BBN–ANG–141 Foundations of phonology 4
The vowel phonemes of English

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outline

English or Englishes?

CUBE vowel phonemes
    short vowels
    long vowels
    diphthongs

the distribution of vowels

simple vowel symbols

standard lexical sets

sample exam questions

some clarification

what does "English" mean?

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for **British English** (BE), more specifically, **Current British English**
(CUBE), aka Standard British English (SBE) or Standard Southern British
English (SSBE), formerly known as Received Pronunciation (RP), aka BBC
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accents of English

are much more diverse in their vowel than in their consonant inventories

the symbols

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all of them (again)
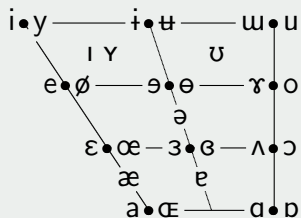
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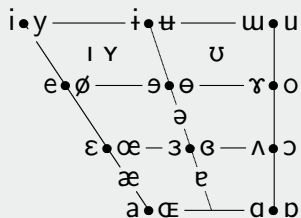
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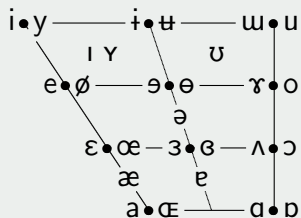
for CUBE

FRONT	CENTRAL	BACK	
(j)	ʉ	(w)	HIGH
ɪ		o	HIGH-MID
ɛ	ə	ɔ	LOW-MID
a		ɑ	LOW

short vowels of CUBE

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the vowels

FRONT	CENTRAL	BACK	
	ʉ		HIGH
ɪ	ə		HIGH-MID
ɛ		ɔ	LOW-MID
a			LOW

short vowels of CUBE

	the vowels			
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short vowels of CUBE

the vowels

FRONT	CENTRAL	BACK	
	ʉ		HIGH
ɪ			HIGH-MID
	ə		
ɛ		ɔ	LOW-MID
	a		LOW

the standard lexical sets

FRONT	CENTRAL	BACK
	FOOT	
KIT		
	STRUT	
DRESS		LOT
	TRAP	

short vowels of CUBE

the vowels

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	ʉ		HIGH
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DRESS		LOT
	TRAP	

minimal pairs

pit /pɪt/, *pet* /pɛt/, *pat* /pat/, *put* /pʉt/, *putt* /pət/, *pot* /pɔt/

long vowels of CUBE

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the vowels

FRONT	CENTRAL	BACK	
	(ʉː)		HIGH
ɪː		oː	HIGH-MID
	əː		
ɛː			LOW-MID
	ɑː		LOW

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the standard lexical sets

FRONT	CENTRAL	BACK	
	(CURE)		
NEAR	NURSE	FORCE	
SQUARE			
		START	

long vowels of CUBE

the vowels

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ɪː		oː	HIGH-MID
ɛː	əː		LOW-MID
		ɑː	LOW

the standard lexical sets

FRONT	CENTRAL	BACK
	(CURE)	
NEAR	NURSE	FORCE
SQUARE		
		START

minimal pairs

beard /bɪːd/, *bared* /bɛːd/, *bird* /bəːd/, *board* /boːd/, *bard* /bɑːd/

the loss of CURE

variation after palatals

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no variation after nonpalatals

speakers merge CURE and FORCE: eg *poor* /poː/, *moor* /moː/

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CURE–POOR split (length is ignored!)

	NURSE	CURE	POOR	FORCE
GA/RP	ə	ʊ		o
CUBE1	ə	ʉ	o	
CUBE2	ə	o		
CUBE3	ə		o	

diphthongs of CUBE

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the vowels

FRONT	CENTRAL	BACK	
j	ʉw	w	HIGH
ɪj	əw	oj	HIGH-MID
ɛj			LOW-MID
aw		ɑj	LOW

diphthongs of CUBE

the vowels

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the standard lexical sets

FRONT	CENTRAL	BACK
	GOOSE	
FLEECE	GOAT	CHOICE
FACE		
MOUTH		PRICE

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the standard lexical sets

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	GOOSE	
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minimal pairs

feel /fijl/, *fail* /fɛjl/, *foul* /fawl/, *fool* /fʉwl/, *foal* /fəwl/, *foil* /fojl/, *file* /fɑjl/

diphthongs of CUBE

the vowels

	FRONT	CENTRAL	BACK	
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types of diphthong

- ► marginal: ɪj, ʉw
- ► narrow: ɛj, əw
- ► wide: aw, ɑj, oj

grouping stressed vowels

	__C	__#	__V
A ɪj ɛj ɑj oj aw əw ʉw	✓	✓	✓
B ɪː ɛː ɑː əː oː ʉː	✓	✓	✗
C ɪ ɛ a ə ɔ ʉ	✓	✗	✗

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	__C	__#	__V
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C ɪ ɛ a ə ɔ ʉ	✓	✗	✗

A diphthongs, occur in all three environments (free vowels)

grouping stressed vowels

	__C	__#	__V
A ij ɛj ɑj oj aw əw ʉw	✓	✓	✓
B iː ɛː ɑː əː oː ʉː	✓	✓	✗
C ɪ ɛ a ə ɔ ʉ	✓	✗	✗

A diphthongs, occur in all three environments (free vowels)

B long monophthongs, do not occur before a vowel (R vowels)

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	__C	__#	__V
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B ɪː ɛː ɑː əː oː ʉː	✓	✓	✗
C ɪ ɛ a ə ɔ ʉ	✓	✗	✗

A diphthongs, occur in all three environments (free vowels)

B long monophthongs, do not occur before a vowel (R vowels)

C short vowels, occur only before consonants (checked vowels)

simple vowel symbols

CUBE symbols are phonetically precise but perhaps overly so. . .
let's use simpler ones

CHECKED	i	e	a		ə	o	u
R	iː	eː	aː		əː	oː	uː
FREE	ij	ej	aj	aw	əw	oj	uw

standard lexical sets 1

groups of words represented by a key word (set in SMALL CAPITALS) containing the same vowel phoneme; in a given accent several lexical sets may contain the same vowel, in other accents they may contain different vowels; the system was devised by John Wells; we here give some transcription systems since 1900

lexical set	Sweet 1900	Jones 1920	Gimson 1962	Upton 1995	Lindsey 2012	simple 2015
1 KIT	i	i	ɪ	ɪ	ɪ	i
2 DRESS	e	e	e	ɛ	ɛ	e
3 TRAP	æ	æ	æ	a	a	a
4 LOT	o	ɔ	ɒ	ɒ	ɔ	o
5 STRUT	ɐ	ʌ	ʌ	ʌ	ʌ/ə	ə
6 FOOT	u	u	ʊ	ʊ	ʉ	u

standard lexical sets 2

lexical set	Sweet 1900	Jones 1920	Gimson 1962	Upton 1995	Lindsey 2012	simple 2015
7 (BATH)	aa	ɑː	ɑː	ɑː	ɑː	aː
8 (CLOTH)	o	ɔ	ɒ	ɒ	ɔ	o
9 NURSE	əə	əː	ɜː	əː	əː	əː
10 FLEECE	ij	iː	iː	iː	ɪj	ij
11 FACE	ei	ei	eɪ	eɪ	ɛj	ej
12 (PALM)	aa	ɑː	ɑː	ɑː	ɑː	aː
13 (THOUGHT)	ɔ	ɔː	ɔː	ɔː	oː	oː
14 GOAT	ou	ou	əʊ	əʊ	əw	əw
15 GOOSE	uw	uː	uː	uː	ʉw	uw
16 PRICE	ai	ai	aɪ	ʌɪ	ɑj	aj
17 CHOICE	oi	ɔi	ɔɪ	ɔɪ	oj	oj
18 MOUTH	au	au	aʊ	aʊ	aw	aw

standard lexical sets 3

	lexical set	Sweet 1900	Jones 1920	Gimson 1962	Upton 1995	Lindsey 2012	simple 2015
19	NEAR	iə	iə	ɪə	ɪə	ɪː	iː
20	SQUARE	eə	ɛə	eə	ɛː	ɛː	eː
21	START	aa	ɑː	ɑː	ɑː	ɑː	aː
22	(NORTH)	ɔ	ɔː	ɔː	ɔː	oː	oː
23	FORCE	ɔə	ɔː	ɔː	ɔː	oː	oː
24	CURE	uə	uə	ʊə	ʊə	ʉː	oː
25	HAPPY	ĭ	ɪ	ɪ	i	ɪj	ij
26	LETTER	ə	ə	ə	ə	ə	ə
27	COMMA	ə	ə	ə	ə	ə	ə

sample exam questions

which set contains only wide diphthongs?

1. ij ej aj oj
2. aj aw oj
3. aw əw uw
4. ij uww

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what is the distribution of long vowels in BE?

1. they occur before vowels, but not after vowels
2. they occur after consonants, but not before consonants
3. they occur word finally, but not word initially
4. they occur word finally, but not prevocalically

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