop and they are also rare in slow, careful speech.

Insertions: /j/, /w/, and intrusive /r/

Americans often change the sounds of words in order to speak with more rhythm and musicality in their speech. One way they do this is to insert [y] and [w] sounds between consonants and vowels, so that the pronunciation can "glide" through the mouth.

Example

If we pronounce the word “regular” as it’s spelled, we would say [REG ew lar].
Inserting the [y] sound allows us to say the word with greater musicality, speed, and stress.
[RE gyə lɝ]

Notice the [y] sound that we insert into the pronunciation of the following words.

Listen and Repeat
•particular [pə TI kyə lɝ]
•vocabulary [və KÆ byə ley riy]
•interview [IN tər vyew]
•usual [YEW ʒEw wəl]
•beautiful [BYEW tə fəl]
•popular [PA pyə lɝ]
•regular [Rɛ gyə lɝ]
•united [yə NAI tɪd]
•figure [Fɪ gyɝ]
•computer [kʌm PYEW tɝ]
•university [YEW nə Vɝ sə tiy]
•opinion [ə PIN nyən]
•useful [YEWS fəl]
•articulate [ar TI kyə lɪt]

Remember, even though the letter “y” does not appear in these words, you must ensure to insert the [y] sound in your pronunciation in order to be clearly understood.
When a word ends in /i:/, or a diphthong which finishes with /ɪ/, speakers often introduce /j/ to ease the transition to a following vowel sound: /j/ is inserted after high front vowels /i:/, /ɪ/, /e/ɪ/, a/ɪ/, oɪ//, such as *seeing* /ˈsi:jɪŋ/.

When a word ends in /u:/ and /ʊ/, or a diphthong which finishes with /ʊ/, speakers often introduce /w/ to ease the transition to a following vowel sound: /w/ is inserted after high back vowels /u:/, /oʊ/, /aʊ/, such as *doing* /ˈdu:wɪŋ/.

The insertion of glides /j/ and /w/ occurs because they are the least marked epenthetic consonants in hiatus position. In other words, glides are generally considered to have the same featural make-up as vowels, i.e. they agree in both backness and roundness with the preceding vowel,

such that /w/
occurs after /u:/, /ʊ/ and /j/ occurs after /i:/, /ɪ/ Moreover, this apportioning of the vowel space is based on the fact that vowels which trigger [r]-insertion never trigger [j]-insertion or [w]-insertion. Each glide has its own domain, although the domains exempt all lax front and lax high vowels, which never occur word-finally in English. If you learn to do this, your English will sound smooth and natural.

Intrusive /r/ also involves the pronunciation of an /r/ sound, but this time there is no justification from the spelling as the word's spelling does not end in or . Again this relates to non-rhotic accents; rhotic accents do not have intrusive r.

Thus, link a final /ə/ or even /ɑ:/ to an initial vowel in the same sense group by inserting an r-sound even if there is no "r" in the spelling. The /r/ added in this way is known as Intrusive /r/, such as *The idea of it* /ði_aɪdɪə_əv_ɪt/ > /ði_aɪdɪə_**r**_əv_ɪt/

When the following vowel sound symbols occurs immediately before another vowel in the same syllable, the vowel sound symbol change.

/i:/ and /ɪ/ change to /ij/
/u:/ and /ʊ/ change to /uw/
/eɪ/ changes to /ej/
/aɪ/ changs to /aj/
/aʊ/ changes to /aw/
/oʊ/ changes to /ow/
/ɚ/ changes to /ɚr/ or /rɚ/
/ɑɚ/ changes to /ɑr/
/eɚ/ changes to /er/
/iɚ/ changes to /ir/
/oɚ/ changes to /or/

Rules:

1- If you have a high/middle front vowels (/i:/, /ɪ/, and /eɪ/) or the low/middle center/back vowel diphthongs (/aɪ/ and /oɪ/), and another vowel following, there will be /j/-change.
Examples:

high /ˈhaɪ/
higher, hire /ˈhajɚ/

2- If you have a high/middle back vowel (/u:/, /ʊ/, and /oʊ/) or the low center vowel diphthong (/aʊ/), and another vowel following, you're going to have /w/-change.
Examples:
cow /ˈkaʊ/
coward /ˈkawɚd/

toe /ˈtoʊ/
toe-er /ˈtowɚ/

3- If you have the high central vowel /ɚ/ before a stressed vowel, there will be /r/-adition. This sound is usually voiceless when it follows a voiceless stop. The letter "r" is not pronounced or is pronounced as /ɚ/ after a vowel in the same syllable.
Examples:
ter·ror /ˈter·ɚ/
ter·ror·ize /ˈter·ɚ·ˌaɪz/
ter·ror·ist /ˈter·ɚr·ɪst/

score /ˈskoɚ/, scorn /ˈskoɚn/
scor·er /ˈskor·ɚ/

<u>Rules in linking words</u>:

1- If you have a high front vowel, like /i/ and /ɪ/, and another vowel following, there will be /j/-insertion.
Example:
I need **the key and** licence. /..ðə_ki:_**j**_æn../

2- If you have a high back vowel, like /u/, and another vowel following, you're going to have /w/-insertion.
Example:
Let's **have a Q&A** session. /..æv_a_kju:_**w**_æ_neɪ../

3- If you have a mid/low vowel like (numerous ones mentioned), then that's where /r/-insertion happens.

Example:

Karma applies to everyone. /..kɑ:mə_**r**_əplaɪz../

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