## BA ENGLISH: PHONETICS 1

# SOUNDS , SPELLINGS ... AND MORE 

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## WHAT IS PHONETICS ABOUT?

- Phonetics: sounds and meanings, sounds and spellings
- Translation: why is phonetics so important?
- Phonetic ranks - from sounds and tones to intonations
- How do you translate - news, instructions, stories, poetry?
- English sounds and spellings:
- Sounds to spellings, spellings to sounds
- Homophones and homographs: phonetic false friends
- Why is English spelling so confusing?
- How do we speak?
- sound production - transmission - perception
- The International Phonetic Alphabet (IPA)
- World Englishes and their sounds


## AUDIBLE AND VISIBLE COMMUNICATION



## AUDIBLE AND VISIBLE COMMUNICATION



## SOUNDS AND SPELLINGS

## HOMOPHONES AND HOMOGRAPHS AND MORE

## THE CHAOS - Gerard Nolst Trenité

Dearest creature in creation, Study English pronunciation.
I will teach you in my verse
Sounds like corpse, corps, horse, and worse.
I will keep you, Suzy, busy, Make your head with heat grow dizzy.

Tear in eye, your dress will tear. So shall I! Oh hear my prayer.

Just compare heart, beard, and heard,
Dies and diet, lord and word,
Sword and sward, retain and Britain.
(Mind the latter, how it's written.)
Now I surely will not plague you
With such words as plaque and ague.
But be careful how you speak:
Say break and steak, but bleak and streak;
Cloven, oven, how and low, Script, receipt, show, poem, and toe.

Hear me say, devoid of trickery, Daughter, laughter, and Terpsichore, Typhoid, measles, topsails, aisles,

Exiles, similes, and reviles; Scholar, vicar, and cigar, Solar, mica, war and far; One, anemone, Balmoral, Kitchen, lichen, laundry, laurel; Gertrude, German, wind and mind, Scene, Melpomene, mankind.

Billet does not rhyme with ballet, Bouquet, wallet, mallet, chalet. Blood and flood are not like food, Nor is mould like should and would.
Viscous, viscount, load and broad, Toward, to forward, to reward. And your pronunciation's OK When you correctly say croquet,
Rounded, wounded, grieve and sieve, Friend and fiend, alive and live.

Ivy, privy, famous; clamour And enamour rhymes with hammer.

River, rival, tomb, bomb, comb,
Doll and roll and some and home.
Stranger does not rhyme with anger, Neither does devour with clangour.

Souls but foul, haunt but aunt, Font, front, wont, want, grand, and grant, Shoes, goes, does. Now first say finger,

And then singer, ginger, linger,
Real, zeal, mauve, gauze, gouge and gauge, Marriage, foliage, mirage, and age.

Query does not rhyme with very,
Nor does fury sound like bury.
Dost, lost, post and doth, cloth, loth.
Job, nob, bosom, transom, oath.
Though the differences seem little,
We say actual but victual.
Refer does not rhyme with deafer.
Foeffer does, and zephyr, heifer.
Mint, pint, senate and sedate;
Dull, bull, and George ate late.
Scenic, Arabic, Pacific, Science, conscience, scientific.

Liberty, library, heave and heaven, Rachel, ache, moustache, eleven. We say hallowed, but allowed, People, leopard, towed, but vowed. Mark the differences, moreover,
Between mover, cover, clover;
Leeches, breeches, wise, precise, Chalice, but police and lice;
Camel, constable, unstable,
Principle, disciple, label.
Petal, panel, and canal,
Wait, surprise, plait, promise, pal. Worm and storm, chaise, chaos, chair,

Senator, spectator, mayor.
Tour, but our and succour, four.
Gas, alas, and Arkansas.
Sea, idea, Korea, area,
Psalm, Maria, but malaria.
Youth, south, southern, cleanse and clean.
Doctrine, turpentine, marine.
Compare alien with Italian, Dandelion and battalion. Sally with ally, yea, ye,
Eye, I, ay, aye, whey, and key. Say aver, but ever, fever,
Neither, leisure, skein, deceiver. Heron, granary, canary.
Crevice and device and aerie.

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# WHY IS ENGLISH PRONUNCIATION SO CONFUSING? 

## SEVERAL REASONS ...

## WHY IS ENGLISH PRONUNCIATION SO CONFUSING?

## One reason - invasions in the first millennium (and semantic change):

- shirt: Saxon origin (Southern England)
- Old English scyrte "skirt, tunic," from Proto-Germanic *skurtjon "a short garment" (source also of Old Norse skyrta, Swedish skjorta "skirt, kirtle;" Middle Dutch scorte, Dutch schort "apron;" Middle High German schurz, German Schurz "apron"), perhaps related to Old English scort, sceort "short," etc., from PIE root *sker- (1) "to cut," on the notion of "a cut piece."
- cf. German: Schürze (apron)
- skirt: Scandinavian origin (Northern England)

Originally a
tunic or smock


- "lower part of a woman's dress," from Old Norse skyrta "shirt, a kind of kirtle;" see shirt. Sense development from "shirt" to "skirt" is possibly related to the long shirts of peasant garb


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Semantic change

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## Another reason ...

- homographs:
- lead: The roof and pipes are made of lead. - Please lead me to your leader.
- ruler: I measured the edges with a ruler. - Caesar was a Roman ruler.
- homophones:
- led - lead: past tense of to lead, - a heavy metal
- meet - meat: to get together - food made of part of an animal

Yet another reason - sound change:

- cough - bough - hiccough - slough - though - through - thorough
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- ruler: Im

Suggested exercises:
an ruler.

- Find the reasons for the spellings of cough, etc.
- homophones:
- led-lear
- Learn the poem Dearest creature in creation...".
- meet $-\mathbf{m}$ - Make full lists of homographs and homophones.

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## HOMOGRAPHS: sounds, meanings, but one spelling



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## MIODRS In vOuD DRAIN

brilliant: She is both brilliant and beautiful. - I was blinded by a brilliant light.
bass: He has a deep bass voice. - He caught a bass and a herring.
bow: He bowed to the queen. - He hit the target with his bow and arrow.
close: Please close the window! - He was close to the explosion.
does: She does her shopping on Saturdays. - I saw the does and stags.
down: She fell down the stairs. - The pillow is filled with goose down.
lead: The roof and the pipes are made of lead. - Please lead me to your leader.
ruler: I measured the edges with a ruler. - Caesar was a Roman ruler.
seal: 1 saw a seal and a seagull. - The letter had an official seal on it.
sink: Did you see the boat sink? fAfter the meal I put the dishes in the sink.
tear: She said goodby with a tear in her eye. The thorns tore my shirt. wind: There's a strong wind today. - Don't forget to wind your watch!

## HOMOPHONES: spellings, meanings, but one sound



## HOMOPHONES: spellings, meanings, but one sound



## PHONOLOGY

## the study of sound types which encode and distinguish words in the mental lexicon or in a dictionary

and

## PHONETICS

the study of actual physical and physiological properties of speech sounds

## PHONOLOGY

[^0]
## PHONOLOGY

## PHONOLOGY:

the linguistic study of abstract sounds in your mental lexicon or in the dictionary, which
make syllable and word segments of speech
by syntagmatic relations (construction)
make sets of contrasting sounds in the syntagmatic relations by paradigmatic relations (classification)

| DICTIONARY | Phoneme <br> for example: $/ \mathrm{p} /$ in $/ \mathrm{pip} /$ <br>  <br> A set of actual speech <br> sounds which do not <br> constrast to make <br> different words. |
| :--- | :--- |


| Phone <br> for example, $\left[p^{h}\right],\left[p^{n}\right]$ and [ I ] in [ $\mathrm{p}^{\mathrm{h}} \mathrm{I} \mathrm{p}^{\mathrm{n}}$ ] |  |
| :---: | :---: |
|  |  |
| An actual speech sound which is a member of a | $V$ |
| phoneme. | SOUND |

## PHONOLOGY



## PHONOLOGY



The phones $\left[p^{\dagger}\right]$ and $\left[p^{`}\right]$ are allophones of $/ p /$. The phone [ I ] is an allophone of /i/.

An allophone of a phoneme is either in complementary distribution or in free variation with other allophones of the phoneme.

## PHONOLOGY



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## PHONOTACTICS: ENGLISH SYLLABLE MAP

English syllable structure is often described as

cCCVCC<br>or (C)(C)(C)V(C)(C)

3 optional consonants, vowel, two optional consonants, as in: sprint

But the combinations are not so simple
(one phoneme per transition set)

ONSET (INITIAL)

RHYME
(FINAL)


## PHONOTACTICS: PUTONGHUA SYLLABLE MAP

Putonghua syllable structure is often
(INITIAL)
RHYME described as

Initial Final

That is, one optional consonants followed by a mandatory vowel with optional consonant:
sprint
But the combinations are not so simple ...
(one example per set)


## PHONOTACTICS: ENGLISH SYLLABLE MAP

## 31761 possible syllables

The number of syllables actually used is smaller, but more can be 'legally' invented and also represented by alphabetic characters sequences.

## PHONOTACTICS: PUTONGHUA SYLLABLE MAP

## 464 possible syllables

The number of syllables actually used and represented by characters is smaller, but more can be 'legally' invented and represented by alphabetic Pinyin character sequences.

## ENGLISH PHONOLOGY: LEXICAL SETS FOR VOWELS

Wells (1982) illustrates paradigmatic relations between vowels with lexical sets of typical words which contain these vowels, for two main English accents:
"RP" (Received Pronunciation), standard accent of South-East England educated upper class.
"GenAm" (General American, geographically "neutral" or widespread accent in the USA.

Wells (1982:123):
The keywords have been chosen in such a way that clarity is maximized: whatever accent of English they are spoken in, they can hardly be mistaken for other words. Although "fleece" is not the commonest of words, it cannot be mistaken for a word with some other vowel...

Wells, John C. (1982). Accents of English. Volume 1: An Introduction (pp. i-xx, 1278), Volume 2: The British Isles, Volume 3: Beyond the British Isles. Cambridge University Press.

## ENGLISH PHONOLOGY: LEXICAL SETS FOR VOWELS

| Keyword | RP | GenAm | Example words | Keyword | RP | GenAm | Example words |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| KIT | I | I | ship, sick, bridge, milk, myth, busy | GOOSE | u: | u | loop, shoot, tomb, mute, huge, view |
| DRESS | e | $\varepsilon$ | step, neck, edge, shelf, friend, ready | PRICE | aI | aI | ripe, write, arrive, high, try, buy |
| TRAP | æ | æ | tap, back, badge, scalp, hand, cancel | CHOICE | эІ | כI | adroit, noise, join, toy, royal |
| LOT | D | a | stop, sock, dodge, romp, possible, quality | MOUTH | av | av | out, house, loud, count, crowd, cow |
| STRUT | $\wedge$ | $\wedge$ | cup, suck, budge, pulse, trunk, blood | NEAR | Іә | Ir | beer, sincere, fear, beard, serum |
| FOOT | v | v | put, bush, full, good, look, wolf | SQUARE | $\varepsilon ə$ | $\varepsilon r$ | care, fair, pear, where, scarce, vary |
| BATH | a : | æ | staff, brass, ask, dance, sample, calf | START | a : | ar | far, sharp, bark, carve, farm, heart |
| CLOTH | D | $\bigcirc$ | cough, broth, cross, long, Boston | NORTH | ว: | or | for, war, short, scorch, born, warm |
| NURSE | 3: | 3 r | hurt, lurk, urge, burst, jerk, term | FORCE | О: | or | four, wore, sport, porch, borne, story |
| FLEECE | i: | i | creep, speak, leave, feel, key, people | CURE | ขə | vr | poor, tourist, pure, plural, jury |
| FACE | eI | eI | tape, cake, raid, veil, steak, day | happY | I | I | copy, scampi, taxi, sortie, committee, hockey, Chelsea |
| PALM | a : | a | psalm, father, bra, spa, lager | lettER | ə | ər | paper, metre, calendar, stupor, succo(u)r, martyr, figure |
| THOUGHT | О: | $\bigcirc$ | taught, sauce, hawk, jaw, broad | commA | ə | ə | catalpa, quota, vodka |
| GOAT | əv | 0 | soap, joke, home, know, so, roll |  |  |  |  |
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## SPEECH PRODUCTION



## SPEECH PRODUCTION: ENGLISH VOWELS (UK)



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## SPEECH PRODUCTION: ENGLISH VOWELS (UK)

| DIPHTHONGS |
| :--- |
| 1. FACE |
| 2. GOAT |
| 3. PRICE |
| 4. CHOICE |
| 5. MOUTH |
| 6. NEAR |
| 7. SQUARE |
| 8. CURE |



## SPEECH PRODUCTION



## SPEECH PRODUCTION: VARIABLE FREQUENCY SOURCE



## SPEECH PRODUCTION: ORAL SOUNDS, ORAL FILTER



## SPEECH PRODUCTION: NASAL SOUNDS, NASAL FILTER



## SPEECH PRODUCTION: NASAL SOUNDS, NASAL FILTER



## SPEECH PRODUCTION: THE SOURCE-FILTER MODEL

The Source-Filter Model of vowel production

airflow
Consonants are different kinds of obstruction of the airflow.

## PROSODY: RHYTHM AND INTONATION

## PROSODY: METALOCUTIONARY POINTERS

STRUCTURAL FUNCTIONS:

## METALOCUTIONARY POINTERS

pitch accents ~ pointers to contrast, emphasis
pitch accents ~ pointers to new information
final pitch accent ~ pointer to new information AND utterance type
global intonation, accent sequence, boundary tones: pointer to utterance type and scope

## INTONATION: METALOCUTIONARY POINTERS

STRUCTURAL FUNCTIONS:

## METALOCUTIONARY POINTERS

global intonation, accent sequence, boundary tones: pointer to utterance type and scope


## INTONATION: METALOCUTIONARY POINTERS

STRUCTURAL FUNCTIONS:

## METALOCUTIONARY POINTERS



Imagine part of a telephone conversation...
I de'cided to 'go into 'town on 'Monday.


No, not SUNday, I said "MONday".


Will you go into town? Yes, of course I will.


## PROSODY: ENGLISH AND CHINESE

## FREQUENCY MODULATION: ENGLISH PITCH ACCENTS

Chinese lexical tones:
function -
phonemic lexical contrast


## FREQUENCY MODULATION: CHINESE LEXICAL TONES

Phonemic tones Tones 1 ... 4
high female voice


Phonemic tones Tones 1 ... 4

Iow female voice: creaky Tone 3


Pitch: FO estimation
Morphemic tone "Tone 6" ©
low female voice: 4 allotones


What is the meaning of this tone?

## THANKS - NOW PLEASE PRACTICE!


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