Phonetics and Phonology

Dr. Mohammed Al-Hilal By: 32f



عمادة التعلم الإلكتروني والتعليم عن بعد

جامعة الملك فيصل

<u>Lecture 1</u>

"Phonetics and Phonology" introduces the main areas in the study of sounds in human language. It covers the main areas of articulatory Phonetics of English. It focuses on the phonology of English starting from the units of the phoneme and the syllable. The course has been suggested because it provides the foundations for the study of the linguistic level of sounds as discussed in Phonetics and Phonology.

Vowels:

Vowels are the class of sound which makes the least obstruction to the flow of air when it passes from the larynx to the lips

Making this sound is the best way for presenting an unobstructed view for the back of a patient's mouth.

Consonants:

Consonants are sounds that obstruct the flow of air through the vocal tract.

Consonants or not consonants:

However, some consonants do not really obstruct the follow of air and we still consider them as consonants. Ex. The sounds at the beginning of words like hay, way, etc. Different languages have different ways of dividing their sounds into vowels and consonants.

Ex. The /r/ sound in red which is felt to be a consonant in English is treated as a vowel in Mandarin Chinese.



Vowels vs consonants:

The difference between vowels and consonants is not only a difference in the production but is also a difference in Distribution

Distribution of sounds refers to examining the positions in which each particular phoneme can occur

Or : "looking at the different context and positions in which particular sounds can occur.

Eg. the distribution of the **h** phoneme **h** can only occur before a vowel, **hen, hat, hide** Eg. only consonants can follow the vowel sound **a, cat, can, nab**

What is the purpose of this book:

- To explain how standard English is pronounced .
- Phonetics and phonology is a theoretical context: The book is a general theory about speech sounds and how they are used in language.
- The theoretical material is necessary for anyone who needs to understand the principles regulating the use of sounds in spoken English

Phonetics vs phonology:

Phonetics: the scientific study of speech sounds, including their production, reception, etc. the study of how we can record speech sounds with written symbols and how we hear and recognize different sounds.

Phonology: is a thorough description of the sounds of a language, including their classification, organization, distribution etc.

Phonology: the study of Phonemes:

Phonemes are the regularly used sounds (vowels and consonants) in a language. The smallest unit of sound employed to form meaningful contrasts between utterances.

Phonemes: an identifiable small number of regularly used sounds (vowels and consonants) Eg.

bin	ban
get	set

/i/ and /a/ are two different phonemes

/g/ and /s/ are two different phonemes

Phonemes vs letters:

We think of English pronunciation in terms of phonemes rather than letters of the alphabet.

Eg. Enough /in^f/ **4** sounds Enough e n o u g h **6** letters Symbols are used to represent speech letters sounds IPA International Phonetic Association.

Association which has taken the responsibility for maintaining a standard set of phonetic symbols used to represents the letters **sounds** of a language

Accents and dialects:

Accent: the word 'accent' is used for varieties which differ from each other only in matters of pronunciation while 'dialect' also covers differences in such things as vocabulary and grammar.

Eg.

-I met the student (accent difference)

-I want some water

سافرت ناديا إلى السعودية

ناديا سافرت إلى السعودية

Received Pronunciation, BBC Pronunciation

Cardinal vowels:

They refer to the way of classifying vowels independently of the vowel system of any particular language; they would serve as reference points that other vowels could be related to. English phonetician Daniel Jones.

- 1. There are two groups: a. Primary cardinal vowels b. secondary cardinal vowels
- 2. they are not vowels of any particular language.
- 3. they are a standard reference system.
- 4. they represent the range of vowels that the human vocal apparatus can make
- 5. Or they are extremes of vowel quality.
- 6. they are used to describe, classify, and compare vowels
- 7. they are distinguished from English vowels by using square brackets. [..]



<u>Lecture 2</u>

- 1- The criteria used for short vowel description:
 - a. Tongue height
 - b. Relation to cardinal vowels.
- c. Shape of the lips
- d. Tongue position
- a. tongue height: the vertical distance between the tongue and the palate: (close or open).
- b. tongue position: indicates which part of the tongue (front or back) is raised highest.



c. The shape of the lips





3- neutral:



Rounded: The corners of the lips are brought towards each others and the lips are pushed forward.

Spread: the corners of the lips are moved away from each others as in a smile Neutral: lips are not rounded nor spread.

2. Description of short vowels

a. Tongue height: the vertical distance between the tongue and the palate: (close or

open).



b. Tongue position: indicates which part of the tongue (front or back) is raised highest.



Tongue height and tongue position



English short vowels:

English short vowel sounds					
Ι	е	æ	٨	α	υ
bid	bed	bad	bud	pot	put
did	dead	dad	does	dot	look
chick	check	camp	chuck	chop	cook
fill	fell	Fat	fun	want	Full/ foot
hid	head	hat	hum	hot	hook
nit	net	nab	nun	nod	good
rid	red	rack	rub	rob	Could
wit	wet	wag	shut	what	wood

Description of short vowels /I/



The tongue height in /I/ is closer than Cardinal vowel No 2, and is nearer to the center.

Description of short vowels /e/



Tongue height	tongue position	lips		
/e/ half open	front	slightly spread		
/e/ is between cardinal vowel No. 2 and 3.				



Rounded

BACK

8

7

6

5

u

0

Э

α

CENTRAL

4

١



 $/\Lambda$ is more open than cardinal vowel No. 3.

Description of short vowels / p /



/D/ is between cardinal vowel No. 5 and 6.

Description of short vowels /ʊ/ Unrounded _____ Rounded васк FRONT CENTRAL / ʊ / Close i u 8 put 1 push • Ŭ 7 pull Half-close e 0 full 6 3 Half-open 0 ε 5 Open æ α Tongue height tongue position lips /ʊ/ half-close nearer to the center rounded $/\upsilon$ / is closer to cardinal vowel No. 7.

Description of short vowels / a / the schwa.



<u>lecture 3</u>

Articulators above the Larynx

<u>Vocal tract</u>: the part starting above the larynx and ending at the mouth and nostrils. The vocal tract involves different parts called the articulators and the study of these articulators is called the **articulatory phonetics**.

<u>Larynx</u>

Location: it is located in the throat.

Function: it has a number of functions:

It function as a valve that can stop air entering or escaping from the lungs **Structure**:

It consists of a rigid framework or box made from cartilages

Oral cavity: the part that comprises the mouth Nasal cavity: the part that leads to the nostrils

The pharynx.

Is a tube which begins above the larynx. It is 7 cm long in women and 8 cm in men.

At its top end it is divided into two parts:

- one part is the back of the oral cavity.
- another part is the beginning of the way through the nasal cavity.

The soft palate:

The layer of soft tissue to which the uvula is attached is called the soft palate (it is also sometimes named the velum).

The soft palate:

- It allows the air to pass through the nose or the mouth

- It can be touched by the tongue as in k, g. we call these velar consonants

The uvula: a small piece of flesh that hangs from the middle of the soft palate

The hard palate: The palate is sometimes known as the "roof of the mouth"

<u>The alveolar Ridge</u>: Behind the upper front teeth there is a hard, bony ridge called the alveolar ridge;

The tongue is usually subdivided for the purposes of description:

-the furthest forward section is the tip,

- behind the tip is the **blade**.
- The widest part of the tongue is called the front.
- behind the blade is the **back**, then the **root**.

Long vowels

Long vowels: vowels that tend to be longer than the short vowels

symbols: These vowels are made with one vowel symbol plus a length mark made of two dots



3 + : =3:

/i:/

beat

bit



Closer to cardinal vowel number 1 [i]. Close vowel. Front vowel.

Examples

Beat, Mean, Peace, Seen, Keen

https://www.youtube.com/watch?v=RZmGzSb-6OM

lecture 4



/3:/

Example: Nurse, Stir, Learn, Fern, Refer



Central vowel

Well known in English as a hesitation sound

spelt er

Lips are neutral

Close in cardinal vowel 3

Example: bird, fern, purse, er

http://www.youtube.com/watch?v=zSJJWHymEPw

/aː/

Example: Father, start, Hard, Card





Back vowel

Close to cardinal vowel number 5.

https://www.youtube.com/watch?v=uDHMuMQdBNw

/ɔː/

Example: Thought, Law, North, War, Board, Torn, horse

https://www.youtube.com/watch?v=KHIIC40_u1Q



between cardinal vowel 6 and 7

Almost full back

Strong lip rounding

Half-open

/uː/

Example: Goose, Tow, Blue, Group, Food, Soon, Loose



https://www.youtube.com/watch?v=mnKEGLuEzV4

The nearest cardinal vowel is 8

A back vowel

Close

Lip moderately rounded

Diphthong

Diphthongs are sounds which consist of a movement or glide from one vowel to another.

/aɪ/

the movement is from /a/ to /I/.



Vowels Vs Diphthongs:

Diphthongs are sounds which consist of a movement or glide from one vowel to another.

Pure vowel : This term is used to refer to a vowel in which there is no detectable change in quality from beginning to end; an alternative name is monophthong.

Pure vowel: : A vowel which remains constant and does not glide .

The most important feature of a diphthong is that it contains a glide from one vowel quality to another one

Characteristics of diphthongs:

- 1. They are similar to long vowels in terms of length.
- The first part of a diphthong is much longer and stronger than the second part. For example, in /ai/, most of the /ai/ consists of the /a/ vowel; only in the last quarter of the diphthong the glide to /i/ is noticed.

<u>Lecture 5</u>

Diphthongs



Centering Diphthongs: Ending in /ə/

https://www.youtube.com/watch?v=vC0h4S0YPJc /Iə/

https://www.youtube.com/watch?v=0J7-5maJJIk /eə/

https://www.youtube.com/watch?v=nHSqluHrD-U /ʊə/



/19/	/ɪə/		/eə/		/ʊə/	
Idea		Square	/skw <mark>eə/</mark>	Sure		
Fierce		Fair	/f <mark>eə/</mark>	Endure		
Ear		Pair	/p eə/	Conjure		
Hear	/h ɪə/	Blair		Immature		
Domineer		Beware		Pure	/pj <mark>ʊə/</mark>	
Here		Hair		assure		
Near	/n ɪə/	Chair		Cure	/kj <mark>ʊə/</mark>	
Clear		Compare		Unsure		
Adhere		Dare		Tour	/t <mark>ʊə/</mark>	
Gear		Declare				
Fear		Aware				
Cheer		Bare				
weary	/w <mark>ıəri/</mark>	Care				
		Despair				

• Similar sounds between /eə/ and /æ/

/eə/		/æ /	
dared	/d eə d/	dad	/dæd/
glared	/gl <mark>eə</mark> d/	glad	/gl <mark>æ</mark> d/
Mary	/M <mark>eə</mark> ri/	marry	/m <mark>æri/</mark>

Closing Diphthongs: Ending in /I/



Closing Diphthongs ending in/1/



Sample words: bay, buy, boy

https://www.youtube.com/watch?v=5FMPlqlFt9g /eI/

https://www.youtube.com/watch?v=Hb8COxAtl14 /aI/

https://www.youtube.com/watch?v=lFRrEI85IcM /oɪ/

/	/eI/ /aI/		I/	/:)I/
Face	/f <mark>eI</mark> s/	Ι		Choice	/t ∫⊃ıs/
Day	/del/	Eye		Noise	/n <mark>əı</mark> z/
Break	/br <mark>eI</mark> k/	Price	/pr <mark>al</mark> s/	Boy	/b <mark>ɔı</mark> /
		High	/h <mark>aI</mark> /	Joy	/j ɔı /
		Try	/tr <mark>aI</mark> /		

• <u>Similar sounds between /eI/and /i:/</u>

/eI/		/ i ː/	
Eight /ate	/eIt/	Eat	/ <mark>i:t</mark> /
Faced	/F <mark>eI</mark> st/	feast	/fi:st/
Great	/gr <mark>eI</mark> t/	greet	/gri:t/
mate	/m <mark>eIt/</mark>	meet	/mi:t/

Closing Diphthongs: Ending in /ʊ/



ອບ ຂບ

https://www.youtube.com/watch?v=r1BRCG0P9C8 /əʊ/

https://www.youtube.com/watch?v=9WDnVMQIaTs /aU/

/əʊ/		/ลบ	5/
Boat	/b əʊ t/	Mouth	/maʊθ/
show	/ <mark>\00</mark> /	Now	/na <mark>ʊ</mark> /
know	/n əʊ/	fowl	/f <mark>aʊl/</mark>
Go / so			

Similar sounds between /əʊ/ and /ɔː/

/ʊɛ/		/:):/
coat	/k əʊ t/	caught	/k <mark>ɔ</mark> :t/
dough	/d əʊ/	door	/:cb/
sew	/s əʊ/	saw	/s ɔ :/
flow	/fl <mark>əʊ/</mark>	floor	/flɔ:/

Similar sounds between /əʊ/ and /aʊ/

/aʊ/		/əʊ	/د
Couch	/kaʊt∫/	Coach	/k <mark>əʊ</mark> t∫/
Clown	/cl <mark>aʊ</mark> n/	Clone	/kl <mark>əʊ</mark> n/
Loud	/laʊd/	Load	/ləʊd/
found	/f <mark>aʊ</mark> nd/	phoned	/f <mark>əʊ</mark> nd/

Triphthongs:

A **Triphthong** is a glide from one vowel to another and then to a third, all produced rapidly without interruption

Characteristics of triphthongs.

- A. Difficult to pronounce
- B. Difficult to recognize
- C. All are formed with a **ə** sound at the end
- D. Produced rapidly
- E. Produced with no interruption
- F. Vary in the pronunciation. (Loss of distinction unstable state).

ei ə	aı ə	91 9	əu ə	au ə
layer	lair	loyal	lower	power
Player	fire	royal	mower	hour
mayor	tire	soya	slower	shower
mayonnaise	Enquire	employer		





Lecture 6

Voicing and Consonants

<u>Larynx</u>

Location: it is located in the throat/neck.

Function: it has a number of functions: It function as a valve that can stop air from entering or escaping from the lungs

<u>Structure</u>: It consists of a rigid framework or box made from cartilages; Cartilages are hollow and attached to the trachea

<u>Cartilages</u>: a material that is similar to a bone but is less hard

Larynx **Inside the larynx** The vocal folds/cords: they are two thick flabs of muscles Trachea (windpip Inside the larynx: The vocal folds /cords Tongue How are the vocal cords attached inside the larynx? Epiglottis Vocal cord At the front the vocal folds are joined together and fixed to the *thyroid cartilage* At the back the vocal folds are attached to a pair of smallPyriform estibular fossafold cartilages called the arytenoid cartilage : Trachea Esophagus If the Arytenoid cartilages move EPIGLOTTIS HYOID BONE the vocal cords move too. THYROID CARTILAGE Where the arytenoid cartilages are attached? They are attached to the cricoid cartilages CRICOID CARTILAGE THYROID GLAND THYROID VEINS TRACHEA wiseGEEK

Vocal folds vibration

Vibration takes place when edges of the vocal cords are touching each other. (or nearly touching).

-vibration happens rapidly and repeatedly.

- women's vibration of vocal cords is faster (300 times per second) than that of men about (150 times per second)

When the vocal cords are tightly closed, air cannot pass between them and the glottal stop/glottal plosive / ? / is produced . coughing a? a? a?

Notice:

Glottal stop or glottal plosive T = /?/

Glottal come from word glottis

Respiration and voicing

Air in the lungs is pushed out.

Egressive pulmonic airstream:

Almost all the sounds we make in speaking are created with the help of air compressed by the lungs. The adjective used for this lung-created airstream is 'pulmonic': the pulmonic airstream may be ingressive (as in breathing in) but for speaking is practically always egressive.



Subglottal pressure

Almost all speech sounds depend on having air pushed out of the lungs in order to generate the sound. For voicing to be possible, **the pressure of air below the glottis must be higher than the pressure above the glottis** (i.e. in the mouth) – otherwise, voicing will not happen.

Variation in the Subglottal pressure

Variation in intensity.

High intensity eg. Shouting

Low intensity eg. Speaking quietly

Variation in frequency

Rapid vibration = high frequency voicing

Fewer vibration = low frequency voicing

Variation in quality

harsh, creaky, whispering voice, hoarse, etc.

lecture 7

English plosives

We have six plosive consonants:

p, t, k, b, d, g

Voiced and Voiceless plosives

Voiced (+V) b, d, g.

Voiceless (-V) p, t, k.

When they are produced, plosives cause plosion.

Plosion is the noise produced by the compressed air is released.

How plosives are produced?

1-They are produced by forming a complete obstruction to the flow of air

2-this results in a build-up of compressed air inside the chamber formed by the closure.

3- When the closure is released, there is a small explosion that causes a sharp noise.

Plosives are among the first sounds used by children when they start to speak

Different places of articulation:

-p b = bilabial

-alveolar = t d (blade of the tongue +alveolar ridge)

- velar = k g (back of the tongue +soft palate)

Distribution of plosives.

Plosives are fully distributed:

They can come initially, medially, and finally.

C= consonant. V= Vowel

initially, medially, finally

CV, VCV, VC

pat. spat,	step
------------	------

take, stake, sit

box, tuber, sab dog, sedate, sad good, rigid, fog

places of articulations for plosives

Plosives are produced at different places of articulation,

- **p b** = bilabial (lips)
- t d = alveolar (blade of the tongue +alveolar ridge)

Look where the tip of the tongue is placed

Watch that the vocal cords vibrate for /d/

• **k g** = velar (back of the tongue +soft palate)

Phases of plosive production

Closing phase:

When the articulator moves to form a stricture for the plosive

Compression phase:

When the compressed air is stopped from escaping

Release phase:

When the articulators used to make a stricture allow the air to escape.

Post-release phase:

Refers to what happens after allowing air to escape.

Number of plosives

There are six plosive consonants p, t, k, b, d, g.

The glottal stop /?/ is an alternative pronunciation for p, t, k in certain contexts, and is therefore less important.

Ex. The glottal stop can replace the plosive /t/ when it follows a stressed vowel:

'getting better' is pronounced /ge?in be?ə/

Ex. Between two vowels:

Water /wɔːʔə/ Lettuce /leʔis/

Aspiration

Refers to the /h/-like sound recognized after the release phase of an initial voiceless plosive and before the voicing of the following vowel begins.

E.g:	pat [p ^h]	
Pill	[p ^h Il]	still [stIl]
till	[t ^h Il]	spill [spIl]
kill	[k ^h Il]	skill [skIl]

• In English, voiceless plosives /p t k/ are aspirated [p^h t^h k^h], especially in word-initial position before a stressed vowel

Pack /pæk/ [p^hæk]

Why does it happen?

This is the result of the vocal folds being widely parted at the time of the articulatory release.

Unaspirated p, t, k

It is noticeable that when **p** t **k** are preceded by **S** at the beginning of a syllable they are not aspirated

Pot spot Kin skin Top stop

Fortis and lenis

- **b**, **d**, **g** are scarcely voiced at the beginning and final position.
- **p**, **t**, **k** are produced with more force than **b**, **d**, **g**.
- We need terms to indicate these facts
- **p t k** are called fortis = strong voiceless plosives
- **b** d g are called lenis = weak voiced plosives.

Pre- fortis clipping

Fortis consonants have the effect of shortening a preceding vowel. For example: **Feet feed**

Lecture 8

Fricatives

Definition: consonants in which air escapes through a narrow passage and makes a hissing sound. Ex. /s/

Complementary distribution

Two phonemes are in complementary distribution when they can never appear in more than one place at the same time.

Clear vs. help

Phonemic vs Phonetic transcription

Phonemic transcription: every speech sound must be identified as one of the phonemes. It only involves the use of phonemes and uses slashes or slant brackets.

Ex: Pit /pɪt/

Phonetic transcription: a transcription which is more accurate than the phonemic transcription. It (Phonetic transcription) contains much more information.

Ex: [p^hɪt]

Diacritics

A diacritic is a mark used to modify the pronunciation of a phoneme in some way.

[pʰɪt]

The h in $[p^h]$ is a diacritic.

Fricatives

Characteristics: Fricatives are continuant consonants: you can continue making them without interruption as long as you have enough air in you lungs.

Importance of the narrow passage

A. make a long hissing sound and gradually lower your tongue so that it is no longer close to the roof of the mouth. The hissing sound will stop as the air passages gets larger.

B. While producing an /f/ sound, pull the lower lip away from the upper teeth, the hissing sound will suddenly stop.

How many fricatives do we have?

f, v, θ,ð, s, z,∫, 3, h

Fortis vs lenis distinction

VIBRATION OF VOCAL CORDS

Fortis	lenis	
θ	ð	
S	Z	
ſ	3	
f v		
h		

NO VIBRATION	VIBRATION	
θ	ð	
S	Z	
ſ	3	
f	v	
h		

VOICING

The lenis fricatives have little or no voicing in initial and final positions.

But they may be voiced when they occur between voiced sounds.

Clipping of preceding vowel

Voiceless fortis fricative have the ability to reduce a preceding vowel.

Ex.

Ice

eyes

Breath

breathe

Practical exercises

- 1. Choose the correct description for the short vowel /l/.
 - a. <u>Close front vowel.</u>
 - b. Open back vowel
 - c. Central vowel
 - d. Half-open vowel
- 2. Choose the correct description for the long vowel /i:/.
 - a. <u>Close front vowel.</u>
 - b. Open back vowel
 - c. Central vowel
 - d. Half-open vowel
- 3. Choose the incorrect description for the long vowel / 31 /.
 - A. Central vowel
 - B. Well known in English as a hesitation sound
 - C. spelt er and the lips are neutral
 - D. <u>A front vowel</u>

4. Choose the <u>correct</u> description for the long vowel / 3. /.

A. <u>A Central vowel .</u>

- B. A front vowel
- C. A Back vowel
- D. A close vowel

5. Choose the correct description for the long vowel / α : /.

- A. <u>An open and back vowel .</u>
- B. A front vowel
- C. A central vowel
- D. A close vowel







6. Choose the incorrect description for the long vowel / a: /.

- A. An open vowel
- B. A back vowel.
- C. Close to cardinal vowel number 5.
- D. <u>A central vowel.</u>

7. Choose the <u>correct</u> description for the long vowel / <code>JI</code> /.

A. <u>It has strong lip rounding</u>

- B. It has neutral lips
- C. It has spread lips
- D. It is a front vowel

8. Choose the correct description for the long vowel /uː /.

- A. <u>It is a back vowel</u>
- B. It is a front vowel
- C. It is an open vowel
- D. It is a central vowel

9. Choose the correct description for the short vowel /e/.

- a. Half-open front vowel.
- b. Half-open back vowel
- c. Central vowel
- d. Close vowel

10. Choose the correct description for the short vowel / \approx /.

a. <u>Open front vowel.</u>

- b. Close back vowel
- c. Half-open vowel
- d. Close vowel







11. Choose the correct description for the short vowel / D /.

- <u>between half-open and open and it is a back vowel</u>
- b. Open front vowel.
- c. Close and front vowel
- d. Central vowel

12. Choose the correct description for the short vowel / Λ /.

- <u>half-open and central vowel</u>
- b. Open front vowel.
- c. Half-open vowel
- d. Close vowel

13. Choose the correct description for the short vowel / σ /.

- a. <u>half-close nearer to the center</u>
- b. Open front vowel.
- c. Half-open vowel
- d. Close vowel

14. Choose the correct description for the short vowel / ϑ /.

- a. between half-close and half-open and a central vowel.
- b. open and front vowel
- c. Close and back vowel
- d. Very close to cardinal vowel number 1.









short vowel	Tongue height	Tongue position	shape of the lips	Example
/١/	Close	front	Slightly spread	bid
/e/	Half open	Front	Slightly spread	b <mark>e</mark> d
/æ/	Open	Front	Slightly spread	bad
/٨/	Half open	central	neutral	b <mark>u</mark> d
/n/	Between half-open	Back	Slightly	Pot
/0/	and open		rounded	
/75/	Half close	Nearer to the	Rounded	p <mark>u</mark> t
/0/		center		
121	Between half-close	central	neutral	moth <mark>e</mark> r
/8/	and half-open			

• The criteria used for short vowel description Short vowels description

long vowels description

Long vowel	Tongue height	Tongue position	shape of the lips	Example
/i•/	close	front	Slightly	Feet -
/1./	CIUSE	nonc	spread	l <mark>i</mark> ttre
121	Half-open	control	neutral	Nurse -
/3./	пап-ореп	-open central		stir
/a:/	onen	back	neutral	F <mark>a</mark> ther -
/u./	орен	Dack	neutrai	st <mark>a</mark> rt
12:1	Half-open	back	Rounding	Law -
/J./	пап-ореп	Dack	Kounung	n <mark>o</mark> rth
/m/	closo	back	Poundad	G <mark>oo</mark> se -
/u./	ciose	DACK	Nounded	bl <mark>ue</mark>

Lecture 9

Fricatives places of articulation

Labiodental fricatives /f/, /v/

the lower lip is in contact with the upper teeth . The fricative noise is never very strong

/f/	/v/
' <mark>f</mark> an'	' <mark>v</mark> an'
'safer'	'saver'
'hal <mark>f</mark> '	'hal <mark>v</mark> e

<u>Dental fricatives /θ/, /ð/</u>

the tongue is normally placed *behind* the teeth, with the tip touching the inner side of the lower teeth. The air escapes through the gaps between the tongue and the teeth

/0/	/ð/	
ʻ <mark>th</mark> umb'	' <mark>th</mark> us'	
'ether'	'fa <mark>th</mark> er'	
'brea <mark>th'</mark>	'brea <mark>th</mark> e'	

Dental vs interdental

Interdental: the tongue become upper or lower the teeth, the tongue bush forward

Dental: the tongue completely behind the teeth with the tip touching the inner side of the lower teeth

Alveolar Fricatives /s/, /z/

tongue blade is pressed against the alveolar ridge

/s/	/z/
'sip'	ʻzip'
'facing'	'phasing'
'rice'	'rise'

Post-Alveolar Fricatives / [/, /3/

the tongue is in contact with an area slightly further back than that for /s/,/ z/

/ʃ/	/3/
'ship'	initial is very rare in English); لا يأتي في بداية الكلمة
'Russia'	'mea <mark>sur</mark> e'
'Irish'	ʻgara ge'

Alveolar vs Post-Alveolar fricatives.

- If you make /J then /3/, you should be able to feel your tongue move backwards.
- The air escapes through a passage along the center of the tongue, as in /s/, /z/, but the passage is a little wider in /J/ and /J/
- Most BBC speakers have rounded lips for /J/ and /3/, and this is an important difference between these consonants and /s/, /z/.
- The fricative \int is a common and widely distributed phoneme, but 3 is not.

Glottal fricative /h/

Glottal fricative: a sound that is produced when the air passes through the glottis as it is narrowed. Ex: /h/ in high.

Example : 'head', 'ahead', 'playhouse'

the narrowing that produces the friction noise is between the vocal folds.

If you breathe out silently, then produce h, you are moving your vocal folds from wide apart to close together.

Why does /h/ have an /æ/ quality? Because always following by a vowel

- In the word 'hat', the /h/ is followed by an /æ/ vowel. The tongue, jaw and lip positions for the vowel are all produced simultaneously with the /h/ consonant, so that the glottal fricative /h/ has an /æ/ quality.
- the glottal /h/ consonant always has the quality of the vowel it precedes. Hat house
- It is noticeable that when /h/ occurs between voiced sounds (as in the words 'ahead', 'greenhouse'), it is pronounced with voicing

Breathy voice

Weak, slightly fricative sound is called breathy voice

breathy /breθi/ voice

Breathy is one of the adjectives used to describe voice quality. In breathy voice, the vocal folds vibrate but allow a considerable amount of air to escape at the same time; this adds "noise" (similar to loud breathing) to the sound produced by the vocal folds. It is conventionally thought that breathy voice makes women's voices sound attractive.

Lecture10

Affricates: /tʃ/ /dʒ/

Definition:

Affricates are complex consonants that begin as a plosive and end as a FRICATIVE. Ex. Judge, Change, church

dʒ t∫

PROBLEM WITH THE DEFINITION:

we cannot class all plosives plus fricative as affricates

Ex.

Breakfast students plosive + fricative plosive + fricative Affricate Affricate

we need to restrict the definition:

"the plosive and the fricative must be made with the same articulators; that is the plosive and the fricatives must be homorganic."

/k/ and /f/ in breakfast are not homorganic.

/t/ and /ʃ/ are homorganic but /k/ and /f/ are not homorganic

Homorganic: produced with same articulators.

But what about the /t/ and /s/ in students. Not Affricate

<u>Nasal consonants /m/, /n/, / n/</u>

The basic characteristic of nasal consonants is that the air escapes through the nose. The soft palate is lowered. The air cannot pass through the mouth, it is prevented by complete closure in the mouth at some point.

The three types of closure are

bilabial - /m/

alveolar - /n/

velar - /ŋ/

/m/ bilabial nasal consonant (+v)

- The soft palate is lowered.
- The lips are slightly spread, pressed together forming a complete obstruction to the air stream through the oral cavity.
- The air passes through the nose. The vocal cords vibrate

/n/ alveolar nasal consonant (+v)

- The soft palate is lowered,
- the tip of the tongue touches the alveolar ridge, forming a <u>complete obstruction</u> to the flow of air through the oral cavity.

The air passes through <u>the nose</u>. The vocal cords are vibrating.

/ŋ/ velar nasal consonant (+v)

- A closure is formed in the mouth between the back of the tongue and the velum.
- This closure is similar to the one we have for /k/ and /g/.
- The soft palate is lowered.
- The vocal cords vibrate.

Distribution

/m/+/n/ are fully distributed:(find in beginning, middle and end)

man	famous	ham

nap find can

/ŋ/ - <u>Unusual sound</u> (don't have alphabet letter) . <u>controversial</u> (some people don't like the sound ŋ)

- Never occurs in initial position
- Medially: frequent finger, singer

Distribution of /ŋ/

The nasal $/\eta$ and the fricative /3 / are the only two consonants that do not occur **initially**

Pronouncing /g/ after /ŋ/

/g/ is <u>not pronounced</u> if the word can be divided into two morphemes:

Singer (sing+er) /sIŋə/ we don't pronounced_g

hanger (hang+er) /hæŋə/

So, we use morphological analysis to decide whether /g/ is pronounced or not.

Pronouncing /ŋ/

n		
nk	ng	
always pronounced Think: / θιŋk / Bank: /bæŋk/	can/cannot be pronounced -ng =/ŋg/ -ng= /ŋ/	

Middle of the word: $/ \eta / + /g/= /\eta g/$

Plosive /g/ is pronounced after nasal/ŋ/ if the word cannot be divided into two morphemes:

Ex: finger /flŋgə/ <u>one morpheme</u> it is not (fing+er)

anger /æŋgə/ one morpheme it is not (ang+er)

Middle of the word: $/ \eta /+/g/=/\eta/$

Plosive /g/ is <u>not pronounced after nasal</u>/ŋ/ if the word can be divided into two morphemes

Ex: Singer = sing+er singer / slŋə/ (two morpheme)

Hanger = hang+er hanger /hæŋə/ (two morpheme)

g تنطق فقط في المفاضلة والمقارنة Exceptions: comparative and superlative

Longer	*/lɒŋə/	/lɒŋgə/

Longest */Ibŋəst/ /Ibŋgəst/

Explain how /g/ is pronounced in the these words:

لا ننطق g hanger /hæŋə/ g

The two words are morphologically different

Pronouncing ng at the end of the word

Rule: NO/g/ is pronounced after $/\eta$ / at the end of a morpheme.

Ex. sing /siŋ/

hang /hæŋ/

sang /sæŋ/

bang /bæŋ/

INTERESTING FACTS

- English speakers in general (apart from those trained in phonetics) are quite ignorant of this rule.
- However, if a foreigner uses the wrong pronunciation (i.e. pronounces / ŋ / where / ŋg/ should occur, or / ŋg/ where /g/ should be used, they notice that a mispronunciation has occurred.

Lecture 11

What do we mean by sound?

- something that you can hear or that can be heard:

- **The sensation** produced by stimulation of the organs of hearing by vibrations transmitted through the air

- When we speak we produce a continuous stream of sounds

Segments:

When we study speech, we divide the stream of sound into small pieces.

man /mæn/

m one segment

æ another segment

n another segment

Segments: separate sound units (segments) that correspond to phonemes

Cat /k/, /æ/, /t/.

Fate /f/, /el/, /t/

Time: /t/, /al/, /m/

Segmentation: dividing speech up into segments (segmentation).

Segmentation: problematic cases

Double sounds and undetectable sounds

- Ex. It is not always easy to decide on the number of segments.

Ex. mime /malm/

/al/ one segment or two ? we don't know !

- Sequences of fricatives often overlap

Ex. it is difficult or impossible to split the sequence or $/f\theta s/$ in 'fifths'.

Two points of view.

First some people believe that segmentation is fundamentally misguided.

Second The opposite view is that since segmentation appears to be possible in most cases, we should not reject segmentation because there are problematical cases.

How many segment type do we have?

Type vs token

Each vowel can be pronounced in many slightly different ways (tokens).

Phonemes are types, and their actual pronunciations by speakers are tokens.

Does that mean that the total number of sounds produced by speakers is practically infinite.!!!???? No because it is still the types we just produce with another way.

We feel quite confident in saying that the number of English vowels is not greater than twenty.

Why?

When we have two slightly different ways of pronunciation, there will be no change in the meaning of the word.

Ex. If we substitute /a/a with a more open vowel like cardinal vowel number 4 [a], there is no difference in meaning.

Similar situation: letters of the alphabet

The letters of the alphabet that we use in writing English:

PHONETICS, Phonetics, Phonetics, PHONETICS, phonetics

Different ways of writing the same letters. Thus, there is an abstract alphabet as the basis for our writing system.

Similarly, there is an abstract set of units as the basis of our speech.

These units are called phonemes. The complete set of these units is called the phonemic system of the language.

The phonemes themselves are abstract (types), but there are many ways (tokens) in which we may make the sounds that represent the phonemes

Complementary distribution:

A phoneme can only occur where the other cannot.

/t/ can be aspirated or unaspirated

Tea eat

Both aspirated and unaspirated /t/ are realized as /t/. But the aspirated realization will never be found in the place where the unaspirated realization is appropriate and vice versa. We call this **Complementary distribution**.

Phonemes Vs Allophnes:

Allophones: Allophones are different realizations of the same phoneme.

T /?/ $[t^h]$ = allophones (all for same phoneme /t/)

Symbols and transcriptions:

Transcriptions: converting from one representation (e.g. written text) into another (e.g. phonetic symbols).

Ex.(change the texts to symbols)

<mark>chip /t∫</mark>Ip/

put /pʊt/

house /haʊs/

The International Phonetic Alphabet/Association (IPA)

The Association has taken the responsibility for maintaining a standard set of phonetic symbols for use in practical phonetics, presented in the form of a chart.

Phonemic vs. Phonetic transcription

Phonemic transcription: the only symbols that may be used are those which represent one of the phonemes of the language, and extra symbols are excluded. We use slant brackets or slashes.
 Ex. pan /pæn/

Every speech sound must be identified as one of the phonemes and written with the appropriate symbol.

Phonetic transcription: the transcriber may use the full range of phonetic symbols (including diacritics) if these are required. We use square brackets []
 Pan: [p^hæn]

BBC Phonemic System:

The BBC accent contains forty-four phonemes:

44 phonemes: (24 consonants, 7 short vowels, 5 long vowels, 8 diphthongs)

7 short vowels	5 long vowels	8 diphthongs
 I as in 'pit' pit e as in 'pet' pet æ as in 'pat' pæt Λ as in 'putt' pΛt D as in 'pot' pDt U as in 'put' pUt Ə as in 'about', uppe ƏbaUt, ΛpƏ 	i as in 'key' ki a as in 'car' ka as in 'core' ka u as in 'coo' ku as in 'coo' ku as in 'cur' ka r'	ei as in 'bay' bei ai as in 'buy' bai bi as in 'boy' bbi iba as in 'peer' pib eba as in 'pear' peb ub as in 'poor' pub bu as in 'go' gbu au as in 'cow' kau

24 phonemes

p	as in 'pea' pi	b	as in 'bee' bix
t	as in 'toe' tau	d	as in 'doe' dəu
k	as in 'cap' kæp	q	as in 'gap' qæp
f	as in 'fat' fæt	v	as in 'vat' væt
θ	as in 'thing' θιη	ð	as in 'this' ð 1s
S	as in 'sip' sip	Z	as in 'zip' zip
ſ	as in 'ship' (Ip	3	as in 'measure' mezə
h	as in 'hat' hæt	U	5
m	as in 'map' mæp	1	as in 'led' led
n	as in 'nap' næp	r	as in 'red' red
n	as in 'hang' hæn	i	as in 'vet' jet
5	6 5	w	as in 'wet' wet
		1	
t∫	as in 'chin' tJin	dʒ	as in 'gin' d31n

The study of the phonemic system:

The phonemic system is similar to the set of pieces used in a game of chess; the exact shape and colour of the pieces are not important as long as they can be reliably distinguished.

The phonemic system is similar to the set of cards; the exact shape and colour of the pieces are not important to the game as long as they can be reliably distinguished.

playing cards can be printed in many different styles and sizes, but these do not affect the game played with them.

We have a more or less fixed set of phonemes which can be used in speaking English.

Lecture 12

Approximants

Definition: An **approximant** is an articulation in which the articulators approach each other but do not get **sufficiently** close to each other to produce a complete consonant such as a plosive , nasal or fricative

Lateral approximant /l/ (/l/ alveolar lateral consonant)
The soft palate is raised. The tip of the tongue is in light contact with the alveolar ridge while the sides of the tongue are lowered, forming rather wide passages. The air escapes along the sides of the tongue.

Movements of the sides of the tongue

The sides are moving up and down while the center is raised.

Experiment 1.

Produce a long sequence of alternations between /d/ and /l/ without moving the middle of the tongue.

Experiment 2.

Feel the movement of the air past the sides of the tongue:

It is impossible in voiced /l/, but Very clear in voiceless /l/ (loud whispered /l/

Why impossible in voiced /l/?

Because the obstruction caused by the vibrating vocal cords reduces the air flow.

https://3c1703fe8d.site.internapcdn.net/newman/gfx/news/hires/2015/564caa4fc2ead.gifDistributionFully distributed. CVVCVCVCInitial:lateMedial:claimFinal:until

Different realizations/ Allophones for lateral /l/.Light Vs Dark /l/

Light /l/ is used <u>before</u> vowels

e.g. lea live, late, lab, Value, fly, relief

Dark /l/ is used <u>after</u> vowels

Ex: Eel

When /l/ precedes a consonant. (/l/ comes before a consonant)

Ex: eels /i:lz/

Dark /l/

☑ Dark /l/ is used when /l/ is preceded by a consonant: /l/ comes <u>after</u> a consonant.

Play, Club

What makes a dark /l/ dark?

https://www.youtube.com/watch?v=pejo6YC BnM

Dark /l/ had a quality rather similar to an [u] vowel with the back of the tongue raised

Phonetic Symbol used for dark /l/ is [†] [~]

Kill /kɪ <mark>l</mark> /	/phonemic/

Kill [kl+]+ dark l[phonetic]

Kill [k^hlł] ł dark l, ^h aspiration [phonetic]

There is no phonetic symbol for light /l/

- Light /l/ and dark [1] are two variations for the same phoneme /l/
- Light /l/ and dark [ł] are in complementary distribution.
- Light /l/ and dark [1] are mutually exclusive

✤ <u>Approximant /r/</u>

Importance: Considerable differences can be found in the pronunciation of /r/ in different accents of English.

Recommended Pronunciation

There is only one pronunciation that can be recommended to the learners of RP: <u>post</u> <u>alveolar approximant</u>.

The articulators approach each other but do not get sufficiently close to each other to produce a complete consonant such as a plosive, nasal or fricative.

Production:

The tip of the tongue approaches the alveolar area in approximately the way it would for a /t/ or /d/ but never actually makes contact with any part of the roof of the mouth at any time.

The place of articulation for the Approximant /r/ is **post-alveolar**

Production: Retroflex

The tongue is slightly curled back; the 'curling back' process carries the tip of the tongue to a position slightly further back than that for alveolar consonants like 't' and /d/. That is why it is called post-alveolar.

***** Production: Voiceless

/r/ will be produced without vibration when it occurs after initial /p/, /t/, and /k/.

Press

Tree

Cress

Production of /r/ with a rounded lip

Children pronounce /w/ instead of /r/ until they learn. It is usual for the lips to be slightly rounded in this production. We need to be careful of strong lip-rounding,; otherwise we produce /w/

distribution

As a letter, /r/ is fully distributed in the spelling

في البداية والوسط ينطق ويكتب Red bread

في النهاية يكتب و لا ينطق car

It is Not Fully Distributed as a phoneme, though.

/r/ is not always pronounced in RP

/r/ does not occur finally

Pronunciation

/r/ only occurs **<u>before</u> vowels**.

Red /red / bread /bred / car /kɑː/

/r/is not pronounced at the end of words and when it is followed by a consonant

E.g. care, /keə/

ever: /evə/ here: /hiə/

hard: /hɑːd/ verse: /vɜːs/

Rhotic vs. non-Rhotic

Accents which have /r/ in final positions and before consonants are called rhotic (American)

Accents in which /r/ only occurs before vowels (bread , chrome) are called non-rhotic (British)

Lecture 13

Approximant /j/ and /w/

They are found at the beginning of words like:

yet /jet/

wet /wet/ The main point about /j/ and /w/

They are phonetically like vowels, but phonologically like consonants

In earlier work on phonology, they were called semi-vowels.

They are phonetically like vowels

The /j/ is very similar to the cardinal vowel [i] but it is very short.

The /w/ is very similar to the cardinal vowel [u].

Are /j/ and /w/ consonants or vowels?

/j/ and /w/ are consonants:

<u>1- They occur before a vowel phoneme</u>



- The indefinite articles test: (a (before consonants), an (before vowels)).
- EX. A way. an incident.

A year. an orange.

The definite articles test:

(the: /ðə/ before consonants; ex: /ðə/ student

(the: /ði/ before vowels, /ði/ oldman).

EX. The /ðə/ way. The /ði/ incident.

The /ðə/ year. The /ði/ orange. Places of Articulation for /w/ and /j/

/w/ is bilabial: A bilabial sound is a sound made with both lips.

/j/ is palatal: <u>Palatal</u> consonants are consonants in which the tongue makes contact with the highest part of the hard palate.

Places of Articulation									
Bilabial	Bilabial Labio-dental Dental Alveolar Post-alveolar Palatal Velar glottal								
рb	f	θ	t d	∫ 3		Кg	h		
m	V	ð	S Z	t∫ dʒ		η			
W			n	r					

Manners of Articulation					
Plosive	Fricative	Affricate	Nasal	Lateral approximant	approximant
p b	fv	t∫ dʒ	m n	I	r
t d	S Z		η		W
k g	∫ 3				j
	θð				
	h				

		Places of Articulation							
		Bilabial	Labio- dental	Dental	Alveolar	Post- alveolar	Palatal	Velar	glottal
	Plosive	рb			t d			k g	
ЧNO	Fricative		fv	θð	S Z	∫ 3			h
ER (Affricate					t∫ dʒ			
CCI N	Nasal	m			n			η	
MA	Lateral				I				
◄	approximant								
	approximant	W				r	j		

Lenis Vs fortis					
Manners of	voiced consonants (lenis)	voiceless			
Articulation	Lenis consonants are <u>weak</u>	Fortis consonants are strong			
Plosive	b, d, g	p, t, k			
Fricative	v,z,ʒ,ð,	f, s,∫, θ, h			
Affricate	dʒ	t∫			
Nasal	m, n , η				
approximant	l, r, w, j				

Sample exam question

1. Choose the voiced affricative consonant.

```
t∫
dʒ
d
k
g
```

2. The consonant /dʒ/ is

A voiced fricative consonant

A fortis affricate consonants

A plosive alveolar consonant

A voiced affricate consonant.

An alveolar lateral approximant

- 3. Choose the fortis plosive alveolar consonant.
 - t∫ dʒ d <mark>t</mark>
 - g
- 4. The consonant /t/ is

A voiced approximant consonant

A fortis affricate consonants

A fricative alveolar consonant

A fortis plosive alveolar consonant.

A lenis plosive alveolar consonant.

5. The place of articulation for $/ \int /$ is

Velar

Alveolar

Post-alveolar

Bilabial

Labio-dental

6. The consonant /..... / has a post-alveolar place of articulation.

```
t∫
dʒ
d
g
```

7. The manner of articulation for $/ \int /$ is

plosive

affricate

<mark>fricative</mark>

nasal

approximant

8. The consonant /..... / has a fricative manner of articulation.

t∫ dʒ d ʃ g

<u>The Syllable</u>

Components of a syllable:

1- an onset (beginning)

2- A center (usual is a vowel)

3- a coda (end)

Ex:

ran /ræn/ sat /sæt/ fill /fil/

✤ Minimum syllable:

Minimum syllable: It is a single vowel in isolation. It is followed and preceded by silence.

Ex:	are /ɑː/	or /ɔː/	err /3 ː/
-----	----------	---------	------------------

zero coda syllable
Onset + centre syllable:

Definition (1)

zero coda syllable: A syllable that has one or more consonants preceding the center.

Or

A syllable that does not have a final consonant.

 Ex:
 bar /bɑː/
 key /kiː/
 More /mɔː/

<u>zero onset syllable</u>
 Centre + coda syllable = zero onset syllable

Features:

- It is a syllable that ends with one or more consonants.
- It is a syllable in which there is no consonant preceding the centre.
- It is a syllable that begins with a vowel.

Ex:

am /æm/ ought /ɔːt/ ease	/iːz/
--------------------------	-------

Consonant cluster

Consonant cluster: when we have two or more consonants together, without any intervening vowels between these consonants.

consonant cluster: A group of consonants at the beginning or end of a syllable.

Strong prompt

Syllabic consonants

Ex. Bottle [bpt[]]

The second syllable is weak

The second syllable contains no vowel at all,

The second syllable consists entirely of the consonant [I]

<u>A syllabic consonant</u> is a weak syllable that contains no vowel at all and it consists entirely of the consonants.

Weak syllables

The vowel in a weak syllable tends to be:

- shorter,
- of lower intensity (loudness)
- and different in quality .

Syllabic consonants

It is usual to indicate that a consonant is syllabic by means of a small vertical mark [,] that goes below the lateral /l/.

Example: 'cattle [kæțl]

Lateral release

When we have a plosive followed by a lateral /l/, the plosive is released through the sides of the tongue. We call this lateral release of the plosive.

```
Example: 'muddle' [ mʌdl ]
```

Syllabic [1]
 It occurs after another consonant

☑ 'bottle [bot]] Lateral release

The plosive /t/ in **bottle** [bbt]] is laterally released through the sides of the tongue. The centre of the tongue is still in contact with the alveolar when /t/ is released: only the sides of the tongue are lowered.

☑ 'muddle' [m∧d] Lateral release

The plosive /d/ in *muddle* $[m \land d]$ is laterally released through the sides of the tongue. The centre of the tongue is still in contact with the alveolar when /d/ is released: only the sides of the tongue are lowered.

Where do we find syllabic [I] in the BBC accent?

Cattle [kæt]]

Bottle [bot]]

Muddle [mʌd]

* Syllabi [n]

Syllabic [n] is most common after alveolar plosives and alveolar fricatives.

t, d, s, z

'eaten' [i:tņ]

Sudden [sʌdʌ]

Nasal release

🗷 'eaten' [i:tņ]

the plosive can be nasally released <u>by lowering the soft palate</u>, so that in the word 'eaten' [i:tn] the tongue does not move in the /tn/ sequence but the soft palate is lowered at the end of /t/ so that the compressed air escapes through the nose. We call this nasal release.

Lecture 14

WHY DO WE USE WEAK FORMS?

Most native speakers of English find an "all-strong form" pronunciation unnatural and foreign-sounding, something that most learners would wish to avoid.

speakers who are not familiar with the use of weak forms are likely to have difficulty understanding speakers who do use weak forms;

learners of the language need to learn about these weak forms to help them to understand what they hear.

The most common weak-form words:

<u>The</u> Strong /ðə/ weak /ði/

⊠ Strong /ðə/.

It occurs before consonants.

Ex. The classroom. /ðə/ classroom

Shut **the** door. shut /ðə/ door.

🗵 Weak /ði/ .

it occurs before vowels.

Ex. the end. /ði/ end

The old man. /ði/ old man

The apple. /ði/ apple.

<u>That</u>

Strong form /ðæt/. Weak form /ðət/.

☑ Strong form /ðæt/ :

when *that* is sentence-initial and when it is used with a demonstrative sense.

Ex. That girl. /ðæt/ girl.

That apple/ðæt/ apple.

That she was clever made them employ her.

/ðæt/ she was clever made them employ her.

☑ Weak form /ðət/:

That only when used as a relative pronoun.

Ex. This is the book that Sally bought.

This is the book /ðət/ Sally bought.

This is the book that I bought.

This is the book /ðət/ I bought.

Linking

liaison (from French) "Linking" or "joining together"

<u>Linking</u>: The way the end of one word is joined on to the beginning of the following word.

In real connected speech, we link words together in in a number of ways.

Linking /r/ and intrusive /r/

✤ Linking /r/

BBC is non-Rhotic = no /r/ in syllable final position.

here /hiə/ four /fɔː/ Car /kɑː/

Linking /r/ when a word ends with /r/ is followed by a word that begins with a vowel, /r/ is PRONOUNCED.

Examples:

here /hIə/.	here is /hɪər ɪz/🔨	*/hıə ız/ <mark>×</mark>
four /fɔː/.	four eggs /fɔːr egz/ 🗸	*/fɔː egz/×
Car / kɑː/. 1	the care is /ðə kɑːr ız/V	*/ðə ka: ız/×

,

this is done to link the words without sliding the two vowels together

***** Intrusive /r/.

speakers often use /r/ in a similar way to link words ending with a vowel, even when there is no "justification" from the spelling.

' Formul <mark>a A</mark> '	fɔːmjələ <mark>r</mark> ei		
'Australi <mark>a</mark> all out'	ostreiliər o∶l aʊt		
' medi <mark>a e</mark> vent '	mi:diər ivent		

Assimilation

A feature of natural connected speech only.

Assimilation: Sounds belonging to one word can cause changes in sounds (phonemes) belonging to neighbouring words

Assimilation is more likely to be found in rapid, casual speech. The cases most often described are assimilations affecting consonants

Assimilation at word boundary

(End with C)Consonant final - - - C^{f} | C^{i} - - - (begin with C) consonant Initial word boundary Assimilation can be either <u>regressive</u> or <u>progressive</u> \frown **Regressive** (C^{f} effected by C^{i}), **progressive** (C^{i} effected by C^{f}) **Regressive Vs Progressive Assimilation** In regressive assimilation C^{f} changes to become like C^{i} **Ex:** Bad boy (ba boy) $C^{f} C^{i} (C^{i} more powerful than <math>C^{f}$)

In progressive assimilation Cⁱ changes to become like C^f

Assimilation of place

In rapid speech, the final alveolar consonant /t/ will become /p/ before a bilabial consonant,

Ex: 'that person' / ðæp p3:sn/

'that man' /ðæp mæn /

'meat pie' /miːp pai /

Progressive assimilation of voice with the suffixes s, z;

When:

- a verb carries a third person singular '-s' suffix,
- a noun carries an '-s' plural suffix
- a noun carries an '-'s' possessive suffix,

These suffix will be

- pronounced as /s/ if the preceding consonant is fortis ("voiceless")
- pronounced as /z/ if the preceding consonant is lenis ("voiced").

Ex:

'Cat <mark>s</mark> '	kæt <mark>s</mark>	'dog <mark>s</mark> '	dɒg <mark>z</mark>		
'jump <mark>s</mark> '	dʒʌmp <mark>s</mark>	'runs'	rʌnz		
'pat' <mark>s</mark> '	pæt <mark>s</mark>	'pam' <mark>s</mark> '	pæm <mark>z</mark>		
t , p, is voiceless		g, n, m is v	voiced		
pronounced as /s/		pronounce	pronounced as /z/		

My best wishes for all ¥