English Phonetics and Phonology

Rebecca Chen

Week 1

The English Sound System

Things to ponder...

- What are the relationships between sounds and letters?
- How are sounds produced?
- How are speech sounds represented?
- What does the English sound system consist of?
- Which English pronunciation system are we learning?
- How is phonetics different from phonology?

Phonetics

= the study of ways human make, transmit, and receive speech sounds

- **articulatory**
- **acoustic**
- **auditory**

Phonology

= the study of the sound systems of languages, and of the general properties displayed by these systems.

how speech sounds of a language **pattern together** according to **regular rules** (of a specific language)

Phonics

Decoding and encoding of sounds into graphemes (letters)

e.g. man
How many letters?
How many sounds?
Each letter represents one sound m-a-n

notation of **segments**

notation of **suprasegmentals** length, pitch, stress

Phonemics
44 phonemes
Allophones

Intonation **patterns**
Stress

Sound **sequences**
Syllables

Intelligible? Comprehensible? Professional?

http://www.youtube.com/watch?v=1O85GLeAqeo&NR=1

4

Why Teach English Phonetics and Phonology? (1)

1. Teaching Intelligible Pronunciation

The features of pronunciation which can cause confusion include

(1) Using the wrong sound
(2) Leaving sounds out
(3) Adding sounds
(4) Putting stress on the wrong syllable in a word
(5) Putting stress on the wrong word in a sentence
(6) Using the wrong intonation pattern
(7) Combinations of these problems

Why Teach English Phonetics and Phonology? (2)

2. Teaching to Create the Best Impression

-particularly at a more advanced level,

e.g. for job interviews

3. Teaching to build up the relationship between pronunciation and writing

e.g. dateline vs. deadline

(1) don't distinguish the vowels in date and dead
(2) Devoice the final consonant of dead
(3) So..they become "homonyms"

Another example: syllabus vs. syllables

What to teach: Segments (1)

Phonics

- English Alphabet: _____ letters
- English sound system: ____ phonemes
- Letter-sound NOT always a one-to-one relationship e.g.

  Sometimes one letter represents more than one sound e.g. m<u>a</u>n, w<u>a</u>tch, <u>a</u>go, c<u>ar</u>, n<u>a</u>m<u>e</u>, <u>a</u>lw<u>ay</u>s, s<u>a</u>w

  Sometimes different letters represent the same sound. E.g. <u>c</u>ent, <u>s</u>ent

What to teach: Segments (2)

Do you want to learn/teach
**International Phonetic Alphabet (IPA)?**

CONSONANTS (PULMONIC)

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k g	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	N		
Trill	B			r					R		
Tap or Flap				ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç j	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	L			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

What to teach: Segments (3)

Articulation positions of consonants
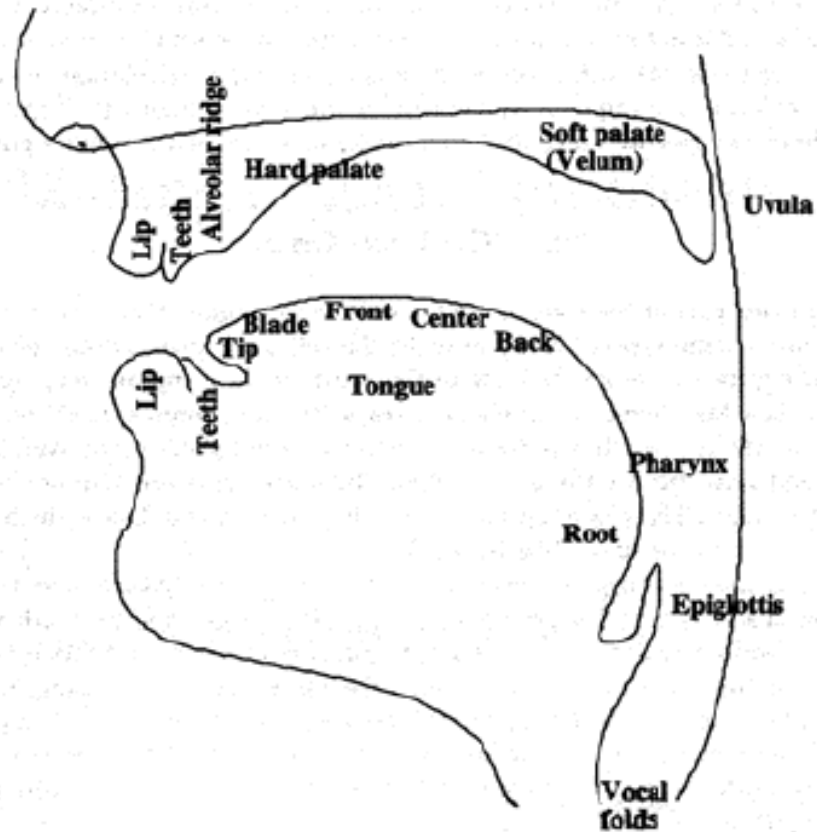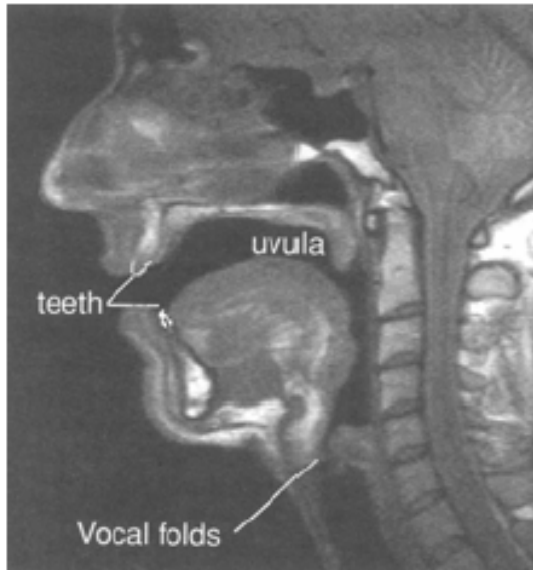
What to teach: Segments (4)

Consonant Chart : 24 phonemes

Table 1 *Chart of English consonant phonemes*

		Place of articulation						
		Bilabial	Labiodental	Dental	Alveolar	Palato-alveolar (Post-alveolar)	Palatal	Velar	Glottal
Manner of articulation	Plosive	p b			t d			k g	
	Fricative		f v	θ ð	s z	ʃ ʒ			h
	Affricate					tʃ dʒ			
	Nasal	m			n			ŋ	
	Lateral				l				
	Approximant	w				r	j		

Consonants

(24)

How many?

p	**p**en	**b**	**b**ack	**t**	**t**ea	**d**	**d**ay
k	**k**ey	**g**	**g**et	**f**	**f**at	**v**	**v**iew

θ	**th**in	**ð**	**th**en	**s**	**s**oon	**z**	**z**ero

ʃ	**sh**e	**ʒ**	plea**s**ure

tʃ	**ch**eer	**dʒ**	**j**ump

h	**h**ot	**m**	**m**an	**n**	**n**o	**ŋ**	si**ng**
l	**l**ed	**r**	**r**ed	**w**	**w**et	**j**	**y**et

11

What to teach: Segments (5)

- We can describe each English consonant sound using technical language like "θ" for a voiceless inter-dental fricative
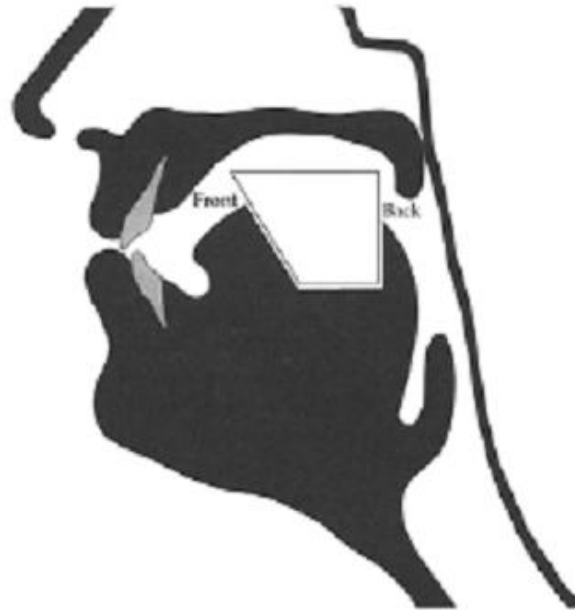
But…

- We can use **everyday words** to describe sounds in terms of 3 features:

1. **What parts** of the mouth are used ("place of articulation")

2. **How** the sound is made ("manner of articulation")

3. Whether or not a **sound** is made in the **throat** ("voicing")
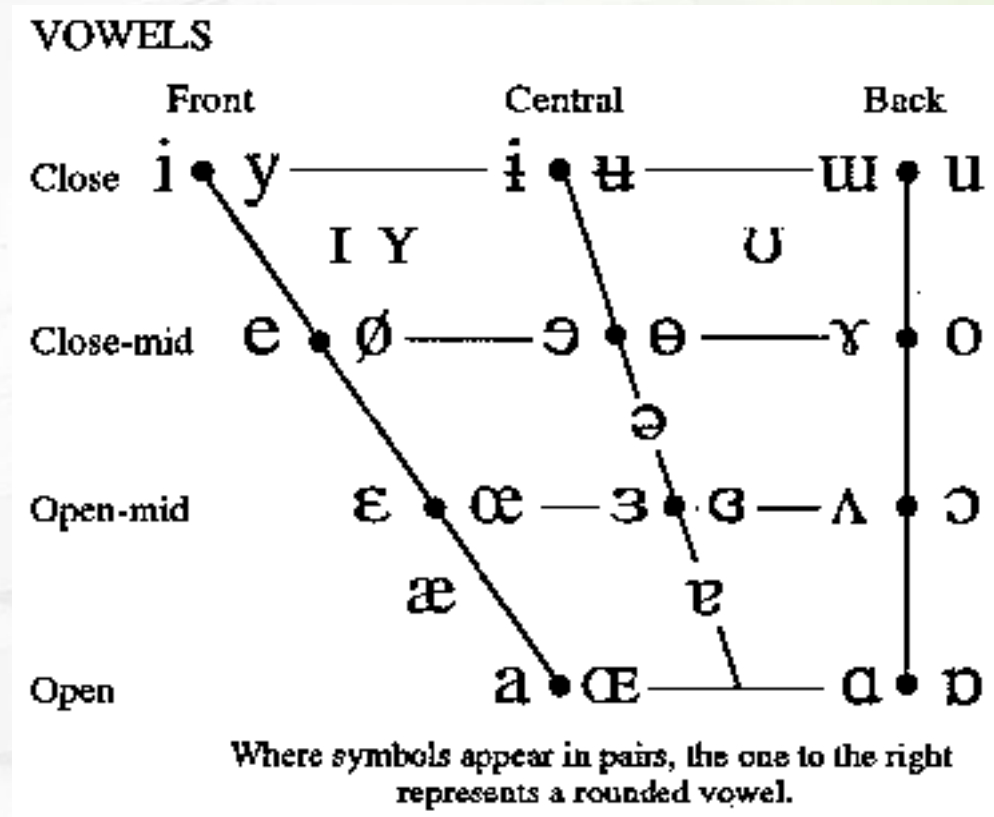
What to teach: Segments (6)

- **The Classical Contrasts of Vowel Space**

How to locate the "vowel space" and get the
basic qualities of the vowel

What to teach: Segments (7)

Chart of Vowels

Comparison of IPA and North American Vowels

IPA

North American (GA)

Some differences:

The IPA chart uses the terms *open* and *close* the GA uses *low* and *high*. The IPA chart has *four* height levels the GA has *three*.

Front Central Back

Close

Close-mid

Open-mid

Open

iː   uː

ɪ   ʊ

ə   ɜː   ɔː

e

ʌ

æ   ɒ

ɑː

English Vowels (RP)

Vowels & Diphthongs (20 phonemes)

ɪ ship   e bed   æ bad   ɒ pot

ʌ cut   ʊ put   ə cupboard   again

---

iː sheep   ɑː father   ɔː caught

uː boot   ɜː bird

---

eɪ make   aɪ buy   ɔɪ boy

aʊ now   əʊ grow

ɪə here   eə there   ʊə poor

17

What to teach: Segments (8)

GA and RP accents

What to teach: Segments (9)

An example of Phonological Processes

Name of Process	Examples
Assimilation Process	
Progressive Assimilation (Left-to-Right Persevative)	The English plural is either /z/ or /s/ when it occurs after a non-sibilant sound. The voicing feature is taken from the final consonant of the base. e.g. works [s] runs/ plays [z]

Note. Sibilants: /s/,/z/, /ʃ /, /ʒ/, /tʃ/,/dʒ/

What to teach: Segments (10)

Combinations of sounds: consonant cluster

English speakers often simplify final clusters in rapid
speech

e.g. texts /teks(s)/

But…

They don't normally drop the final consonant in

a cluster, e.g. suffix –s, -ed   (walked, friends)

What to Teach: Supra-segments (1)

What is stress? (Word /Sentential)

- 1. Stressed syllables are usually louder and longer than other syllables.

- 2. Some words, which are important bits of information in the message, receive what we call tonic stress (pitch movement)

- English tones include rising, falling and falling-rising

What to Teach: Supra-segments (2)

- Stress within words

1. Noun/Verb pairs

Noun	Verb
´Conduct	con´Duct
´Import	im´Port
´Record	re´Cord

What to Teach: Supra-segments (3)

2. Compound nouns

´White House

´greenhouse

´blueberries

´post office

What to Teach: Supra-segments (4)

3. Suffixes can be classified into three types according to their effect on stress:

(1). stress-preserving: -ment in
    enter´**tain**ment

(2). stress-attracting: -ette in
    cigar´**ette**

(3). stress-shifting: they cause the stress to shift to another syllable within the word, but not to the suffix -tion in

    ´**e**ducate   edu´**ca**tion

What to Teach: Supra-segments (5)

Rhythm, stress and Intonation in Sentences

´Jack and ´Jill went ´up the ´hill

To´ fetch a´ pail of´ water

´ Jack fell ´down and ´broke his ´crown

And Jill came ´tumbling ´after

What to Teach: Supra-segments (6)

The Emphasis Pattern of English

Content Words	Function Words
nouns *(cat, book, Mary)*	**pronouns** *(he, she, it, they)*
main verbs *(make, run)*	**prepositions** *(in, on, of, at)*
adjectives *(good, happy)*	**articles** *(a, an, the)*
adverbs *(quickly, often)*	**"to-be" verbs** *(am, is, are)*
question words *(who, what, when, where,)*	**"to-have" verbs** *(has, have))*
demonstrative pron. *(this, that, these, those)*	**conjunctions** *(and, but, so)*
	auxiliary verbs *(do, can,)*

What to Teach: Supra-segments (7)

Intonation:

Each tone can have several different functions:

- Falling tone (↘): statement (or wh-Q), definiteness, end of a list

- Rising Tone (↗): yes-no question, indicating surprise, end of an item (but not the last one) in the list

- Falling-rising Tone: (↘ ↗)
    1. indicating uncertainty, hesitation
    2. indicating encouragement
    3. indicating syntactic break in the middle of a sentence

What to Teach: Supra-segments (8)

Here are the example of neutral placement of the stress—where it falls on the last content word

- Yesterday Sam gave a big blue book to **Clara**
- Yesterday Sam gave a big blue **book** to her
- Yesterday Sam gave a big **blue** one to her
- Yesterday Sam **gave** it to her

What to Teach: Supra-segments (9)

- Yesterday Sam gave a big blue **book** to Clara.
  (not a bag, or some other thing)
- Yesterday Sam gave a big **blue** book to Clara.
  (not a red or a green one)
- Yesterday Sam gave a **big** blue book to Clara
  (not a small one)
- Yesterday Sam **gave** a big blue book to Clara
  (He actually handed it to her; he didn't send it by post)
- Yesterday **Sam** gave a big blue book to Clara
  (Sam did it, not Steve)
- **Yesterday** Sam gave a big blue book to Clara
  (not this morning)

What to Teach: Supra-segments (10)

Pause and thought Group

We pause briefly between chunks. This gives our listeners a chance to absorb what we're saying.

Do you know where to pause in sentences to form thought groups?

We usually pause
1. before punctuation marks (, . ; : ? !)
2. before conjunctions (and, or, but, which, since..)
3. between grammatical units such as phrases, clauses, and sentences.
4. We often slow down at dramatic parts of a story or important points in an argument.

What to Teach: Supra-segments (11)

Once upon a starless midnight / there was an owl /

who sat on the branch of an oak tree./   Two

ground moles / tried to slip by, / unnoticed. / "You!"

/ said the owl. /   "Who?" / they quavered, / in

fear and astonishment, / for they could not believe /

it was possible / for anyone to see them / in that

thick darkness./   (from *The Owl Who Was God* by

James Thurber)

Inter-language Phonology (1)

Contrastive analysis

MODERN STANDARD CHINESE

	LABIAL	DENTAL	ALVEOLAR	PALATO-ALVEOLAR	ALVEO-PALATAL	PALATAL	VELAR	GLOTTAL
STOP	p pʰ		t tʰ				k kʰ	
AFFRICATE			ts tsʰ	tʂ tʂʰ	tɕ tɕʰ			
FRICATIVE	f		s	ʂ ɻ	ɕ		x	
NASAL	m		n				ŋ	
APPROXIMANT	w		l			j		

GENERAL AMERICAN ENGLISH

	LABIAL	DENTAL	ALVEOLAR	PALATO-ALVEOLAR	ALVEO-PALATAL	PALATAL	VELAR	GLOTTAL
STOP	b p		d t				g k	
AFFRICATE				tʃ dʒ				
FRICATIVE	f v	θ ð	s z	ʃ ʒ				h
NASAL	m		n				ŋ	
APPROXIMANT	w		l	r		j		

Inter-language Phonology (2)

Rhythm is timing patterns among syllables. There are basically two types of sentence rhythm in languages: "stress-timed rhythm" and "syllable-timed rhythm.
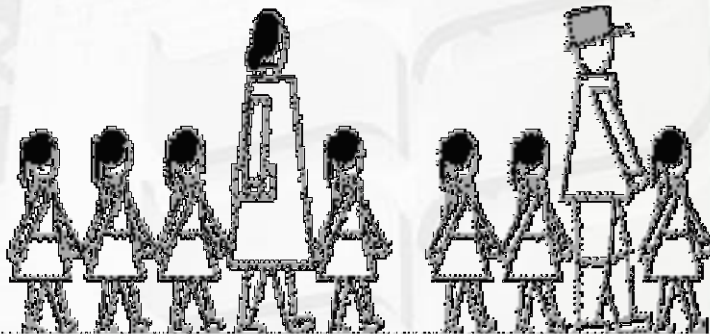
(A) Stress-timed Rhythm　　**(B) Syllable-timed Rhythm**
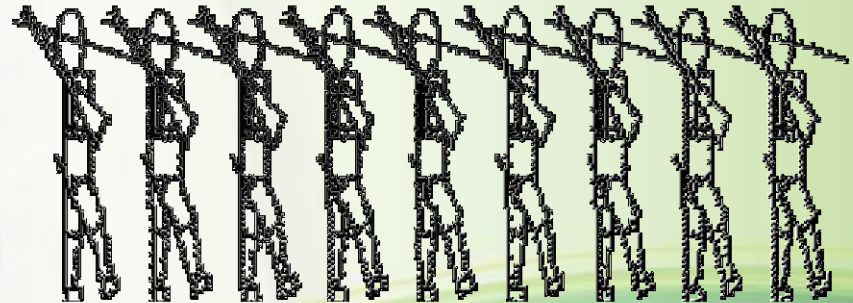
Pronunciation is important

Online Resources (1)

Phonics for kids or lower achievers

http://www.starfall.com/

Online Resources (2)

Phonetics: The sounds of American English

http://www.uiowa.edu/~acadtech/phonetics/english/frameset.html

Online Resources (3)

Online platforms: e.g. **My English Tutor (My ET):**
The "Automatic Speech Analysis System" can analyze the English speech on pronunciation, pitch, timing and emphasis, and even pinpoint problems to individual sounds

http://www.myet.com/MyETWeb/PersonalizedPage.aspx

World Englishes

▸ As English is spoken around the world by different peoples, there are *variations* or differences in English pronunciation. We call these speech differences *accents*.

▸ What accent(s) do you speak English with?

▸ What accent(s) is the best model to learn? Why?

▸ Which model do we adopt in this course?

Received Pronunciation (RP)

Received Pronunciation

Received Pronunciation (**RP**) is the speech model used in Roach (2009) because

1. it has often been the standard accent for foreign learners learning British English (BrE);
2. it is the most fully described BrE accent;
3. it is most frequently used as the basis for textbooks and pronouncing dictionaries for overseas learners of BrE
4. it used to be used by most announcers and newsreaders on serious national and international BBC broadcasting channels. (p.4-5)

There is, of course, no implication that other accents are inferior or less preasant-sounding.

Today…

- Module overview & Details of Course Assessment
- Meaning of phonetics/phonology/phonics
- 2 sub-systems of the English sound system-segmental and suprasegmental
- Major speech organs/production of speech sounds
- Adoption of RP in the Module
- Tutorial task: phonics-consonant letters and sounds