Phonetics and Phonology

- both describe the sounds + the combinatory possibilities of the sounds and the prosody of the language (how pitch, loudness and length work to produce accent, rhythm, and intonation)

Phonetics

- describes the speech sounds that occur in the languages of the world
- conc. with the concrete characteristics of the sounds (articulatory, acoustic, auditory)
- determines the nature of the sounds, their patterns, and aspects of the sounds necessary for conveying the meaning
- **phone** = the basic unit of phonetics, the smallest identifiable unit found in a stream of speech that is able to be transcribed with an IPA symbol, a concrete realisation of a phoneme
- **allophone** = a phonetic variant of a phoneme in a particular language, the basis for narrow phonetic transcription []

Phonology

- describes the systems and patterns of sounds in a language
- conc. with the function of the sounds in a systemic way in a particular language
- determines its distinctive sounds, establishes a set of rules to describe the changes in these sounds in different relationships with other sounds
- the phonology of a language = the set of rules describing the changes in the underlying sounds (or, phonemes) occurring in speech
- phonemics = the traditional approach to phonology, analyses the stream of speech into a sequence of contrastive segments ('contrastive' = 'contrasting with other segments which might change the meaning')
- **phoneme** = the basic unit of phonology, an abstract unit, not a single sound but a group of sounds used to differentiate words
- the smallest contrastive unit in the sound system of a language, defined according to its allophones and environments (American structuralist tradition) or as a set of distinctive features (generative tradition)
- the basis for writing down a language to record the variations btw sounds used to differentiate meaning = broad phonemic transcription //
- a word can be realised by a single phoneme (e.g. I, oh, ah)

Phone versus Phoneme

phone	phoneme
one of many possible sounds in the languages of the world	a contrastive unit in the sound system of a particular language
the smallest identifiable unit found in a stream of speech	a minimal unit that serves to distinguish btw meaning of words
pronounced in a defined way	pronounced in one or more ways, depending on the number of allophones
represented btw brackets by convention	represented btw slashes by convention
Example: [b], [j], [o]	Example: /b/, /j/, /o/

Articulatory Phonetics

The Vocal Organs

- the respiratory system pushes air out of the lungs > the windpipe (= trachea) > the larynx > the vocal tract
- the vocal tract: the vocal cords > the oral tract within the mouth and pharynx > the nasal tract within the nose
- **articulators** = the parts of the vocal tract used to form sounds
    - the upper lip and the upper teeth
    - the alveolar ridge
    - the hard palate
    - the soft palate (= velum)
    - the uvula
    - the tongue: the tip, the blade, the front (beneath the hard palate), the centre, the back (beneath the soft palate), the root (opposite the back wall of the pharynx; the epiglottis attached to its lower part)
- two-dimensional diagrams of the vocal organs (= a mid-sagittal view)

The Phonetic Description of Speech

- the stages of a speech sound: the production stage, the transmission s., the reception s.
- consonant sounds: most easily described mainly in terms of their articulation
- vowel sounds: described mainly in terms of their auditory impressions
- phonological definition: consonants as those segments occurring at the edges of syllables, vowels as segments occurring at the centre of syllables
- x /j, w, r/: consonants phonologically, vowels phonetically (the approximants [j, w] pronounced as short versions of vowels in the [i, u] regions) => **semi-vowels**

The Articulation of Consonants

- factors describing the articulation of consonant sounds
    - (a) source of the airstream (lungs for pulmonic articulation x elsewhere for non-pulmonic a.)
    - (b) direction of the airstream (outwards for egressive articulation [all E sounds] x inwards for ingressive a.)
    - (c) state of the vocal cords (close together and vibrating for voiced sounds x apart for voiceless s.)
    - (d) state of the soft palate (raised for oral sounds x lowered for nasal s.)
    - (e) place of articulation
    - (f) manner of a.
    - (g) + central or lateral a.
- [z] in 'easy': pulmonic, egressive, voiced, oral, alveolar, fricative, central (= 'voiced alveolar fricative', the oth. points assumed unless indicated otherwise)
- the **oro-nasal process**: the velum separates the nasal tract from the oral tract
    - (a) when raised against the back wall of the pharynx = a velic closure
    - (b) when lowered + an obstruction in the mouth created = a nasal consonant
- classification of speech sounds accord. to their noise component
    - (a) **obstruents** = their production causes noise (stops, fricatives, affricates)
    - (b) **sonorants** = no noise (voiced nasals, approximants, and vowels)

Place of Articulation

- **labial** articulations (the lips)
    - bilabial: the two lips ([p, b, m] in 'pie, buy, my')
    - labiodental: the lower lip and the upper front teeth ([f, v] in 'fee, vie')
- **coronal** a. (the tongue tip or blade)
    - dental: the tongue tip and the upper front teeth ([θ, ð] in 'think, then'); + interdental: the tongue protrudes btw the teeth
    - alveolar: the tongue tip or blade and the alveolar ridge ([t, d, n, s, z, l] in 'tie, die, nigh, sigh, zeal, lie')
    - post-alveolar: the tongue tip and the back of the alveolar ridge ([ɹ] in 'red')
    - retroflex: the tongue tip and the part of the hard palate immediately behind the alveolar ridge ([ɻ] in 'rye, row, raw'), not used by many speakers at all
    - palato-alveolar: the tongue blade and the back of the alveolar ridge ([ʃ, ʒ, tʃ, dʒ] in 'sheep, measure, cheap,

jump')

- **dorsal** a. (the back of the tongue)
    - palatal: the front of the tongue and the hard palate ([j] in 'you'); coronal or dorsal a.
    - velar: the back of the tongue and the soft palate ([k, g, ŋ] in 'hack, hag, hang')
    - glottal: an obstruction or a narrowing causing friction but not vibration ([h] in 'house')
- a secondary place of articulation in addition to the primary: e.g. the raising of the back of the tongue twd the velum in addition to the alveolar contact in the velarized [ɫ]

Manner of Articulation

(a) complete closure

- **stop**, or, plosive [p, b, t, d, k, g, m, n, ŋ]
- = complete closure of the articulators preventing the airflow to escape through the mouth
- oral stop = 'stop': the velum raised, the nasal tract blocked off ('pie, buy' [bilabial closure]; 'tie, dye' [alveolar c.]; 'key, guy' [velar c.])
- nasal s. = 'nasal': the velum lowered, the nasal tract free ('my' [bilabial closure], 'nigh' [alveolar c.], 'sang' [velar c.])
- **affricate** [tʃ, dʒ]
- = a stop immediately followed by a fricative ('cheap, judge')

(b) intermittent closure

- **trill**, or, roll [r]
- = a series of rapid intermittent closures made by a flexible organ on a firmer surface
- e.g. the trill of the tongue tip against the alveolar ridge (Scott. E: 'rye, raw')
- **tap**, or, flap [ɾ]
- = a single tap of made by a flexible organ on a firmer surface
- e.g. the tap of the tongue against the alveolar ridge (GA: 'letter')

(c) partial closure

- **lateral** (= lateral approximant) [l]
- = incomplete closure btw one or both sides of the tongue and the roof of the mouth ('lie' [alveolar lateral])

(d) narrowing

- **fricative** [f, v, θ, ð, s, z, ʃ, ʒ, x, h]
- = close approximation producing a turbulent airflow ('fee, vie' [labiodental]; 'thigh, thy' [dental]; 'sigh, zoo' [alveolar]; 'shy' [palato-alveolar])
- sibilants: the higher-pitched fricatives with a more obvious hiss ('sigh, shy')

(e) narrowing without friction

- **approximant** [j, w]
- = approximation producing no turbulent airflow ('yacht' [the front of the tongue + the palatal area], 'we' [lips + the velar area])

The Articulation of Vowels

- factors describing the articulation of vowel sounds
    (a) the position of the soft palate
    - raised for oral vowels x lowered for nasalized v.
    (b) the degree of spreading or rounding of the lips
    - **rounded** vowels [æ, o, ɒ, ɔ, u, ʊ] x **unrounded** v. [i, ɪ, e, ɛ, ɜ, a, ʌ, ɑ, ə]
    (c) the height of the body of the tongue
    - **high** vowels [i, u] in 'heed, food' x **mid-high** v. [ɪ, ʊ] in 'hid, good' x **mid-low** v. [ɛ] in 'head' x **low** v. [æ, ɑ] in 'had, father'
    (d) the front-back position of the tongue
    - **front** vowels [i, ɪ, e, ɛ, a, æ] x **back** v. [ɔ, ʊ, o, u]
    (e) relatively pure vs. gliding vowels
    - relatively **pure** vowels: unchanging, e.g. the vowel in 'learn'
    - **gliding** vowels: diphthongal, e.g. the vowel in 'line'

Phonetic Features

- statements conc. phonemic categories and allophonic variants made wrt only one variety of one language
- the features stated mainly in articulatory terms, only some of them in auditory or acoustic
- binary feature = a feature with 2 classificatory possibilities (Voice)
- multivalued f. = a feature with more than 2 classificatory possibilities (Stricture)

Contrast versus Neutralisation

- distinctive feature = a phonetic property used to classify sounds
- minimal pairs = pairs of words differing in respect of only one sound segment; the distinctive sound segments stand in **contrast** (or, opposition)
- **complementary distribution** = the predictable occurrence of a specific allophone of a phoneme in a particular context or situation (the aspiration of stops when initial in accented syllables, etc.)
- free variation = the occurrence of variant realisations of the same phoneme in the same situation (depends on the speaker)
- **neutralisation** = the lack of contrast or opposition, the sound may be assigned to either of 2 phonemes with equal validity
    - the contrast btw the voiceless /p, t, k/ x the voiced /b, d, g/ > neutralised after /s/ in word-initial position => no contrast btw /sp-, st-, sk-/ x /sb-, sd-, sg-/
    - also the neutralisation of the allophones of /m/ and /n/ before /f/ or /v/ > the nasalized [m̃] in both 'symphony, infant'; etc.

Distinctive Features

- the feature name conventionally spelled with a capital letter, the classificatory possibilities conventionally presented within square brackets
- the feature Coronal further splits into [+ anterior] = sounds made on or in front of the alveolar ridge x [– anterior] = sounds made behind the alveolar ridge
- the feature Sibilant differs in being an acoustic (as opposed to articulatory) property; [+ sibilant] also the affricates [tʃ, dʒ] if consid. single units
- the feature Syllabic separates vowels from consonants, classifies [i] and [u] as distinct from [j] and [w]

Features Required for Classifying English Segments

Feature name	Classificatory possibilities	English segments
Voice	[+ voice]	b, d, g, m, n, v, ð, z, ʒ, ɹ, l, j (and all vowels)
	[− voice]	p, t, k, f, θ, s, ʃ
Labial	—	p, b, m, f, v
Coronal	[+ anterior]	θ, ð, t, d, n, s, z, l, ɹ
	[− anterior]	ʃ, ʒ, j (and front vowels)
Dorsal	—	k, g, w (and back vowels)
Stricture	[stop]	p, t, k, b, d, g, m, n
	[fricative]	f, θ, s, ʃ, v, ð, z, ʒ
	[approximant]	w, ɹ, l, j (and all vowels)
Nasal	[+ nasal]	m, n
	[− nasal]	(all oth. segments)
Lateral	[+ lateral]	l
	[− lateral]	(all oth. segments)
Sibilant	[+ sibilant]	s, ʃ, z, ʒ
	[− sibilant]	(all oth. segments)
Height	[maximum]	(all consonants except w, j)
	[4 height]	i, u, w, j
	[3 height]	e, ɪ, o, ʊ
	[2 height]	ɛ, ɔ
	[1 height]	æ, ɑ
Back	[+ back]	u, o, ʊ, ɔ, w, k, g
	[− back]	i, e, ɪ, ɛ, æ (and all oth. consonants)
Syllabic	[+ syllabic]	(all vowels)
	[− syllabic]	(all consonants, incl. w, j)

Consonant and Vowel Charts

- consonant and vowel symbols used to represent the contrasts occurring among words and to describe the articulations involved
- the voiced-voiceless distinction conventionally shown by putting the voiceless symbols to the left of the voiced symbols
- the symbol [w]: shown in two places because articulated with both a narrowing of the lip aperture (= bilabial) and a raising of the back of the tongue twd the velum (= velar)
- the symbol [h]: not shown because articulated as the voiceless counterpart of the surrounding sounds with no precise place or manner of articulation; acts like a consonant, yet articulated similarly as the vowels before and after it

A Phonetic Chart of the Relative Qualities of English Vowels

	front	central	back
high	i		u
mid-high	ɪ		ʊ
mid	e	ɜ	o
mid-low	ε	ʌ	ɔ
low	æ	a	ɒ ɑ
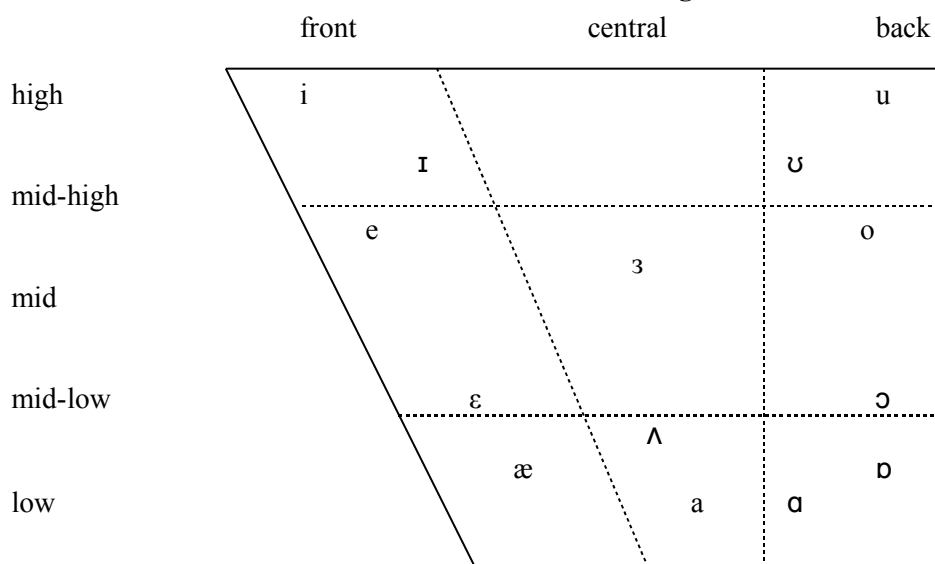
A Phonetic Chart of English Consonants

Place of articulation → Manner of articulation ↓	bilabial	labio-dental	dental	alveolar	palato-alveolar	palatal	velar
nasal (stop)	m			n			ŋ
stop	p b			t d			k g
fricative		f v	θ ð	s z	ʃ ʒ		
approximant	(w)					j	w
lateral				l			

Prosodic Features

- vowels and consonants = segments
- together form the syllables
- features imposed on the syllables = suprasegmentals, or, prosodic features
- suprasegmentals infl. patterns extending over larger chunks of utterance than the single segment
- (a) variations in **stress**
- grammatical function (distinguish btw a noun x a verb)
- contrastive emphasis ('I want a *red* pen, not a black one.')
- (b) variations in **pitch**
- pitch pattern in a sentence = intonation
- pitch pattern of a syllable or word causing the change of meaning in tone languages (Chinese) = tone
- grammatical function ('This is my father.' [the highest pitch on the 1st syllable of 'father']; 'Is this your father?' [the highest pitch on the 2nd syllable])
- (c) variations in **length**
- (d) v. in **loudness**
- combinations of pitch, length and loudness produce accent
- oth. suprasegmentals: rhythm, tempo, voice quality

Word Accent

- the word = a commutable entity with a separate linguistic identity, composed of one or more phonemes
- the word as a pattern formed by the qualitative and quantitative elements of its phonemes
- polysyllabic words: the word pattern determined also by the relationship of its parts
- varying prominence of the individual word parts gives rise to different word patterns
- the syllable of a word standing out from the remainder = the accented syllable
- accentual pattern of English words
  - (a) fixed = the main accent always falls on a particular syllable of any given word
  - (b) free = the main accent not tied to any particular situation in the word (x Czech: the main accent falls on first syllables)

Prominence

- degrees of prominence of a syllable
  - (a) primary accent = the last major pitch change in a word/utterance
  - (b) secondary accent = a non-final pitch change in a word/utterance
  - (c) minor prominence = full vowel with no pitch change
  - (d) non-prominence = reduced vowel with no pitch change /ɪ, ʊ, ə/
- achieving the prominence
  - (a) pitch change
  - the most prominent factor
  - **primary accent** = the final pitch accent, the most prominent one
  - **secondary accent** = a pitch accent on an earlier syllable, less prominent
  - shift of accent in ''insult (n.) x in'sult (v.); 'import (n.) x im'port (v.); 'billow x be'low'' x no shift of accent in 'report, delay, select''
  - (b) loudness
  - accented syllables louder than unaccented ones
  - (c) quantity and quality
  - unaccented syllables: some more prominent than others due to the quality and quantity of the vowels at their centre
  - long vowels and diphthongs more prominent than short vowels
  - **full vowels** = vowels with minor prominence
  - **reduced vowels** = non-prominent short vowels in unaccented syllables /ɪ, ʊ, ə/

The Process of Elision

- = a process of gradation, a loss of phonemes or obscuration of vowels in weakly accented syllables
  - (a) established in the language for some time

(b) current only recently in colloquial speech
- vowels: initially ('state, scholar, sample'), medially ('forecastle' /ˈfəʊksl/, 'Salisbury' /ˈsɔːlzbrɪ/, 'marriage'), finally ('name, loved, cousin')
- consonants: initial clusters /wr, kn, gn/ ('write, know, gnaw'), medial /t/ + /n/ or /l/ ('fasten, often, castle'), final /mb, mn/ ('lamb, hymn')

Intonation

- **intonational phrases** = divisions of an utterance, signalled by pitch changes; their boundaries generally correspond syntactically with syntactic phrase/clause boundaries
- **nucleus** = the syllable with the final pitch accent, the starting point of one of the pitch patterns
- **nuclear tone** = a pitch pattern beginning at the primary accent and ending at the end of the intonational phrase
- types of nuclear tone:
  (a) falling nuclear tones = start from the highest pitch of the speaking voice and fall to the lowest pitch (= high fall), or from the mid pitch to the lowest pitch (= low fall)
  (b) rising nuclear tones = end at a high point (= high rise), or at a mid point (= low rise)
  (c) falling-rising nuclear tones = fall-rise
  (d) rising-falling nuclear tones = rise-fall
  (e) level nuclear tones = mostly commonly a mid level
- the nucleus falls on the most prominent syllable, hence the most prominent word in an intonational phrase => the nucleus marks the end of the new information
- falling intonation: declaratives, yes/no-interrogatives, tag-interrogatives when expecting agreement, imperatives when abrupt, exclamatives
- rising intonation: wh-interrogatives, tag-interrogatives when leaving open the possibility of disagreement, imperatives when polite

IPA Transcription

Phonological versus Phonetic Transcription

- **IPA** = International Phonetic Association
- founded in 1886 by a group of leading phoneticians from Fr., Ger., GB, and Denmark
- the International Phonetic Alphabet

Phonology

- the 1ˢᵗ task in a phonological description: to determine the different sounds which can convey a difference in meaning, i.e. to determine the different phonemes
- phonemes = abstract units forming the basis for a phonological transcription of a language
- **phonological**, or, **phonemic**, or, **broad transcription //**
- = records the variations btw the sounds causing a difference in meaning
- shows the underlying phonemes
- uses a simple set of symbols, the same symbols repres. different sounds in different contexts
- shows none of the details of pronunciation predictable by phonological rules
- places the underlying phonemic segments btw slanting lines /tɛn/ and /tɛnθ/ x the phonetic segments pronounced [tɛn] and [tɛn̪θ]
- symbols for phonemic transcription chosen accord. to the following principles:
(a) use one symbol per phoneme (Gimson uses 44 different symbols)
(b) use the phonetic symbols of the most frequent allophones
(c) replace non-roman symbols arising from the above principle by roman symbols where these are not already in use, i.e. the principle of romanisation
- **romanisation** = the replacement of phonetic symbols by their nearest roman symbols in phonemic transcrip.
- (the phonetic symbols for the most common allophone of the phoneme at the beginning of 'red' is /ɹ/ > the phonemic transcription replaces it by /r/)

Phonetics

- **phonetic**, or, **allophonic**, or, **narrow transcription []**
- = indicates the detailed sound values
- shows the allophonic differences
- uses more unusual symbols
- also uses diacritics = small marks added to a symbol to modify its value ([̥]= a small circle, indicates a voiceless sound, 'play' [p̥laɪ], 'try' [t̺ɹaɪ])
- applies the phonological rules to the segments in the underlying forms of words, shows the variations in words as described by the phonological rules = **alternations**
- places the phonetic segments btw square brackets, even if just one phonetic detail of one segment in an otherwise phonemic transcription is indicated, square brackets are used

The Transcription of Consonants

- **a minimal set** = a set of words differing from each oth. by only one sound
- some consonant sounds contrast with oth. only in the middle or at the end of words ('rang' /ŋ/ x 'ran' /n/)

Special Consonant Symbols

(a) ascenders = letters going up from the line of writing
(b) descenders = letters going below the line of writing
- **[ŋ]**, voiced velar nasal ('rang') = the letter *n* combined with the tail of the letter *g* descending bellow the line
- **[θ]**, voiceless dental fricative ('thigh, thin, breath') = an upright version of the Gr. letter theta
- **[ð]**, voiced dental fricative ('thy, then, breathe') = an Anglo-Saxon letter; the corresponding voiced sound for [θ], not distinguished by the spelling system of E ('either' [ð] x 'ether' [θ])
- **[ʃ]**, voiceless palato-alveolar fricative ('shy, sheep, rash') = a long straightened letter *s* going both above and below the line of writing
- **[ʒ]**, voiced palato-alveolar fricative ('vision, measure, leisure') = a long letter *z* descending below the line

- [ɹ], voiced alveolar approximant ('red, rose, rye') = an upside down letter *r* x **[r]**, voiced alveolar trill ('rye, raw')
- **[tʃ]** and **[dʒ]** = sequences of two oth. consonants; both [ʃ] and [ʒ] cluster only with [t] and [d] respectively, yet should be transcribed with two symbols to show there are two elements in each of them

IPA Symbols for Transcribing English Consonants (alternative symbols in parentheses)

p	pie	pea	
t	tie	tea	
k	kye	key	
b	bye	bee	
d	die	D	
g	guy		
m	my	me	ra*m*
n	nigh	knee	ra*n*
ŋ			ra*ng*
f	fie	fee	
v	vie	V	
θ	thigh		
ð	thy	thee	
s	sigh	sea	li*s*ten
z		Z	mi*zz*en
ʃ (š)	shy	she	mi*ss*ion
ʒ (ž)			vi*s*ion
l	lie	lee	
w	why	we	
ɹ (r)	rye		
j (y)		ye	
h	high	he	
+ tʃ (č)	chi(me)	chea(p)	
+ dʒ	ji(ve)	G	

The Transcription of Vowels

Special Vowel Symbols

- **[ɪ]** = a small capital letter I ('sit, hit'); somewhat like **[i]** ('seat, head')
- **[ɛ]** = the Gr. letter **epsilon** ('head')
- **[æ]** = the letters *a* and *e* joined together into **digraph** ('had')
- **[ɑ]** = another version of the letter *a* ('heart' and 'hot' RP: [hɑt] and [hɒt] x GA: [hɑɹt] and [hɑt])
- **[ɔ]** = an open letter *o* or an inverted letter *c* ('caught, naught')
- **[ʊ]** = a letter *u* with the ends curled out ('hood, could, good'); somewhat like **[u]** ('who, hoot, cooed')
- **[ə]** = an upside down letter *e*, or, **schwa**; the most common unstressed vowel, in RP the sole component of the <-er> part of words ('father, brotherhood, simpler')
- **rhotacization** = an additional feature added to the vowel when followed by <r> in GA
- GA: **[ɚ]** = an unstressed vowel, the little hook indicates the *r*-colouring of the vowel
- GA: **[ɝ]** = a stressed vowel ('my sister's bird' [maɪ 'sɪstɚz 'bɝd])
- **[ʌ]** = an upside down letter *v*, or, **wedge** ('bud, hut')
- **[ɜ]** = a reversed version of the Gr. letter epsilon ('pert, bird, curt')

IPA Symbols for Transcribing Contrasting English Vowels

GA	RP					
i	i	heed	he	bead	heat	keyed
ɪ	ɪ	hid		bid	hit	kid
eɪ	eɪ	hayed	hay	bayed	hate	Cade
ɛ	ɛ	head		bed		
æ	æ	had		bad	hat	cad

ɑɹ	ɑ	hard		bard	heart	card
ɑ	ɒ	hod		bod	hot	cod
ɔ	ɔ	hawed	haw	bawd		cawed
ʊ	ʊ	hood				could
oʊ	əʊ	hoed	hoe	bode		code
u	u	who'd	who	booed	hoot	cooed
ʌ	ʌ	Hudd		bud	hut	cud
ɝ	ɜ	herd	her	bird	hurt	curd
aɪ	aɪ	hide	high	bide	height	
aʊ	aʊ		how	bowed		cowed
ɔɪ	ɔɪ		(a)hoy	Boyd		
ɪɹ	ɪə		here	beard		
eɹ	ɛə		hair	bared		cared
aɪɹ	aə	hired	hire			
+ ju	+ ju	hued	hue	Bude		cued

Transcription Systems

- more vowel sounds than vowel letters in the alphabet in E
- different transcription systems: different degrees of application of the principle of romanisation
- different styles of transcription appropriate for different purposes

Comparative versus Simple Phonemic Transcription

(d) **comparative phonemic** transcription
- = does not fully implement the principle of romanisation
- allows comparison with vowels in oth. languages even in a phonemic transcrip.
- ('cot' and 'caught', simple phonemic transcrip.: /o/ and /o:/ x comparative phonemic transcrip.: /ɒ/ and /ɔ:/)

(e) **simple** phonemic transcription
- = fully implements the principle of romanisation
- ('hid', comparative phonemic transcrip.: /ɪ/ x simple phonemic transcrip.: /i/)

(f) variation on the simple phonemic transcription
- uses double letters instead of the length marks to indicate long vowels
- ('card', /a:/ > /aa/)

(g) variations representing oth. factors
- /əʊ/ > /oʊ/ or /ou/, represents different pronunciation ('foal')
- [:] = indicates greater length, and so eliminates the symbols [ɪ, ɛ, ʊ] (presumes differences in quality also indicate differences in length)

RP versus GA Transcription

- RP phonemes /ɑ, ɪə, eə, ʊə/ > GA: no equivalents
- RP diphthongs /eɪ/ and /oʊ/ > GA: monophthongs /e/ and /o/ ('play, goat')
- RP /e/ > GA: /ɛ/, the quality of vowel nearer *C*3 /ɛ/ than *C*2 /e/ ('set')
- RP /u:/ > GA /ū/, length indicated by a macron
- RP /aɪ/ and /əʊ/ > GA /aj/ and /əw/, the 2nd element in closing diphthongs indicated by /j/ and /w/

Changes within IPA

- IPA revised in 1989
- before '89: [ɪ] and [ɪ], [ʊ] and [ω] alternatives x after '89: only [ɪ], [ʊ] officially approved
- before '89: both vowels in 'above' transcribed as [ə] for GA x after '89: the unstressed vowel as [ə], the stressed vowel as [ʌ]
- before '89: the vowel in 'boat' transcribed as [oω] for both GA and RP x after '89: transcribed as [oʊ] for GA and [əʊ] for RP

Differences between Authorities

J. S. Kenyon & T. A. Knott: *A Pronouncing Dictionary of American English* (1953)

-   varieties of AmE pronunciation
-   <> Ladegofet: uses very similar symbols x but: substitutes K&K's GA [e] in 'bait' and [o] 'boat' for RP [eɪ] and [oʊ]

C. Prator & B. Robinett: *A Manual of American English Pronunciation* (1985)

-   varieties of AmE pronunciation
-   an overdifferentiated transcription
-   indicates the ends of diphthongs by [y] and [w] to mark a vowel followed by an offglide, not just a sequence of two vowels

D. Jones: *Everyman's English Pronouncing Dictionary* (1977), revised by **A. C. Gimson**

-   varieties of BrE pronunciation
-   avoids unusual letter shapes as far as possible
-   marks the vowels in 'beat' and 'boot' as longer than those in 'bit' and 'put' => avoids the symbols [ɪ] and [ʊ]

A. C. Gimson, revised by **A. Cruttenden**: *Gimson's Pronunciation of English* (1998)

-   indicates difference btw pairs of phonemes in quality and length at the same time
-   symbols for the short vowels /i, æ, ɒ, ʊ, ə/ different from symbols for the long vowels /iː, ɑː, ɔː, uː, ɜː/ to indicate their difference in quality as well as length
-   the length mark still used with the long vowels to indicate the equal importance of both factors in maintaining the contrast btw the vowels

J. C. Wells: *Longman Pronunciation Dictionary* (1990)

-   both GA and RP
-   x Ladefoget: uses the same symbols x but: avoids length marks

Webster: *New International Dictionary* (1961)

-   does not confirm to IPA

Main Transcription Systems in Transcribing Vowels

key word	Ladefoget before '89	Ladefoget after '89	Kenyon & Knott	Prator & Robinett	Gimson & Jones	Wells	Webster
beat	i	i	iy	iy	iː	iː	ë
bit	ɪ	ı	ɪ	ɪ	i	ɪ	i
bait	eɪ	eı	e	ey	ei	eɪ	ā
bet	ɛ	ɛ	ɛ	ɛ	e	e	e
bat	æ	æ	æ	æ	æ	æ	a
father	ɑ	ɑ	ɑ	a	ɑ	ɑː	ä
bother	ɒ	ɒ	ɑ	a	ɔ	ɒ	ä
bought	ɔ	ɔ	ɔ	ɔ	ɔː	ɒː ɔː	o [with a single dot above]
boat	oʊ əʊ	oω	o	ow	ou	oʊ əʊ	ō
put	ʊ	ω	ʊ	ʊ	u	ʊ	u [with a single dot above]
boot	u	u	u	uw	uː	uː	ü
butt	ʌ	əʌ	ʌ	ə	ə	ʌ	ə
bird	ɝ ɜ	ɝ ə	ɝ	ər	əː ɜː	ɝː ɜː	ər
bite	aɪ	aı	aɪ	ay	ai	aɪ	ī
bout	aʊ	aω	aʊ	aw	au	aʊ	au [with a single dot above *u*]
boy	ɔɪ	ɔı	ɔɪ	y	ɔi	ɔɪ	oi [with a single dot above *o*]

The Consonant Inventory of English

- the consonant inventory of E: 24 phonemes
- 6 of them with restricted occurrence /h, r, ʒ, ŋ; w, j/

The Distinctive Consonants

- a process of **commutation** = the discovery of minimal pairs
- 24 distinctive units consonantal both wrt: their position in syllables + their phonetic nature
(a) obstruents
- a total closure or stricture causing friction
- a noise component
- a distinctive opposition btw voiceless x voiced types
- incl. plosives, affricates, fricatives
(b) sonorants
- a partial closure or an unimpeded oral or nasal escape of air
- no noise component
- typically voiced, sharing many phonetic characteristics with vowels
- incl. nasals, approximants
+ glottal stop [ʔ]: not phonemically distinctive in RP => excluded from the chart below

The Distinctive Consonants of English

	plosive	affricate	fricative	nasal	approximant
bilabial	p, b			m	(w)
labiodental			f, v		
dental			θ, ð		
alveolar	t, d		s, z	n	l
post-alveolar					r
palato-alveolar		tʃ, dʒ	ʃ, ʒ		
palatal					j
velar	k, g			ŋ	w
glottal			h		

Contrastive groups wrt the place of articulation
- plosives, nasals: bilabial, alveolar, velar
- affricates, /l/, /r/: alveolar
- fricatives: labiodental, dental, alveolar, palato-alveolar, glottal
- + various allophonic realisations x but: the number of oppositions wrt the place of articulation remains unchanged

Plosives (or, Stops)

Articulatory Phonetics

- place of articulation: /p, b/ bilabial; /t, k/ alveolar; /k, g/ velar
- articulation stages:
- the closing stage = the articulating organs move together to form the obstruction
- the compression stage = lung action compresses the air behind the closure
- the release stage = the organs forming the obstruction part rapidly to allow the compressed air to escape abruptly
- the release stage:
(a) no audible release in stop clusters
- a cluster of two stops = plosive + plosive, plosive + affricate
- the 1st stop with no audible release (/p/ + /t/ in 'dropped', /b/ + /d/ in 'rubbed', /b/ + /dʒ/ in 'object')
- NO intervening [h] with voiceless plosives, NO obscure vowel of the [ə] type with voiced plosives
- **gemination** = a sequence of identical stops > one closing stage and one release stage involved together with about a double-length compression stage ('top post, good deal, big girl')
(b) nasal release

- a plosive before the homorganic nasal consonant > the escape of the compressed air through the nasal passage (/p/ + syllabic /m̩/ in 'topmost', /p/ + syllabic /m̩/ in 'happen', /d/ + syllabic /n̩ / in 'sudden')
(c) lateral release:
- a plosive before by the homorganic lateral consonant > one or both sides of the tongue lowered to allow the air to escape (/t/ + /l/ in 'cattle', /d/ + /t/ in 'regardless')
- NO aspiration, NO obscure vowel ('little' *[lɪtʰl̩], 'middle' *[mɪdᵊl̩])

Auditory Phonetics

- **aspiration** = a voiceless interval consisting of strongly expelled breath btw the release of the plosive and the onset of the following vowel
- aspiration of /p, t, k/ initial in an accented syllable ('pip' [pʰɪp], 'test' [tʰɛst], 'kick' [kʰɪk])
- **neutralisation** of the distinction btw the voiceless /p, t, k/ x voiced /b, d, g/ followed by /s/ within the same syllable > the resulting plosives unaspirated and voiceless ('spin' [spɪn], 'stop' [st̬ɒp], 'score' [sk̬ɔ:])
- **devoicing** of /l, ɹ, w, j/ after initial /p, t, k/ in an accented syllable ('play' [pl̥eɪ], 'twin' [tw̥ɪn], 'cue' [k̥ju])
- full voicing of /b, d, g/ only btw voiced sounds ('labour, leader, to be')
- partial voicing or complete devoicing of initial or final /b, d, g/, i.e. following or preceding silence ('bill, done, game' [b̥, d̥, g̥])
- length of preceding sounds: syllables closed by voiceless consonants shorter than syllables open or closed by voiced consonants
- a complex of quantitative and qualitative contrasts ('rope x robe' /rəʊp x rəʊb/)

The Plosive Sounds

(a) bilabial plosives /p, b/
- description: bilabial plosives before the labiodental /f/ or /v/ > labiodental rather then bilabial closure in anticipation of the following fricative articulation ('cup-full' [kʌpfʊl], 'obvious' [ɒb̥vɪəs])
- variants: partial voicing or complete devoicing of the initial or final /b/
(b) alveolar plosives /t, d/
- description: /t, d/ + /n/ = nasal plosion, /t, d/ + /l/ = lateral plosion; /t, d/ + /r/ = post-alveolar contact ('try, dry'), /t, d/ + /θ, ð/ = dental contact ('eighth; not that')
- variants: syllable-final /t/ NOT followed by a vowel or syllabic /n/ or /l/ > reinforced or replaced by a glottal closure
- GA: unaccented intervocalic /t/ > replaced by tap [ɾ] ('butter, latter, put it')
(c) velar plosives /k, g/
(d) glottal plosive [ʔ]
- the obstruction formed by the closure of the vocal folds
- the compression stage consists of silence auditorily perceived by a sudden cessation of the preceding sound or sudden onset of the following sound
- neither voiced nor voiceless
- RP: syllable boundary marker before vowel initial 2ⁿᵈ syllable ('cooperate' [kəʊˈʔɒpəreɪt], 'geometry' [dʒiˈʔɒmətri], 'reaction' [riˈʔækʃən])
- some RP: reinforcement of the voiceless plosives /p, t, k/ when syllable-final and after a vowel, nasal or lateral and before a pause or consonant ('reap, limp, help')
- some: RP replacement of /p, t, k/ when syllable-final and before a homorganic consonant (/t/ + /t/ in 'that table', /t/ + /d/ in 'get down, /t/ + /dʒ/ in 'great joke')
- CockE: reinforcement and replacement when utterance-final ('mind your feet' [ˈmaɪʔ dʒɒ: ˈfɪəʔ]; 'have a look' [ˈæv ə ˈlʊʔ]; 'get that' [geʔ ˈðæʔ])

Affricates

- = compound sounds
- considered either single phonemic entities x sequences of two phonemes
(a) palato-alveolar affricates /tʃ, dʒ/
- former label for affricates: 'palato-alveolar', new: 'post-alveolar' x former label for /ɹ/: 'post-alveolar', new: 'alveolar'
- the voiced /dʒ/ <> plosives, fricatives: devoiced when syllable-initial or final

- the voiceless /tʃ/ <> /p, t, k/: reduced length of preceding sounds when syllable-final

(b) **sequences /tr, dr/**
- NO affricates x but: sequences of special importance esp. for foreign learners
- retractions of /t, d/ before /r/ ([t̠, d̠])
- devoicing of [r] after /t/
- minimal pairs /tʃ/ x /tr/ in 'cheese' x 'trees', /dʒ/ x /dr/ in 'jaw' x 'draw'

Fricatives

- two organs held close together to produce local air turbulence with a noise component
- place of articulation: /f, v/ labiodental; /θ, ð/ dental; /s, z/ alveolar; /ʃ, ʒ/ palato-alveolar; /h/ glottal
- full voicing of /v, ð, z, ʒ/ only btw voiced sounds ('cover, other, easy, leisure')
- devoicing of initial or final /v, ð, z, ʒ/ ('van, that, zoo; leave, breathe, peas, rouge')
- syllable-final /f, θ, s, ʃ/ reduce length of the preceding sounds ('fife, loath, place, leash')

(a) **labiodental fricatives /f, v/**
- variants: word-final /v/ before a word-initial voiceless consonant > /f/ ('have to; some: 'love to, have some')

(b) **dental fricatives /θ, ð/**
- variants: elision of /θ, ð/ before /s, z/ ('clothes' /kləʊz/, 'months' /mʌns/)
- CockE: labiodental rather than dental articulation ('throw it' /ˈfrəʊ ɪt/; 'breathe in' /ˈbriːv ˈɪn/)

(c) **alveolar fricatives /s, z/**
- lisp = a speech defect substituting /s, z/ for /θ, ð/
- variants: regional **plosive epenthesis** = the insertion of /t/ btw /n/ and /s/ (no distinction btw /ns/ x /nts/ in 'mince x mints; tense x tents; assistance x assistants')

(d) **palato-alveolar fricatives /ʃ, ʒ/**
- variants: sometimes /ʃ, ʒ/ medially before /uː/ > /s, z/ + /j/ ('issue, sexual, seizure')
- lack of minimal pairs distinguishable by /ʃ/ x /ʒ/ > possible alternations btw them ('Asia, transition, version')

(e) **glottal fricative /h/**
- = a strong voiceless onset of the following vowel, only syllable-initial and pre-vocalic
- no distinctive voiced x voiceless opposition
- function: /h/ as a voiceless syllable-initial phoneme <> /ŋ/ as a syllable-final phoneme
- variants: elision of /h/ in unaccented non-initial positions in connected speech with function words 'have, has, had', pronouns and pronominal adjectives ('he pushed him on his back' /hiː ˈpʊʃt ɪm ɒn ɪz ˈbæk/; 'I could have hit her' /aɪ kəd əv ˈhɪt ə/)
- regional loss of /h/ (no distinction btw RP minimal pairs 'hill x ill; high x eye; hair x air')

(f) **velar fricative [x]**
- voiceless
- exceptionally in some speaker's pronunciation of Scott. words ('loch')

Nasals

- a total closure within the mouth, the soft palate lowered to allow the air to escape into the nasal cavity
- no audible friction
- no voiced x voiceless opposition
- resemble vowel-type sounds
- place of articulation: /m/ bilabial; /n/ alveolar; /ŋ/ velar
- syllabic (<> vowels) syllabic /n̩/ in 'mutton' [mʌtn̩], syllabic /m̩/ in 'rhythm' [rɪðm̩], syllabic /ŋ̍/ in 'bacon' [beɪkŋ̍]
- devoicing of /m,n/ after voiceless consonants ('smoke, snake')

(a) **bilabial nasal /m/**
- word-final /n/ before bilabials in connected speech > /m/ ('one mile' /ˈwʌm ˈmaɪl/; 'gone back' /ˈgɒm ˈbæk/
- word-final /ən/ or /n̩/ after /p/ or /b/ > [m̩] ('happen' [hæpm̩], 'ribbon' [ɹɪbm̩])

(b) **alveolar nasal /n/**
- /n/ before the labiodental /f, v/ > /ɱ/ ('infant; in voice; in vain')
- /n/ before dental /θ, ð/ => /n̪/ ('tenth')
- /n/ word-final before bilabials or velars > /m/ ('ten people') or /ŋ/ ('ten cups')

(c) **velar nasal /ŋ/**
- normally voiced x devoiced when syllabic ('bacon, thicken')
- variants: regionally retained earlier [ŋg] instead of RP /ŋ/ ('singing' [sɪŋgɪŋg] instead of RP /sɪŋɪŋ/ => [ŋ] as allophone of /n/, NOT separate phoneme)

Oral Approximants

- the airstream escapes through a relatively narrow aperture in the mouth
- no friction

(a) **lateral approximant /l/**
- clear [l] = the front of the tongue raised toward the hard palate, the tip contact ensures a front vowel resonance
- dark [ɫ] = the front of the tongue depressed, the back raised toward the soft palate, ensures a back vowel resonance (= **velarized**)
- before a vowel or /j/ > clear [l]; all other positions > dark [ɫ]
- word-final after a consonant > syllabic dark [ɫ] ('fiddle, final, parcel')
- GA, SE, ANE, NortE: dark [ɫ] in all positions
- Irish E => clear [l] in all positions
- GA => syllabic [ɫ] instead of RP [-aɪɫ] ('fertile, futile, missile, reptile')

(b) **post-alveolar approximant /r/**
- the voiced [ɹ] = the most common allophone of RP /r/
- phonetically vowel-like x but: consonantal wrt function
- devoicing of [ɹ] after accented /p, t, k/ (price, try, cream'), after unaccented voiceless syllable-initial plosives ('upright, apron, acrobat') and in the syllable-initial sequences /spr-, str-, skr-/ ('spring, string, scream')
- SE and some NortE: replacement of RP [ɹ] by an alveolar **tap** [ɾ] in intervocalic positions ('very, sorry, marry') and after /θ, ð/ ('three; forthright; with respect')
- /d/ x [ɾ]: the contact for the tap of shorter duration and less complete, with a typical central hollowing of the tongue (the distinction btw [ɾ] in 'carry' x /d/ in 'caddy')
- SE and RP declamatory verse-speaking: the RP [ɹ] replaced by a lingual **trill** (or, roll) [r] = a rapid succession of taps by the tip of the tongue on the alveolar ridge
- some NortE and SE: uvular trill [ʀ] or uvular fricative [ʁ]
- some GA: the retroflexed [ɻ] anticipates the consonant and colours the preceding vowel > **r-coloured** vowels ('bird, farm, lord')

(c) **palatal and labial-velar approximants (or, semi-vowels) /j, w/**
- semi-vowel = a rapid vocalic glide onto a syllabic sound of greater steady duration
- the palatal /j/ glides from the position of /i:/ ('year')
- the labial-velar /w/ glides from the position of /u:/ ('west')
- vocalic in phonetic terms x but: consonantal wrt function (marginal rather than central in the syllable)
- articles in their pre-consonantal forms before /j/ and /w/ ('the yard' /ðə/; 'a yacht' /ə/)
- variation btw /jə/ and /ɪə/ in unaccented syllables ('immediate, idiot, hideous')
- devoicing of /j/ after accented /p, t, k/ ('cue' [kju:])
- partial devoicing of /w/ after voiceless consonants, complete devoicing of /w/ after accented /t, k/ > /ʍ/ = voiceless labial-velar approximant
- GA: /ju:/ esp. after /t, d/ > /u:/ ('tune, dune, duty')
- SE: words spelled <wh> > [ʍ] with a phonemic status (opposition btw 'wine' x 'whine')

Voiced and Voiceless as Phonological Categories

- voiceless /p, t, k, f, θ, s, ʃ, tʃ/
- voiced /b, d, g, v, ð, z, ʒ, dʒ/
- distinction in voice x but: realisation of the distinction varies according to position
    - voiced sounds fully voiced only when word-medial btw voiced sounds
    - voiced sounds devoiced when word-initial and word-final
    - voiceless /p, t, k/ aspirated when syllable-initial
    - voiceless sounds reduce length of preceding vowels, nasals and laterals

Allophones of English Consonants

Stops

Variations in the Manner

- **aspiration**, indicated by a small raised letter *h* [ʰ] = a period of voicelessness after the stop articulation and before the start of the voicing for the vowel ('pie, tie, kye' [pʰaɪ, tʰaɪ, kʰaɪ])
- **unexploded** consonant, indicated by a small raised mark [̚]: syllable- or word-final consonant unexploded when the next syllable or word begins a stop or nasal ('the cat pushed [ðə ˈkʰæt̚ ˈpʰʊʃt], 'apt' [æp̚t], 'act' [æk̚t])
- absence of this rule in oth. languages, a mark of foreign accent to explode all final stop consonants and add an extra vowel at the end ('it's a big day' [ɪts ə ˈbɪg̚ ˈdeɪ] x *[ɪts ə ˈbɪgə ˈdeɪ])
- a **glottal stop**, indicated by a question mark without the dot [ʔ] = the sound, or the lack of sound, produced with the vocal cords held tightly together (m̩hm̩] for 'yes' x [ˈʔm̩ʔm̩] for 'no')
- glottal stops frequently as allophones of /t/ ('beaten' [ˈbiʔn̩], 'kitten' [ˈkɪʔn̩], 'fatten' [ˈfæʔn̩])
- a **syllabic** consonant, indicated by [̩]
  - homorganic sounds = two sounds with the same place of articulation
  - (a) nasal plosion = the release through the nose of the air pressure built up in the mouth when a voiced stop and a homorganic nasal occur in the same word ('sadden' [ˈsædn̩], 'sudden' [ˈsʌdn̩], 'leaden' [ˈlɛdn̩])
    - a mark of foreign accent to add a vowel [ˈsædən, ˈsʌdən, ˈlɛdən]
  - (b) lateral plosion = the release by lowering the sides of the tongue of the air pressure built up in the mouth when a stop and a homorganic lateral occur in the same word ('little' [ˈlɪtl̩], 'ladle' [ˈleɪdl̩])
- a **flap** [ɾ]: GA [t] changed into a voiced sound after a stressed vowel and before an unstressed syllable oth. than [n̩] ('city' [ˈsɪɾi], 'better, writer')

Variations in the Place

- **coarticulations** = the overlapping of adjacent articulations, present in all utterances
- anticipatory coarticulation = anticipation of the articulations of the sounds yet to come (a stop unexploded before another consonant in 'apt' [æp̚t], etc.)
- perseverative coarticulation = the actions involved in making one sound continue into the next ('it is' [ɪt ɪz] > 'it's' [ɪts])
- E = an anticipatory language
- the feature that two consecutive sounds have in common will be retained throughout the transition btw them
- articulators not involved in the primary articulation will take up twd the articulation of the following item
- a general tendency in E to equalise the lengths of syllables differing in the number of segments x but: stressed syllables longer than the corresponding unstressed ones
- target positions = the positions of the vocal organs specified for a given sound; remain always the same x but: the resulting articulation may be changed by the neighbouring sounds
- targets = units used in describing how a speaker produces utterances
- x phonemes = more abstract units used in describing languages to show how one word contrasts with another

Allophones of English Stop Consonants

1	2	3	4	5
pie	**b**uy	s**p**y	na**p**	na**b**
tie	**d**ie	s**t**y	ma**t**	ma**d**
kye	**g**uy	s**k**y	kna**ck**	na**g**

Column 1 vs. 2
- a set of voiceless stop consonants x voiced stop consonants
- more precisely a set of (voiceless) aspirated stops x (partially voiced) unaspirated stops
Column 1 vs. 3
- in E no opposition btw words beginning with /sp-, st-, sk-/ and /sb-, sd-, sg-/
Column 4 vs. 5
- vowel > shorter before voiceless consonants /p, t, k/ than before voiced ones /b, d, g/
- syllable-final voiceless consonant > longer than the corresponding voiced consonant after the same vowel

Fricatives

- fricatives resemble stops
- both groups the only E consonants to contrast by being voiced x voiceless
- both infl. vowel length: vowels shorter before voiceless consonants than before voiced ones
- syllable- or word-final voiceless consonants longer than voiced ones in the same position
- syllable- of word-final voiced consonants fully voiced throughout the articulation only before another voiced sound
- **obstruents** = a natural class of sounds incl. both fricatives and stops /p, b, t, d, k, g, f, v, θ, ð, s, z, ʃ, ʒ/ [+ obstruent] x all oth. E sounds [– obstruent]

Affricates

- [tʃ] and [dʒ] = sequences of a stop followed by a homorganic fricative
- from a phonological POV and wrt the sound pattern of E consid. single units

Nasals

- [ŋ] = a sequence of the phonemes /n/ + /g/
- phonemically: 'sing' /sɪng/ x but: [sɪŋg] accord. to the phonological rule of /n/ before /g/ and /k/ > the allophone [ŋ]
- the status of [ŋ] different from the oth. nasals
    - cannot be syllabic at the end of word like the oth. nasals together with [ɹ, l]
    - cannot occur at the beginning of word

Approximants

- devoicing of a vowel, indicated by [ʰ]: a vowel after the voiceless stops /p, t, k/ partially voiceless ('pie' [pʰaɪ], 'tie' [tʰaɪ], 'kye' [kʰaɪ])
- **devoicing** of a consonant, indicated by [̥]: an approximant after the voiceless stops /p, t, k/ voiceless ('play' [p̥leɪ], 'twice' [tw̥aɪs], 'clay' [k̥leɪ], 'cue' [k̥ju])
- **velarization**, indicated by [~] = the arching upwards of the back of the tongue
- GA: all examples of /l/ > [ɫ]
  RP: only word-final or before a consonant ('feel' [fiɫ], 'ball', 'filled')

The Vowel Inventory of English

The Distinctive Vowels

- the vowel inventory of E: 20 vowels
- 12 monophthongs, 8 diphthongs

Contrasts in Vowels Established by Commutation

/iː/	heed	feel	bead	pea	
/ɪ/	hid	fill	bid		except
/e/	head	fell	bed		
/æ/	had		bad		
/ɑː/	hard		bard	par	
/ɒ/	hod				
/ɔː/	hoard	fall	board	paw	
/ʊ/	hood	full			
/uː/	who'd	fool	booed		
/ʌ/			bud		
/ɜː/	heard	furl	bird	purr	
/ə/					accept
/eɪ/		fail	bayed	pay	
/aɪ/	hide	file	bide	pie	
/ɔɪ/		foil			
/əʊ/		foal	bode		
/aʊ/		foul	bowed		
/ɪə/			beard	peer	
/eə/			bared	pair	
/ʊə/				poor	

Relatively Pure Vowels

/iː/ ('bead')
- description: high front unrounded, near to Cardinal Vowel 1 [i]
- variants: diphthongization in final positions, RP glides from a position near to [ɪ] > [ɪi], CockE glides from the central position [ə] > [əi]

/ɪ/ ('bid')
- description: mid-high front unrounded
- variants: RP trend twd /ə/ in non-final unaccented syllables ('quality')
- NortE: substitutes RP /ɪ/ for [i] in all positions

/e/ ('bed')
- description: mid-low front unrounded, btw Cardinal Vowel 2 [e] and Cardinal Vowel 3 [ɛ]
- CockE: glides twd [ɪ] ('bed' [beᶦd])
- NortE: substitutes RP /e/ for C[ɛ] in all positions

/æ/ ('bad')
- description: low front rounded
- GA and NortE: substitutes RP /ɑː/ for /æ/ before a voiceless fricative ('past')
- SE: loss of distinction btw /æ/ x /aː/ ('cam' x 'calm')

/ʌ/ ('bud')
- description: low front unrounded, Cardinal Vowel 14
- NortE: loss of distinction btw /ʊ/ x /ʌ/ ('put' x 'putt')

/ɑː/ ('bard')
- description: low front unrounded, near to Cardinal Vowel 5 [ɑ]
- rhotic dialects: substitute RP /ɑː/ for /æ/ + /r/ ('car, card, large')
- SE: loss of contrast btw /ɑː/ x /æ/ ('palm' x 'Pam'; 'calm' x 'cam')

/ɒ/ ('cod')
- description: mid-high back rounded, quality of an open lip-rounded Cardinal Vowel 5 [ɑ]

- GA: substitutes RP /ɒ/ for /ɑ/ (loss of contrast btw 'bomb x 'balm')

/ɔ:/ ('cord')
- description: mid-high back rounded, btw Cardinal Vowel 6 [ɔ] and Cardinal Vowel 7 [o]
- rhotic dialects: substitute RP /ɔ:/ for /ɒ/ + /r/ ('horse, cord, war')
- GA and SE: substitute RP /ɔ:/ for /ɒ/ (loss of distinction btw 'cot' x 'caught')

/ʊ/ ('good')
- description: mid-high back rounded
- SE: loss of opposition btw /ʊ/ x /u:/ ('pull' x 'pool')
- NortE: substitutes RP /ʌ/ for /ʊ/

/u:/ ('food')
- description: high back rounded, near to Cardinal Vowel 8 [u]
- CockE: diphthongization [əü]

/ɜ:/
- description: mid central unrounded; quality often coincides with that of /ə/ > /ɜ:/ in accented syllables x /ə/ in unaccented syllables ('foreword' x 'forward')
- variants: the only accented vowel in the central area => many individual realisational variation
- SE: substitution of RP /ɜ:/ for vowel + /r/ in the words spelled with vowel letter + <r>
- GA: substitution of RP /ɜ:/ for *r*-coloured vowel [ɝ] in the words spelled with vowel letter + <r>

/ə/
- description: mid central unrounded
- variants: no qualitative opposition in the central area => many individual variation
- SE: substitutes RP /ə/ for short full vowel + /r/ in the words spelled with vowel letter + <r>
- GA: substitutes RP /ə/ for *r*-coloured vowel [ɚ] in the words spelled with vowel letter + <r>

Diphthongal Vowel Glides
- = sequence of vocalic elements forming a glide within one syllable
- 1st element, the starting point > 2nd element, the point in the direction of the glide
- RP diphthongs: 1st element in the region of [ɪ, e, a, ə, u] > 2nd in [ɪ, ʊ, ə]
- **falling** diphthongs = most length of the glide concentrated on the 1st element
- rising diphthongs = most length of the glide concentrated on the 2nd element /ɪə, ʊə/
- **closing** diphthongs = gliding from a more open to a closer position /eɪ, aɪ, ɔɪ, əʊ, aʊ/
- particularly susceptible to variation in different regional and social dialects

/eɪ/ ('fail')
- CockE: substitutes RP /eɪ/ for [æɪ] ('fate'); substitutes RP /aɪ/ for [ɑɪ] ('fight')
- SE, GA and NortE: substitute RP /eɪ/ for the monophthong [e:]
- ('late, make, lady')

/aɪ/ ('file')
- variants: differences in starting point
- ('time, die, cry')

/ɔɪ/ ('foil')
- description: the only glide of this type with a back starting point => asymmetrical in the RP diphthongal system
- CockE and SE: a closer starting point
- ('boil, boy, toy')

/əʊ/ ('foal')
- CockE: substitutes RP /əʊ/ for [æʊ]
- ('both, toe, know')

/aʊ/ ('foul')
- CockE: substitutes the 1st element for [ɛ] or [æ], or substitutes the RP diphthong /aʊ/ for the monophthong [a:]
- ('house, council, allow')

Centering Diphthongs /ɪə, eə, ʊə/ ('peer, pair, poor')
- rhotic dialects: substitute the 2nd element of the RP diphthongs for /r/ in the words spelled with vowel letter + <r>

- CockE and NortE: substitute the RP diphthong /ʊə/ for the monophthong /ɔ:/
- ('here, dear, weird; rare, pair, bear; poor, tour, endure')

Allophones of English Vowels

- vowel sounds form a continuum, no distinct boundaries btw one type of vowel and another
- x unlike consonant sounds (a consonant may be e.g. a stop or a fricative, not halfway btw the two)
- the traditional terms high, low, back, and front:
    - labels for the auditory qualities of the different vowels
    - descriptions of vowels how they sound in relation to one another
    - no absolute descriptions of the position of the tongue

Cardinal Vowels

- the cardinal vowel system devised by Daniel Jones = two scales per 8 vowels denoted by the following numbers and symbols:

(a) primary Cardinal Vowels: 1, [i]; 2, [e]; 3, [ɛ]; 4, [a]; 5, [ɒ]; 6, [ɔ]; 7, [o]; 8, [u]

(b) secondary Cardinal Vowels: 11, [æ]; 14, [ʌ]

The Primary Cardinal Vowels

C.₁ [i]   C.₈ [u]

    C.₂ [e]   C.₇ [o]

        C.₃ [ɛ]   C.₆ [ɔ]

            C.₄ [a]   C.₅ [ɒ]
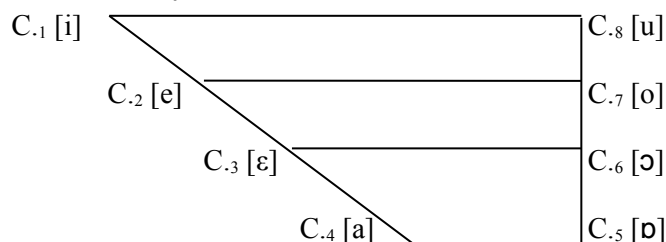
Tense vs. Lax Vowels

- tense vs. lax vowels: differ in distribution
- lax vowels [ɪ, ɛ, æ, ʊ, ʌ, ɒ] = appear in closed syllables only
- tense vowels [all the oth. vowels] = appear in both closed and open syllables
- **closed syllables** = have a consonant at the end x **open syllables** = no consonant at the end
- pairs of a tense vowel + the lax vowel nearest to it in quality:
    - [i] in 'beat' and [ɪ] in 'bit'
    - [eɪ] in 'bait' and [ɛ] in 'bet'
    - [u] in 'boot' and [ʊ] in 'foot'
    - the lax vowel: shorter, lower, and more centralised than the corresponding tense vowel
    - the lax vowels [æ] in 'hat' and [ʌ] in 'hut' fall in no pair x but: both shorter than the low tense vowel [ɑ] in 'spa'

The Distribution of Tense vs. Lax Vowels in Stressed Syllables in GA

Tense Vowels	Lax Vowels	Closed Syllables	Open Syllables
i		beat	bee
	ɪ	bit	—
eɪ		bait	bay
	ɛ	bet	—
	æ	bat	—
ɒ		hot	pa
ɔ		bought	saw
oʊ		boat	low
	ʊ	good	—
u		boot	boo
	ʌ, ɝ	but	—
aɪ		bite	buy
aʊ		bout	bough
ɔɪ		void	boy
ju		cute	cue
	BrE: + ɒ	cod	—

Stressed vs. Unstressed Syllables

- [ə] used to designate a wide range of mid-central vowels with a reduced vowel quality; occurs only in unaccented syllables
- stressed syllables: full forms of vowels
- unstressed syllables: reduced form

Allophones of English Vowels in Stressed vs. Unstressed vs. Reduced Syllables

Vowel	Stressed syllable	Unstressed syllable	Reduced syllable
i	depreciate	create	deprecate
ɪ	implicit	simplistic	implication
eɪ	explain	chaotic	explanation
ɛ	allege	tempestuous	allegation
æ	emphatic	fantastic	emphasis
ɑ, ɒ	demonstrable	prognosis	demonstration
ɔ	cause	causality	
oʊ, əʊ	invoke	vocation	invocation
ʊ	hoodwink	neighbourhood	
u	acoustic	acoustician	
ʌ	confront	umbrella	confrontation
ɝ, ɜ	confirm	verbose	confirmation
aɪ	recite	citation	recitation
aʊ	devout	outsider	
ɔɪ	exploit	exploitation	
ju	compute	computation	circular

Vowel Length

- the phonetic opposition btw short x long vowels = a complex of quality and quantity
- /ɪ/ in 'bid' x /iː/ in 'bead'
- /ʊ/ in 'good' x /uː/ in 'food'
- /æ/ in 'cad' x /ɑː/ in 'card'
- /ɒ/ in 'cod' x /ɔː/ in 'cord'
- /ə/ in '(for)ward' x /ɜː/ in 'word'
- **morphophonemic alternation** = relationship btw the vowels in the root morpheme of cognate words (the long vowel /aɪ/ in 'divine' x the short vowel /ɪ/ in 'divinity')
- orig.: an alternation btw a long x a short vowel of the same quality (the long vowel [iː] x the short vowel [i] > Great Vowel Shift > no longer vowels of the same quality)
- /aɪ/ in 'wise' x /ɪ/ in 'wisdom'
- /iː/ in 'hero' x /e/ in 'heroine'
- /eɪ/ in 'sane' x /æ/ in 'sanity'
- /əʊ/ in 'mediocre' x /ɒ/ in 'mediocrity'
- /aʊ/ in 'pronounce' x /ʌ/ in 'pronunciation'

Phonological Rules

- phonological rules = describe the variations of the sounds in terms of simple statements about regular sound patterns
- not prescriptive x but: descriptive rules

Allophones of English Consonants

(a)   [− voiced, + stop] > [+ aspirated] when syllable initial
= voiceless stops /p, t, k/ > aspirated when syllable initial ('pip' [pʰɪp], 'test' [tʰɛst], 'kick' [kʰɪk])

(a')   [ə] > [ʰ] after syllable initial [− voiced, + stop] and before [− voiced, + stop]
= unstressed vowels > voiceless after syllable initial voiceless stop and before another voiceless stop ('potato, catastrophe')

(b)   [+ voiced, + obstruent] > partially voiced when syllable final except when followed by a voiced sound
= voiced obstruents /b, d, g, v, ð, z, ʒ/ > partially voiced when at the end of an utterance or before a voiceless sound (/v/ in 'prove this'; /d/ in 'add two')

(b')   [+ voiced, + stop] > partially voiced when syllable initial except when preceded by a voiced sound
= voiced stops /b, d, g,/ partially voiced when syllable initial after a voiceless sound

(c)   [+ consonantal] > longer at the end of a phrase
= syllable final consonants > longer than syllable initial ones ('bib, did, don x nod')

(d)   [+ approximant] > [− voiced] after [+ aspirated, + stop]
= approximants /w, ɹ, j, l/ > devoiced after voiceless aspirated /p, t, k/ ('play' [p̥leɪ], 'twin' [tw̥ɪn], 'cue' [k̥ju])

(d')   [− voiced, + stop] > [− aspirated] after /s/ at the beginning of a syllable
= voiceless stops /p, t, k/ > not aspirated after syllable initial /s/ ('spew, stew, skew')

(e)   [− voiced] > longer at the end of a syllable
= ('back x bag', 'cap x cab')

(f)   [+ stop] > unexploded before [+ stop]
= ('apt' [æp̚t], 'act' [æk̚t])

(g)   [− voiced, + stop] > [+ glottal stop] + [− voiced, + stop] after a vowel and at the end of a syllable
= voiceless stops /p, t, k/ > reinforced by a glottal stop when syllable final after a vowel ('tip' [tɪʔp], 'pit' [pɪʔt], 'kick' [kɪʔk])

(h)   [− voiced, + alveolar, + stop] > [+ glottal stop] before an alveolar nasal in the same word
= the voiceless alveolar stop /t/ > replaced by a glottal stop before the alveolar nasal /n/ ('beaten' [biʔn])

(i)   [+ nasal] > [+ syllabic] at the end of a word and immediately after [+ obstruent]
= nasals /m, n, ŋ/ > syllabic when word final after an obstruent ('leaden' ['lɛdn̩], 'chasm' ['kæzm̩])

(j)   [+ lateral] > [+ syllabic] at the end of a word and immediately after a consonant
= lateral /l/ > syllabic when word final after a consonant x but: not after /r/ for GA ('paddle' ['pædl̩], 'whistle' ['wɪsl̩], 'kennel' ['kɛnl̩] x GA: 'snarl' [snɑɹl])

(j')   GA: [+ liquid] > [+ syllabic] at the end of a word and immediately after a consonant
= **liquids** = the cover term for /l, ɹ/ > syllabic when word final after a consonant ('razor' ['reɪz̩ɹ], 'hammer' ['hæm̩ɹ], 'tailor' ['teɪl̩ɹ])

(k)   GA: [− voice, + alveolar, + stop] > [+ voiced, + tap] when the single consonant btw two vowels with the 2ⁿᵈ one unstressed
= the voiceless alveolar stop /t/ > replaced by a tap when btw two vowels with the 2ⁿᵈ one unstressed ('fatty' ['fæɾi], 'data' ['dæɾə])

(k')   GA: [+ alveolar, + stop] > [+ voiced, + tap] when the single consonant btw two vowels with the 2ⁿᵈ one unstressed
= alveolar stops /d, t, n/ > replaced by a tap when btw two vowels with the 2ⁿᵈ one unstressed ('daddy' ['dæɾi], 'many' ['mɛ̃ɾi]: [~] = indicates nasalisation when placed above a symbol x velarisation when in the middle of a symbol)

(l)   [+ alveolar] > [+ dental] before [+ dental]
= the alveolar consonants /d, t, n, l/ > dentalised before dental consonants ('eighth' [eɪt̪θ], 'width' [wɪd̪θ], 'tenth' [tɛn̪θ], 'wealth' [wɛl̪θ])

(m)   [+ alveolar, + stop] > zero (i.e. omitted) btw two consonants
= the alveolar stops /d, t/ > no audible release btw two consonants ('most people, sand paper')

(n)   [+ consonant] > shortened before identical [+ consonant]
= ('big game, top post')

(o)   zero > [− voice, + stop] after a nasal and before a voiceless fricative followed by an unstressed vowel

= the adding of a short voiceless stop [p], [t], [k] btw a nasal and a voiceless fricative before an unstressed vowel ('something' ['sʌmpθɪŋ], 'youngster' ['jʌŋkstə]): **epenthesis** = the insertion of a sound into the middle of a word

(p)   [+ lateral] > velarized after a vowel and before another consonant or the end of a word
         = ('life' [laɪf] x 'file' [faɪɫ], 'clap' [klæp] x 'talc' [tæɫk])

Allophones of English Vowels

- [+ vowel] > shorter before voiceless sounds in the same syllable ('cap x cab')
- [+ vowel] > longer in open syllables ('sea x seed', 'sigh x side')
- [+ vowel] > longer in stressed syllables ('be'low x 'billow')
- [+ vowel] > [+ nasal] before [+ nasal] ('ban' [bæ̃n])
- [+ front, + vowel] > [+ retracted] before syllable final /l/
- = front vowels > as if diphthongs with an unrounded form of [ʊ] as the last element before syllable final /l/ ('peel' [pʰiʊɫ], 'pail' [pʰeʊɫ], 'pal' [pʰæʊɫ])

RP and GA

Standards of Pronunciation
- the extreme sensitivity of the British to variations in the pronunciation of E unparalleled in any oth. country
- => a standard pronunciations exists, though never explicitly imposed by any official body
- written language: the spelling of E fixed in 18ᵗʰ c., the conventions of grammatical forms, constructions and vocabulary accepted with no controversy
- spoken language: a great diversity in the spoken realisations of E used in different parts of the country and by different sections of the community

The History of the Standard
- poor communications btw regions, different external infl. (foreign invasion), etc. => a natural development of different varieties in different parts of the country
- since 16ᵗʰ c.: an increasing social prestige of the south-east England pronunciation for reasons of politics, commerce and the presence of the Court
- 19ᵗʰ c.: the establ. of the London region pronunciation as the speech of the ruling class due to the conformist infl. of public schools
- => pronunciation = a marker of position in society

Received Pronunciation
- RP = an implicitly accepted social standard of pronunciation, the term suggests its being a result of social judgement rather than of any official decision
- historically: regionally based = the educated speech of the south-east of England
- presently: the original concept of the RP speaker considerably diluted = 'General British' (GB) rather than RP
- traditionally taught to foreigners => no longer the exclusive property of a particular social stratum
- for historical reasons continues to serves as a model in Europe x GA used as a model esp. in Asia and Latin Am.
- certain types of regional pronunciation also firmly establ. and universally accepted (SE)
- main types of RP:
  - (a) General RP
  - (b) Refined RP = reflects class distinction, associated with upper-class (characterised by very open vowels /ɪ/, /ɜ/, and word-final /ə/
  - (c) Regional RP = reflects regional distinction, basically RP except for the presence of a few regional characteristics

General American
- the standard model for learners of E as a 2ⁿᵈ language in esp. Latin Am. and Asia
- Eastern pronunciation: incl. New England and NY City
- Southern pronunciation: incl. Virginia to Texas and southwards
- General pronunciation: all the remaining area
- GA = the form with no marked regional characteristics, in this way comparable to RP

Types of Differences
(a) **realisational** differences
- = differences in the phonetic realisations of the phonemes
- the same system and the same number of phonemes
- (RP: /t/ > CockE: [ʔ] btw vowels)

(b) **systemic** d.
- = differences in phoneme inventory
- different system and different number of oppositions
- (RP: distinction btw 'Sam' x 'psalm' > SE: homophones; RP: phonemic [ŋ] in 'sing' > NortE: no more phonemic [ŋg])

(c) **lexical** d.

- = differences of lexical incidence
- the same system x but: different incidence of phonemes in words
- (RP: opposition btw /uː/ x /ʊ/ > NortE: the same opposition x but: the use of /u/ in 'book, took')

(d) **distributional** d.

- the same system x but: limitation of the phonetic context for certain phonemes
- (non-rhotic accents: the distribution of /r/ limited to prevocalic positions ('red, horrid') x rhotic accents: the full distribution of /r/ ('part, car'))

Differences between RP and GA

(a) systemic differences

- lack of RP monophthong /ɒ/ and diphthongs /ɪə, eə, ʊə/
- /ɒ/ > GA /ɑː/ ('cod, spot, pocket', loss of distinction btw 'bomb x 'balm') or /ɔː/ before a voiceless fricative ('across, gone, often')
- /ɪə, eə, ʊə/ > GA sequences of vowel + /r/ ('beard' /bɪrd/, 'fare' /fer/, 'dour' /dʊr/)

(b) lexical d.

- RP /ɑ/ > GA /æ/ before a voiceless fricative ('past, after')
- RP /ɔː/ > GA /ɔ/ (loss of distinction btw 'cot' x 'caught')

(c) realisational d.

- RP diphthongs /eɪ/ and /əʊ/ > GA monophthongs [eː] and [oː] ('late' [leːt], 'load' loːd])
- RP /r/ > GA [ɹ] = the tip of the tongue curled further backwards
- RP /t/ > GA [ɾ] = voiced tap, in unaccented intervocalic positions ('better' ['beɾ], 'butter, latter')
- RP /l/ > GA [ɫ], i.e. dark (in all positions)

(d) distributional d.

- RP /ɑː/ > GA /æ/ + /r/ in words spelled with the vowel letter + <r> ('car, card, large')
- RP /ɜː/ > GA *r*-coloured vowel [ɝ] in words spelled with vowel letter + <r> ('bird, farm, lord')
- RP /ə/ > GA *r*-coloured vowel [ɚ] in words spelled with vowel letter + <r>
- RP /ɔː/ > GA /ɔ/ + /r/ in words spelled with vowel letter + <r> ('horse, cord, war')
- RP [aɪ] + [ɫ] > GA [aɪ] + syllabic [ɫ] ('fertile, futile, missile, reptile')
- RP /ɹ/ > GA syllabic [ɹ] when word final after a consonant ('razor' ['reɪzɹ̩], 'hammer' ['hæmɹ̩], 'tailor' ['teɪlɹ̩])
- RP /j/ + /uː/ after /t, d/ > GA /uː/ ('tune, dune, duty')

<u>Non-standard Varieties of English</u>

- basilectal varieties = used by lower socio-economic classes and middle classes in informal situations

Scottish English (SE)

- = an alternative standard to RP within the British Isles

Vowel Differences

- SE vowel inventory: lack of RP diphthongs /ɪə, eə, ʊə/
- RP distinction btw /ɑ:/ x /æ/, /u:/ x /ʊ/, /ɔ:/ x /ɒ/ > SE loss of these distinctions (homophony of 'Sam x psalm', 'ant x aunt', 'soot x suit', 'caught x cot')
- RP diphthongs /ɪə, eə, ʊə/ > SE sequences of vowel + /r/ ('beard' /bɪ:rd/, 'fare' /feɪr/, 'dour' /du:r/)
- RP diphthong /eɪ/ > SE monophthong [e:]
- RP diphthong /əʊ/ > SE monophthong [o:] ('coat' [ko:t])
- SE short vowel duration before voiced stop or a nasal ('spoon, brood')

Consonant Differences

- SE consonant inventory: the phonemic status of /ʍ/
- RP [ɹ] > SE voiced tap [ɾ] ('red' [ɾed], 'trip' [tɾɪp])
- RP /l/ > SE dark [ɫ] in all positions
- RP /t/ > SE glottal stop [ʔ] in intervocalic positions ('butter' ['bʌʔə])
- RP /w/ > SE distinctive phonemes /w/ = labial-velar semi-vowel ('witch') x /ʍ/ = voiceless labial-velar fricative ('which')
- SE /x/ = voiceless velar fricative ('loch')

Cockney English

- together with NortE most common within Britain, often underlies regional forms of RP
- NOT *'~~London English~~': as much a class dialect as a regional one, traces of CockE pronunciation spread also among middle-classes of the area
- in comparison with GA and SE wrt RP: no systemic differences, few lexical ones, much realisational differences

Vowel Differences

- RP short front vowels > CockE closer short front vowels ('sat x set x sit': 'sat' sounds like 'set', 'set' sounds like 'sit')
- RP short vowel /ʌ/ > CockE more forward, almost like Cardinal vowel 4 [a]
- RP long vowels /i:/, /u:/, /ɔ:/ > CockE diphthongs [ɪi], [ʊu], [ɔʊ] morpheme-medially or [ɔwə] morpheme-finally ('bead' [bɪid], 'boot' [bʊut], 'sword' [sɔʊd], 'saw' [sɔwə]
- RP diphthongs /eɪ/, /aɪ/, /əʊ/, /aʊ/ > CockE [aɪ], [ɑɪ], [æʊ], [a:] ('late' [laɪt], 'light' [lɑɪt], 'load' [læʊd], 'loud' [la:d])

Consonant Differences

- RP /h/ > CockE omission ('hammer' /'æmə/)
- RP /θ, ð/ > CockE replacement by /f, v/ ('think' /fɪŋk/, 'father' /'favə/)
- RP [ɫ], i.e. /l/ when not prevocalic > CockE vocalic [ʊ] ('milk' [mɪʊk])
- RP /t/ > CockE glottal stop [ʔ] when intervocalic ('butter' [bʌʔə]
- RP [p, t, k] > CockE glottal stop before a consonant ('soapbox' ['sæʊʔbɒks], 'statement' [staɪʔmənt], 'technical' ['teʔnɪkəl])

Estuary English

- = a middle-class pronunciation of the Thames estuary
- a type of Regional RP heavily infl. by CockE
- RP [p, t, k] > [ʔ] before a consonant
- RP [ɫ] > [ʊ]

Northern English

- = a general term for the disparate pronunciation systems in the north of England (north of a line from the River Severn to the Wash, incl. Birmingham)
- together with CockE most common within Britain

Vowel Differences

- RP distinction btw /ʊ/ and /ʌ/ > NortE no distinction
- RP /ɑ:/ > NortE /æ/ before a voiceless fricative or a nasal followed by another consonant ('past' /pæst/, 'laugh' /læf/, 'aunt' /ænt/)
- RP /ə/ in prefixes > NortE full vowel ('advance' /æd'væns/, 'consume' /kɒn'sju:m/, 'observe' /ɒb'zɜ:v/)

Consonant Differences

- RP /r/ > NortE [ɾ]
- RP allophonic difference btw [l] and [ɫ] > NortE no allophonic difference
- RP /ŋ/ > NortE /ŋg/ ('singing' [sɪŋgɪŋg])

Australian English (ANE)

- typical of an E pronunciation of the southern hemisphere
- shares many features with CockE
- no systemic differences, few lexical ones, mostly realisational differences

Vowel Differences

- RP /ɑ:/ > ANE [a:] ('father' [fa:ðə], 'part' [pa:t])
- RP /i:/, /u:/ > ANE [ɪi], [ʊu]
- RP short front vowels > ANE closer short front vowels
- RP /eɪ/, /aɪ/ > ANE [aɪ] and [ʌʌɪ]

Consonant Differences

- RP /h/ > ANE omission
- RP /l/ > ANE [ɫ]
- ANE: no vocalisation of /l/, no glottal stop

Non-native Pronunciation of English

Teaching the Pronunciation of English

- vocabulary and grammatical structures can be ordered and taught in sequence
- x pronunciation does not permit such progressive treatment, all phonetic/phonological features potentially present from the very first lesson
- performance targets:
    (a) minimum general intelligibility = the lowest requirement, with a set of distinctive elements roughly corresponding to the phonemic inventory of RP
    (b) high acceptability = the highest requirement, may not be identified as non-native by the native listener
- choice of a single pronunciation model
- a representative form of Br. or Am. pronunciation preferable: widely understood, adequately described in textbooks
- no conscious attempts to alter the pronunciation accord. to the situation as native speakers
- importance of internal consistency, no mixture of different pronunciation styles
- focus on those features of E not found in the learner's native language

Segmental Aspects

- focus on those sounds with high frequency of occurrence (vowels 40%, consonants 60% of the phonemes uttered)
- acquisition of the full phoneme system: 20 vowels (12 monophthongs, 8 diphthongs), 24 consonants

Vowels

- complex vowel system
- the existence of a central long vowel /ɜ:/
- distinction of voiced /ɜ/ x voiceless /ə/
- RP: no *r*-colouring of the vowels /ɜ/ and /ə/ in words spelled with vowel letter + <r>
- the extremely open quality of /ɒ/, help: relating /ɒ/ to /ɑ:/
- the quality of /æ/, help: a conscious constriction of the pharynx
- the opposition of the close vowels /i:/ x /ɪ/ and /u:/ x /ʊ/
- the delicately differentiated front vowel set /i/ - /ɪ/ - /e/ - /æ/ - /ʌ/
- durational variations: esp. in oppositions 'seed x seat; heard x hurt; road x wrote'
- quality & quantity complexes:
    - long tense /i:/ in 'bead' x reduced tense [i] in 'beat' x short lax /ɪ/ in 'bit'
    - the reduced tense [i] before voiceless consonants ('seat') NOT to be confused with short lax /ɪ/ ('sit')
    - qualitative and quantitative relationship btw /ɪ/ x /i:/ ('bid x bead')
    - long tense /u:/ in 'food' x reduced tense [u] in 'boot' x short lax /ʊ/ in 'good'
    - qualitative and quantitative relationship btw /æ/ x /ʌ/ x /ɑ:/ ('match x much x march')

Consonants

Plosives

- shares with many languages the system of plosives /p, t, k, b, d, g/ x but: not the conventions of its realisation
- E: presence/absence of aspiration as the crucial feature x CZ: presence/absence of voicing
- aspiration of voiceless /p, t, k/ in accented positions x no aspiration of voiced /b, d, g/
- avoidance of intervening [h] with voiceless plosives, avoidance of obscure vowel of the [ə] type with voiced plosives
- devoicing of /l, r, j, w/ after accented /p, t, k/ ('plead' [l̥] x 'bleed' [l], 'pray' [ɹ̥] x 'bray' [ɹ])
- /t, d/ before the homorganic syllabics /n/ or /l/ with nasal or lateral release
- avoidance of aspiration or of intrusive obscure vowel before nasal or lateral release ('little' *[lɪtʰl̩], 'middle' *[mɪdəl̩], 'button, sudden')

Fricatives

- distinction btw the labiodental fricative /v/ x the labial-velar approximant /w/: /v/ with strong friction btw the lower lip and upper teeth x /w/ with protruded and rounded lip action and no lower teeth contact ('vain x wane;

verse x worse; vest x west')
- avoidance of replacement of the dental fricative /θ/ by the dental stop /t/ or the alveolar fricative /s/ and of the dental fricative /ð/ by the dental stop /d/ or the alveolar fricative /z/
- distinction btw words with initial <h> + vowel x initial vowel; elision of /h/ in unaccented non-initial positions in connected speech with function words

Affricates
- avoidance of replacement of the palato-alveolar affricates /tʃ, d₃/ by the sequences of /s, z/ + /j/

Nasals
- avoidance of /g/ after /ŋ/, esp. before vowels ('singing, reading out, a long essay')

Approximants
/l/
- the qualities and distribution of the allophones [l, ɫ, l̥]
- avoidance of phonemic opposition btw [l] x [ɫ], avoidance of over-veralisation in pre-vocalic positions (Slav languages)
- devoicing of [l̥] after aspirated /p, t, k/ ('plot' with a fully voiced /l/ risks confusion with 'blot')
/r/
- use of the post-alveolar approximant or frictionless continuant [ɹ]
- avoidance of uvular trill [R], uvular fricative [ʁ], lingual trill [r] or tap [ɾ] (though the least objectionable substitute)
- help: approaching the RP [ɹ] as if a vowel
- avoidance of the intrusive post-vocalic /r/ in words spelled with vowel letter + <r>
- help: considering the post-vocalic *r* simply as a mark of length for the preceding vowel ('car, arm, hurt') or as a sing of the 2nd element [ə] of the diphthong ('fear, there, tour')
- use of the linking /r/ in connected speech = the word-final *r* links to a following word beginning with a vowel ('far away, pour out')
- devoicing of [ɹ̥] after /p, t, k/: distinction btw the sequences [pr-, tr-, kr-] x [br-, dr-, gr-] ('pray x bray; try x dry; crow x grow')

Consonant Clusters
- permits many consonant clusters x but: permits different combinations than CZ
- the first plosive of stop sequences with no audible release ('actor, rugby, big dog')
- no intrusive vowel inserted in consonant clusters, esp. between /s/ and /p, t, k/ ('sport, strike, school')

Prosodic Aspects
Rhythm and Accent
- an English listener tends to interpret a distorted sound/accentual pattern in terms of his own correct pattern, aided by the meaning of the total context
- x but: a word pronounced with the correct sound sequence may be misunderstood when pronounced with an incorrect relative prominence of the syllables
- rhythm + the related obscuration of weak syllables = the prime distinguishing feature of E
- unaccented syllables outnumber those with primary or secondary accents
- focus on variations in the accentual patterns of citation forms x forms in connected speech
- **reduction** of unaccented vowels, incl. weak forms of function words in normal speech (strong forms only under special emphasis, contrast or in final positions)
- elision of weak vowels in established cases
- **elision** of alveolar consonants: the simplification of three-consonant clusters by the elision of the medial stops /t/ or /d/ ('restless, kindness, wind down')
- consonant clusters with no epenthetic vowels ('sport' *sə'pɔt [= homonymous with 'support'], *ə'spɔt [= homonymous with 'a sport'])
- focus on the variation of quality in words distinguished by a **shift of accent**

- cases of the accentual pattern of an extended word not associated with the accentual pattern of the root ('photograph' /ˈfəʊtəgrɑːf/ x 'photography' /fəˈtɒgrəfɪ/, 'nation' /ˈneɪʃn/ x 'national' /ˈnæʃnəl/, 'origin' /ˈɒrɪdʒɪn/ x 'original' /əˈrɪdʒɪnəl/)
- primary accent on the final syllable of the root before the suffixes <-ity, -ion, -ian, -ic, -ify, -ible, -able, -ish> ('uni'versity, ma'gician, dra'matic')
- accent on the penultimate syllable of the root in 3+ syllable verbs with <-ate> (''penetrate') x but: accent on <-ate> in disyllables ('cre'ate')
- accent on the 1st syllable of the suffix <-ation> ('nationali'zation, pressuri'zation, privati'zation')

Intonation

- variation in intonation btw languages not as great as variation in segments
- x but: sufficient to cause a strong foreign accent and possible misunderstanding
- intonation = the crucial factor for the accentual patterning of E
- shares with most non-tone languages the tendency of falling tunes for declaratives and commands and rising tunes for questions and non-finality
- x some types and uses of fall and rise (incl. fall-rise) specific to E
- focus on attitudinal implications of intonation
- dividing the speech into **intonational phrases** (in ways very similar in any language)
- putting the nucleus on the focal point in the sentence, de-accenting old information at the end of a phrase
- using appropriate **nuclear tones**: over-use of simple falling tone > aggressive; over-use of simple rising tones > tentative