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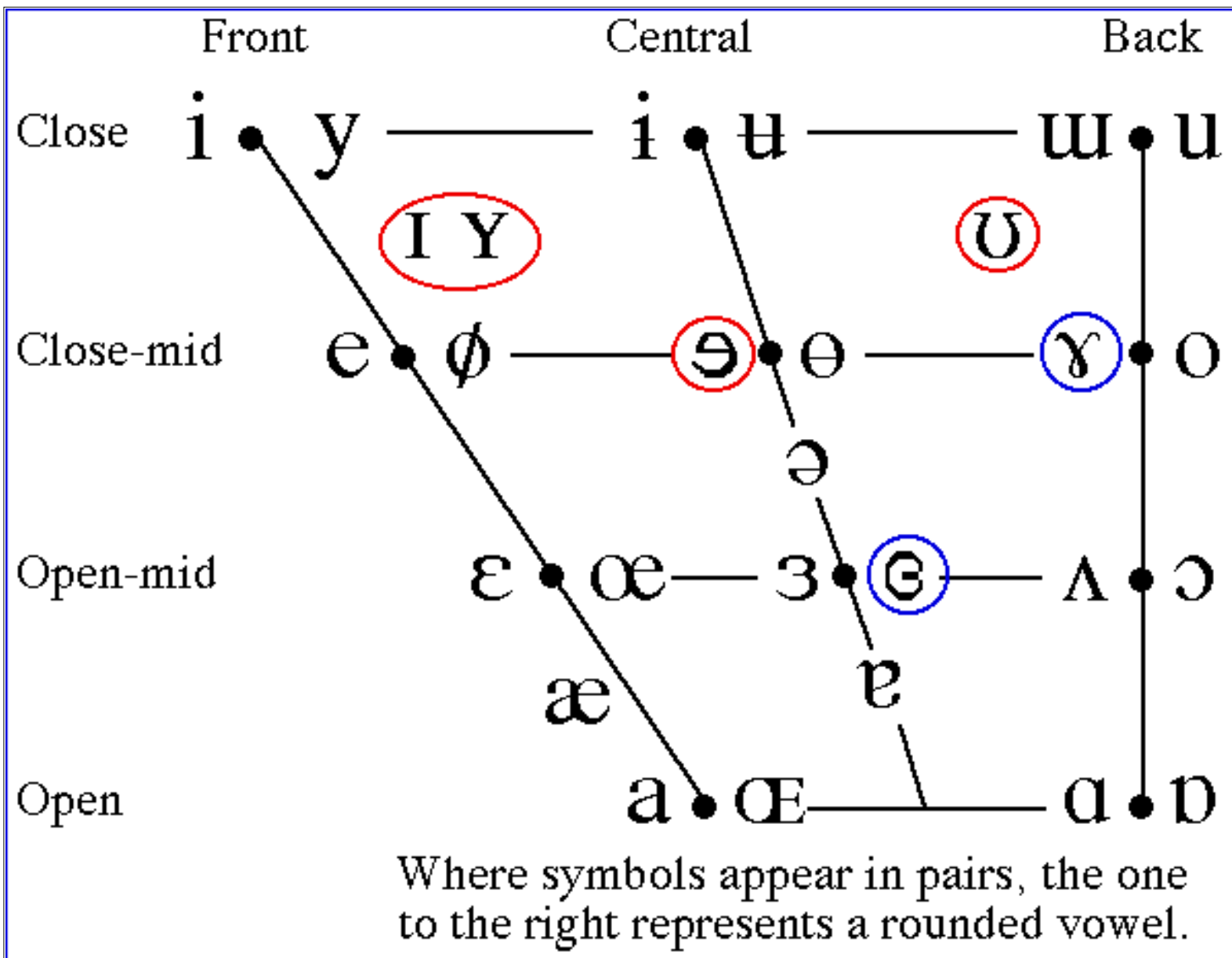
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## Errata

Unfortunately there were some errors in the first printing of the 4th. edition of *A Course in Phonetics*. On the IPA chart on the inside of the cover page, in the consonant chart, the symbol for a retroflex plosive is wrong, and should be as shown below:

	BILABIAL	LABIO-DENTAL	DENTAL	ALVEOLAR	POST-ALVEOLAR	RETROFLEX
PLOSIVE	<b>p b</b>		<b>t d</b>			<b>ʈ ɖ</b>
NASAL	<b>m</b>	<b>ɱ</b>	<b>n</b>			<b>ɳ</b>
TRILL	<b>ʙ</b>		<b>r</b>			
TAP OR FLAP			<b>ɾ</b>			<b>ɽ</b>
FRICATIVE	<b>ɸ β</b>	<b>f v</b>	<b>θ ð</b>	<b>s z</b>	<b>ʃ ʒ</b>	<b>ʂ ʐ</b>
LATERAL FRICATIVE			<b>ɬ ɮ</b>			
APPROXIMANT		<b>ʋ</b>	<b>ɹ</b>			<b>ɻ</b>
LATERAL APPROXIMANT			<b>l</b>			<b>ɭ</b>

The vowel chart also had a number of errors as shown below: The red circle items were wrong or omitted, the blue circle items were badly shaped.



In Chapter 5, Table 5.5 has been printed with 5 columns instead of four. It should be as follows:

Table 5.5. (1) Optional pre-nuclear pitch accents on stressed syllables (2) Nuclear pitch accents (3) Phrase accents (4) Boundary tones.

1	2	3	4
H*	H*		
L*	L*		

$L + H^*$     $L + H^*$     $L - H\%$

$L^* + H$     $L^* + H$

$H + !H^*$     $H + !H^*$     $H - L\%$

$(!H^*)$     $(!H^*)$

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## Language Index

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## !Xóõ click places of articulation

Bilabial	Dental	Alveolar	Palatal	Lateral
ʘʘôo	k ʔâa	k!ʔáã	k‡ʔāa	k  ʔàa
'get stuck'	'die'	'be seated'	'shoot you'	'not to be'



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## Table 2.2

### General American and British English Vowels

Click on a word to hear it pronounced in a General American accent.

<a href="#">i:</a>	heed	he
<a href="#">ɪ</a>	hid	
<a href="#">eɪ</a>	hayed	hay
<a href="#">ɛ</a>	head	
<a href="#">æ</a>	had	
<a href="#">ɑɪ</a>	hard	
<a href="#">ɑ:</a>	hod	
<a href="#">ɔ:</a>	hawed	haw
<a href="#">ʊ</a>	hood	
<a href="#">oʊ</a>	hoed	hoe
<a href="#">u:</a>	who'd	who
<a href="#">ʌ</a>	Hudd	
<a href="#">ɜ</a>	herd	her
<a href="#">aɪ</a>	hide	high
<a href="#">aʊ</a>		how
<a href="#">ɔɪ</a>		(a)hoy
<a href="#">ɪ ɪ</a>		here
<a href="#">ɛɪ</a>		hair
<a href="#">ɑɪ ɪ</a>	hired	hire

ai	hired	hire
ju	hued	hue

Click on a word to hear it pronounced in a British English accent.

## British English Vowels

i	heed	he
ɪ	hid	
eɪ	hayed	hay
ɛ	head	
æ	had	
ɑː	hard	
ɒ	hod	
ɔː	hawed	haw
ʊ	hood	
əʊ	hoed	hoe
uː	who'd	who
ʌ	Hudd	
ɜː	herd	her
aɪ	hide	high
aʊ		how
ɔɪ		(a)hoy
ɪə		here
eə		hair
aɪ	hired	hire
ju	hued	hue

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## Performance Exercises 11 C Burmese

mâ	'lift up'	mâ
nă	'pain'	nă
ṅă	'right'	ṅă
ṅâ	'fish'	ṅâ

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## Ewe

<b>Voiceless bilabial</b>	éḗá 'he polished'	éḗle 'he bought'
<b>Voiceless labiodental</b>	éfá 'he was cold'	éflé 'he split off'
<b>Voiced bilabial</b>	èβè 'Ewe' (the language)	èβló 'mushroom'
<b>Voiced labiodental</b>	èvè 'two'	évló 'he is evil'

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## Performance Exercises 11 E Ewe

éφά 'he polished'	éφle 'he bought'
éfá 'he was cold'	éflě 'he split off'
èβè 'Ewe' (the language)	èβló 'mushroom'
èνè 'two'	évló 'he is evil'

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## Table 6.5 Gujarati

ḅar	'outside'	ḅ <sup>h</sup> ar	'burden'	bar	'twelve'
ṃel	'palace'	ṃel	'dirt'		

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## Performance Exercises 11 G French

li	ly	lu		
'bed'	'read [p.p.]'	'wolf'		
le	lø	lo		lõ
'the [pl.]'	'the [m.sg.]'	'prize'		'long'
le	lœʃ	lɔʃ	lẽ	lœ̃di
'ugly'	'their'	(name)	'flax'	'Monday'
la		la	lã	
'there'		'tired'	'slow'	

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# French

ʁuʒ

'red'

ʁoz

'rose'

lɛtʁ

'letter'



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## Performance Exercises 11 H German

bī:tan 'offer'	vy:tan 'rage'	bu:tan 'booed'
bitan 'ask'	bytan 'tubs' [dat.pl.]	butan 'flounders' [dat.pl.]
be:tan 'pray'	bø:tan 'offered' [subj.]	bo:tan 'boats' [dat.pl.]
bē:tan 'asked' [subj.]		
betan 'beds'	bætiŋən (town name)	bōtiç 'vat'
bā:tan 'asked'		
batan (town name)		
vaitan 'widen'	boyta 'booty'	bautan 'built'

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## Performance Exercises 11 D Greek

Dental	Palatal	Velar
θiki 'box'	çeri 'hand'	xɔma 'soil'
ðiki 'trial'	jeri 'old men'	ɣɔma 'eraser'

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## Hausa implosives, ejectives and laryngealized consonants

⇒	ba:tà:	'line'	ɓa:tà:	'spoil'
⇒	da:mè:	'mix well'	ɗa:mè:	'tighten'
⇒	ka:rà:	'put near'	k'a:rà:	'increase'
⇒	k <sup>w</sup> a:rà:	'pour'	k <sup>w</sup> 'a:rà:	'shea nut'
⇒	sa:rà:	'cut'	s'a:rà:	'arrange'
⇒	ja:	'he' [comp.]	ʔja:	'daughter'

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## Table 6.7 Hindi

	Voiceless un aspirated	Voiceless aspirated	Voiced	Breathy voice
<b>Bilabial</b>	pa  'take care of'	p <sup>h</sup> a  'knife blade'	ba  'hair'	b <sup>h</sup> a  'forehead'
<b>Dental</b>	ta  'beat'	t <sup>h</sup> a  'plate'	da  'lentil'	d <sup>h</sup> a  'knife'
<b>Retroflex</b>	ʈa  'postpone'	ʈ <sup>h</sup> a  'wood shop'	ɖa  'branch'	ɖ <sup>h</sup> a  'shield'
<b>Postalveolar affricate</b>	tʃa  'walk'	tʃ <sup>h</sup> a  'deceit'	dʒa  'water'	dʒ <sup>h</sup> a  'glimmer'
<b>Velar</b>	ka  'ear'	k <sup>h</sup> a  'mine'	ga  'song'	g <sup>h</sup> a  'bundle'

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## Italian

li 'there'	li 'to him'	nomi 'names'	gnomi 'gnomes'
folla 'crowd'	foʎa 'leaf'	nonno 'grandfather'	sonno 'dream'
velare 'conceal'	veʎare 'keep watch'		

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**Table 6.1 Lakhota ejectives**

	<b>Bilabial</b> ↓	<b>Dental</b> ↓	<b>Velar</b> ↓
<b>Ejective</b> ⇒	p'o 'foggy'	t'uʃε 'at all costs'	k'u 'to give'
<b>Voicless unspirated</b> ⇒	payō̃ta 'mallard'	tuwa 'who'	kah 'that'
<b>Voicless + velar fricative</b> ⇒	p <sup>x</sup> a 'bitter'	t <sup>x</sup> awa 'own'	k <sup>x</sup> anta 'plum'

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## Table 7.1 Malayalam

<b>Bilabial</b>	<b>Dental</b>	<b>Alveolar</b>
kʌmmi	pʌɳɳi	kʌnni
‘shortage’	‘pig’	‘virgin’
<b>Retroflex</b>	<b>Palatal</b>	<b>Velar</b>
kʌɳɳi	kʌɳɳi	kʌɳɳi
‘link in chain’	‘boiled rice & water’	‘crushed’

# Nama Clicks

Nama					
	<b>Voiceless unaspirated</b>	<b>Voiceless aspirated</b>	<b>Delayed aspiration</b>	<b>Voiced nasal</b>	<b>Glottal closure</b>
<b>Dental</b>	k oa 'put into'	k h <sup>h</sup> o 'play an instrument'	ŋ h <sup>h</sup> o 'push into'	ŋ o 'measure'	k ʔo 'sound'
<b>Palatal</b>	k  <sup>h</sup> ais 'calling'	k h <sup>h</sup> aris 'small one'	ŋ h <sup>h</sup> ais 'baboon's arse'	ŋ  <sup>h</sup> ais 'turtledove'	k ʔais 'gold'
<b>Alveolar</b>	k!oas 'hollow'	k!h <sup>h</sup> oas 'belt'	ŋ!h <sup>h</sup> oas 'narrating'	ŋ!oras 'pluck maize seeds'	k!ʔoas 'meeting'
<b>Lateral</b>	k  aros 'writing'	k  h <sup>h</sup> aos 'strike'	ŋ  h <sup>h</sup> aos 'special cooking place'	ŋ  aes 'pointing'	k  ʔaos 'reject a present'



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## Performance Exercises 11 A Navajo

tota 'not'	t <sup>x</sup> á:ʔ 'three'	t'ah 'wait'
hátítsı 'you will speak'	tshah 'awl'	ts'ah 'sagebrush'
	tʰah 'ointment'	nıstʰa: 'left'
t̥s̥í 'day'	t̥shá:ʔ 'beaver'	t̥s'ah 'hat'
	bıkhá: 'its surface'	k'a: 'arrow'

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## Polish

sali 'room' [gen.]	şali 'scale' [gen.]	çali 'sown'
zalef 'bay'	zali 'complains'	zali 'gaped'
kasa 'case'	kaşa 'groats'	kaçaş 'burglar'
skaza 'flaw'	gaza 'gauze'	kaza (name) [gen.]

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## Table 7.2 Quechua

t̥ʃaka 'bridge'	kujuj 'to move'	qaʎu 'tongue'
t̥ʃʰaka 'large ant'	kʰujuj 'to whistle'	qʰaʎu 'shawl'
t̥ʃʼaka 'hoarse'	kʼujuj 'to twist'	qʼaʎu 'tomato sauce'

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## Performance Exercises 11 I Swedish

ɹɪta	ɹɪt:	ɹy:ta	ny:tɑ	ɹu:ta	ɹu:t:
'draw'	'ride' [n.]	'roar'	'use' [n.]	'root'	'rowed'
ɹe:ta	ɹe:t:	ɹæ:ta	ɹe:t:	ɹo:ta	ɹo:t:
'tease'	'correct' [n.]	'window pane'	'route'	(valley name)	'raw'
ɹe:ta		ɹø:ta	ɹœ:t:	ɹo:ta	ɹa:t:
'straighten'		'rot'	'red'	'refuse'	'steering wheel'
hæ:ɹ		hœ:ɹ			
'here'		'hear'			

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## Table 6.6 Thai

Thai		
	Bilabial	Dental
<b>Voiced</b>	bâ: 'crazy'	d̄â: 'curse'
<b>Voiceless unaspirated</b>	pâ: 'aunt'	t̄â: 'eye'
<b>Voiceless aspirated</b>	phâ: 'cloth'	th̄â: 'landing place'

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## V'enen Taut

	Bilabial	Linguo-labial	Alveolar
<b>Plosive (initial)</b>	pətək 'my head'	t̪atei 'breadfruit'	
<b>Nasal (medial)</b>	nəmək 'my spirit'	nə̃nek 'my tongue'	ɬ̪anu 'island'
<b>Fricative (medial)</b>	naβal 'songfest'	naɬ̪at 'stone'	

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## Performance Exercises 11 J Vietnamese

ti 'bureau'	tuw 'fourth'	tu 'to drink'
te 'numb'	tɤ 'silk'	to 'soup bowl'
té 'to fall down'	ʌŋ 'favor'	tɔ 'large'
æŋ 'to eat'	ta 'we/our'	

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## Table 6.3 Xhosa

	Dental	Alveolopalatal	Alveolar lateral
<b>Voiceless unaspirated velar plosive</b>	ukúk ola 'to grind fine'	ukúk!oba 'to break stones'	úk  olo 'peace'
<b>Voiceless aspirated velar plosive</b>	úkuk hóla 'to pick up'	ukúk!hola 'perfume'	úkuk  hoba 'to arm oneself'
<b>Murmured velar plosive</b>	úkug ôba 'to be joyful'	ukúg!oba 'to scoop'	úkug  oba 'to stir up mud'
<b>Voiced velar nasal</b>	ukún oma 'to admire'	ukún!ola 'to climb up'	ukún  iba 'to put on clothes'
<b>Murmured velar nasal</b>	ukún ola 'to be dirty'	ukún!ala 'to go straight'	ukún  on la 'to lie on back knees up'



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## Zulu clicks

	Dental	Alveolopalatal	Alveolar lateral
<b>Voicless un aspirated velar plosive</b>	k á:ǵà 'to whitewash'	k!à:k!á 'to undo'	k  á:ǵà 'put into a fix'
<b>Voicless aspirated velar plosive</b>	k hà:ǵá 'to identify'	k!hà:k!hà 'to rip open'	k  há:ǵà 'to link horses'
<b>Voiced velar plosive</b>	ǵ ò:ǵá 'to grease'	ǵ!ò:ǵá 'to milk'	ǵ  ò:ǵá 'to beat'
<b>Voiced velar nasal</b>	ìsì:ǵ é (kind of spear)	ìsì:ǵ!é 'rump'	ìsì:ǵ  é:ǵlè 'left hand'

## Performance Exercises 11 B Zulu clicks

	Dental	Alveolopalatal	Alveolar lateral
<b>Voiceless unaspirated velar plosive</b>	k á:gà 'to whitewash'	k!à:k!á 'to undo'	k  á:gà 'put into a fix'
<b>Voiceless aspirated velar plosive</b>	k hà:gá 'to identify'	k!hà:k!hà 'to rip open'	k  há:gà 'to link horses'
<b>Voiced velar plosive</b>	g ò:bá 'to grease'	g!ò:bá 'to milk'	g  ò:bá 'to beat'
<b>Voiced velar nasal</b>	ìsì:ŋ é (kind of spear)	ìsì:ŋ!é 'rump'	ìsì:ŋ  é:lè 'left hand'

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# Zulu

lálà 'sleep'	ǀáǀà 'play' [imper.]	ǀânzà 'vomit'
	ínǀàǀà 'hunger'	íntǀ'ántǀ'á 'good luck'
		kǀ'íná 'be naughty'

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## Performance Exercises 11 F Zulu laterals

	<b>Voiced lateral approximant</b>	<b>Voiced lateral fricative</b>	<b>Voiceless lateral fricative /affricate</b>
<b>Alveolar</b>	lálà 'sleep'	ǀálà 'play' [imper.]	ǁânzà 'vomit'
<b>Nasal + alveolar</b>		ínǀàlà 'hunger'	ínǁ'ànǁ'à 'good luck'
<b>Velar</b>			kǁ'íná 'be naughty'

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# Chapter 1

To hear the whole row of the Consonants, click on the name of the manner of articulation.

## THE INTERNATIONAL PHONETIC ALPHABET (revised to 1993, corrected 1996)

### CONSONANTS (PULMONIC)

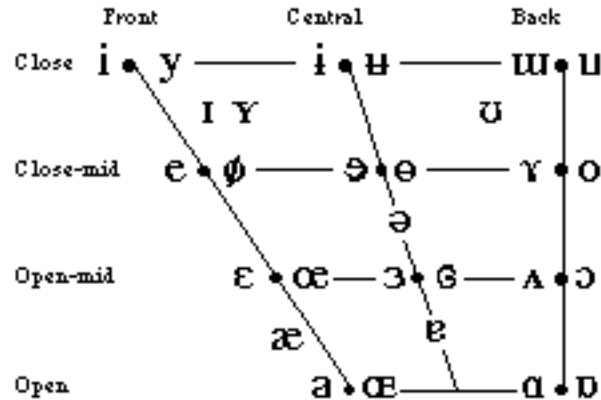
	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill				ʀ					ʁ		
Tap or Flap				ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant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

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

### CONSONANTS (NON-PULMONIC)

Clicks	Voiced implosives	Ejectives
ʘ Bilabial	ɓ Bilabial	ʼ Examples
ǀ Dental	ɗ Dental/alveolar	ɓʼ Bilabial
ǃ Postalveolar	ɟ Alveolar	ɗʼ Dental/alveolar
ǂ Alveolar/alveolar	ɠ Velar	ɠʼ Velar
ǁ Alveolar/alveolar	ʄ Velar	ʄʼ Alveolar/alveolar

### VOWELS



Where symbols appear in pairs, the one to the right represents a rounded vowel.

### OTHER SYMBOLS

ʍ Voiceless bilabial ejective	ɰ Alveolar-palatal ejectives
ʍ Voiced bilabial approximant	ɰ Alveolar/alveolar flap
ɰ Voiced bilabial-palatal approximant	ɰ Simultaneous ʃ and ʁ
ɦ Voiceless epiglottal ejective	
ʕ Voiced epiglottal ejective	Difficulties and double articulations can be represented by two symbols joined by a tie bar if necessary
ʕ Epiglottal plosive	

Click on any part of this chart to see the symbols and hear the sounds

[Return to the IPA chart](#)

**This is half the consonant chart. To hear the sounds before a vowel press on the left side of the symbol; to hear the sounds between two vowels press on the right.**

	BILABIAL	LABIO-DENTAL	DENTAL	ALVEOLAR	POST-ALVEOLAR	RETROFLEX
PLOSIVE	p b		t d			ʈ ɖ
NASAL	m	ɱ	n			ɳ
TRILL	ʙ		r			
TAP OR FLAP			ɾ			ɽ
FRICATIVE	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ
LATERAL FRICATIVE			ɬ ɮ			
APPROXIMANT		ʋ	ɹ			ɻ
LATERAL APPROXIMANT			l			ɭ

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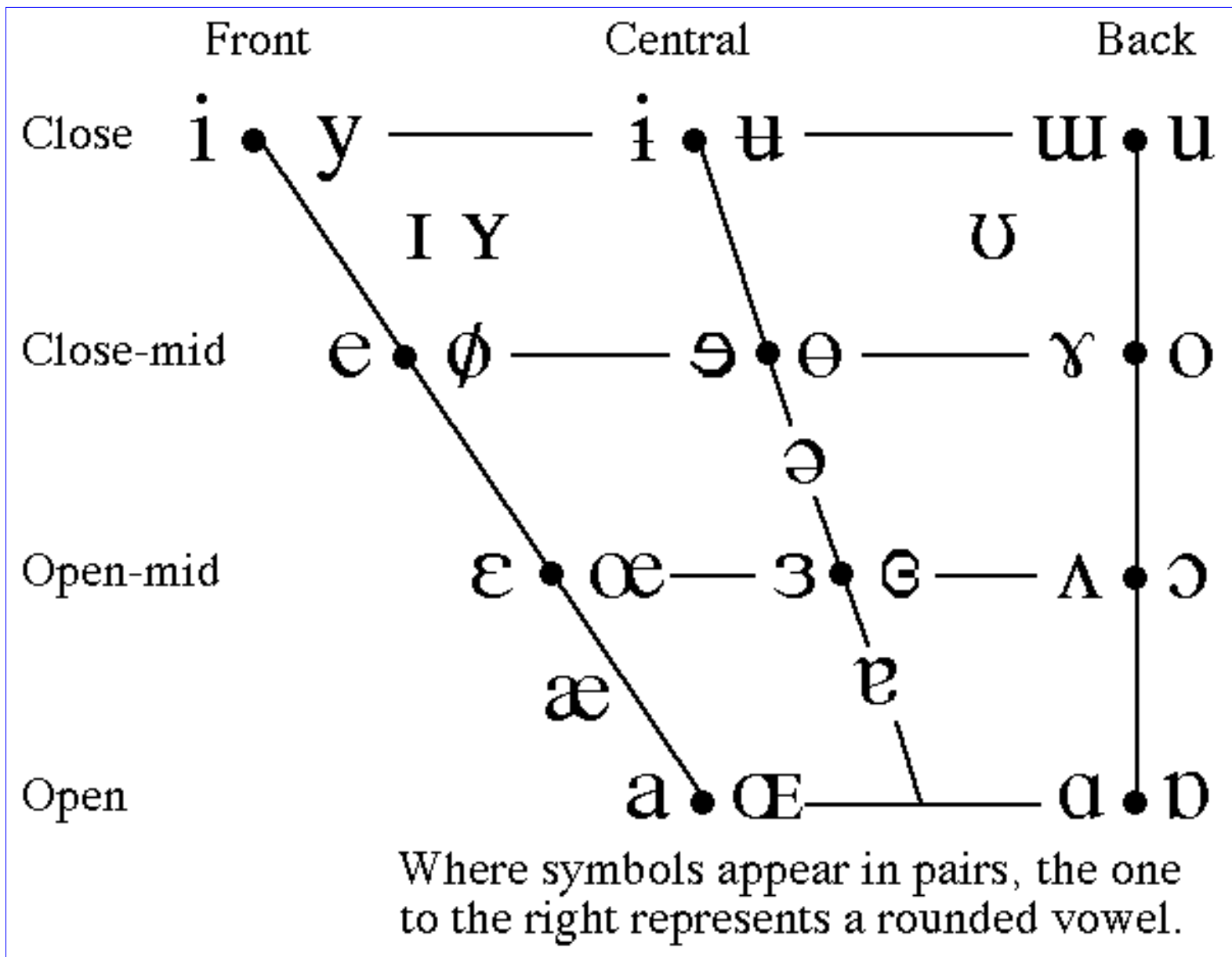
**This is half the consonant chart. To hear the sounds before a vowel press on the left side of the symbol; to hear the sounds between two vowels press on the right.**

	PALATAL	VELAR	UVULAR	PHARYNGEAL	GLOTTAL
PLOSIVE	<b>c</b> <b>ɟ</b>	<b>k</b> <b>g</b>	<b>q</b> <b>ɢ</b>		<b>ʔ</b>
NASAL	<b>ɲ</b>	<b>ŋ</b>	<b>ɴ</b>		
TRILL			<b>ʀ</b>		
TAP OR FLAP					
FRICATIVE	<b>ç</b> <b>ʝ</b>	<b>x</b> <b>ɣ</b>	<b>χ</b> <b>ʁ</b>	<b>ħ</b> <b>ʕ</b>	<b>h</b> <b>ɦ</b>
LATERAL FRICATIVE					
APPROXIMANT	<b>j</b>	<b>ɥ</b>			
LATERAL APPROXIMANT	<b>ʎ</b>	<b>ʟ</b>			

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**This is the vowel chart. To hear the sounds click on a symbol.**

Primary Cardinal Vowels ..... Secondary Cardinal Vowels





**This is the 'clicks' chart. Click on symbol to hear the sound.**

Clicks		Voiced implosives		Ejectives	
⦿	Bilabial	ɓ	Bilabial	ʼ	Examples:
	Dental	ɗ	Dental / alveolar	pʼ	Bilabial
!	(Post)alveolar	ɟ	Palatal	tʼ	Dental / alveolar
ɸ	Palatoalveolar	ɠ	Velar	kʼ	Velar
	Alveolar lateral	ʄ	Uvular	sʼ	Alveolar fricative

**This is the 'other symbols' chart. To hear the sounds click on the symbol.**

ʍ	Voiceless labial-velar fricative	ç ʒ	Alveolo-palatal fricatives
w	Voiced labial-velar approximant	ɺ	Alveolar lateral flap
ɥ	Voiced labial-palatal approximant	ɧ	Simultaneous ʃ and x
ħ	Voiceless epiglottal fricative		
ʕ	Voiced epiglottal fricative	Affricates and double articulations joined by a tie bar if necessary.	
ʔ	Epiglottal plosive	k͡p	

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# 1 Articulatory Phonetics

The Vocal Organs

[Voicing](#)

Places of Articulation

The Oro-Nasal Process

Manners of Articulation

The Articulation of Vowel Sounds

Suprasegmentals

[Stress variations and pitch variations](#)

Exercises

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# Vocal Organs

Click on the [ffffvwwwffffvwww]to hear the voicing contrasts and then say it yourself

ffffvwwwffffvwww

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## Stress Variation

Click on a word to hear it.

Click on an **arrow** to hear the row or column.

	Noun	Verb
⇒	(an) insult	(to) insult
⇒	(a) pervert	(to) pervert
⇒	(an) overflow	(to) overflow

## Pitch Variation

"That'sa cat"

"That's a *cat*?"

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## **2 Phonology and Phonetic Transcription**

### **The Transcription of Consonants**

[Table 2.1](#)

### **The Transcription of Vowels**

[Table 2.2](#)

[Unstressed vowels](#)

**Exercises**

**Consonant and Vowel Charts**

**Phonology**

**Exercises**

[Performance Exercises](#)

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## Table 2.1

Click on a word in red to hear it pronounced in a General American accent.

p	pie	pea	
t	tie	tea	
k	kye	key	
b	by	bee	
d	dye	D	
g	guy		
m	my	me	ram
n	nigh	knee	ran
ŋ			rang
f	fie	fee	
v	vie	V	
θ	thigh		
θ	thy	thee	
s	sigh	sea	listen
z		Z	mizzen
ʃ (š)	shy	she	mission
ʒ (ž)			vision
l	lie	lee	
w	why	we	
r (r)	rye	re	
j (y)		ye	
h	high	he	
tʃ (č)	chi(me)		chea(p)
dʒ (dž)	ji(ve)	G	

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## Unstressed Vowels

	British	American
Sophie	'soufi	'soufi
sofa	'soufə	soufə
Texas	'tæksəs	tæksəs
taxis	'tæksɪz	'tæksɪz
taxes	'tæksɪz	'tæksəz
Tax is	'tæks ɪz	'tæks ɪz
Tax is good	'tæks ɪz 'gʊd	'tæks ɪz 'gʊd



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## Performance Exercises A Chapter 2

Click on the symbols to hear them pronounced.

ɑː  
zɑː  
ɪ'zɑː  
tɪ'zɑː  
'æɪ'zɑː  
m'æɪ'zɑː  
ʌm'æɪ'zɑː  
tʌm'æɪ'zɑː

## Performance Exercises B Chapter 2

pi'suz  
pi'sus  
pi'zuz  
pi'zuz  
pi'zuz

## Performance Exercises C Chapter 2

ta'θeð	'kipik	'læmæm	'mʌlʌl
ta'θeθ	'kɪpɪk	'læmæn	'mʌɹʌl
ta'ðeθ	'kɪpɪk	'lænæm	'mʌwʌl
ta'ðeð	'kɪpɪk	'lænæn	'nʌlʌl
ta'feð	'kɪpɪt	'lænæŋ	'nʌɹʌl

## Performance Exercises D Chapter 2

'skanzil  
 'bʌaɪgbluzd  
 'dʒɪŋsmæŋ  
 flɔɪf'θɹaɪðz  
 pʃʊt'peɪtʃ

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# 3 The Consonants of English

## Stop Consonants

[Table 3.1 Stop allophones](#)

[Stops following 'S'](#)

[London Cockney](#)

[Glottal stops](#)

[Nasals and lateral plosion](#)

Fricatives

Affricates

Approximants

Rules for English Consonant Allophones

Diacritics

Exercises

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## Table3.1

Words illustrating allophones of English stop consonants.

Click on a word or arrow to hear the sounds.

1	2	3	4	5
↓	↓	↓	↓	↓
pie	buy	spy	nap	nab
tie	die	sty	mat	mad
kye	guy	sky	knack	nag

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## Stops following [s]

Click on either the words or arrows to hear the words or rows pronounced.

⇒	spy	(s)py	pie	buy
⇒	sty	(s)ty	tie	die
⇒	sky	(s)ky	kye	guy
⇒	spill	(s)pill		
⇒	still	(s)till		
⇒	skill	(s)kill		

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## London Cockney

Click on the transcription to hear the word pronounced

butter

kitty

fatter

'bʌʔə

'kɪʔɪ

'fæʔə

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## Glottal Stops

Click on the symbols or arrows to hear the words pronounced

rap	rat	rack
↓	↓	↓
ɹæʔp <sup>h</sup>	ɹæʔt <sup>h</sup>	ɹæʔk <sup>h</sup>
ɹæp <sup>ʔ</sup>	ɹæt <sup>ʔ</sup>	ɹæk <sup>ʔ</sup>
ɹæʔp <sup>ʔ</sup>	ɹæʔt <sup>ʔ</sup>	ɹæʔk <sup>ʔ</sup>
ɹæʔ	ɹæʔ	ɹæʔ

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## Nasal and Lateral Plosion

Click on the symbols to hear the words pronounced

Nasal Plosion	Lateral Plosion
kitten	little
['kɪt̚n̩]	['lɪt̚l̩]



## Performance Exercises for Chapter 3

Click on the symbols to hear the words pronounced

### C

which	whether
hwɪtʃ	hwɛðə
witch	weather
wɪtʃ	wɛðə

### D

⇒ m̥â	'lift up'	m̥â	'from'
⇒ nǎ	'pain'	nǎ	'nose'
⇒ ɲǎ	'right'	ɲǎ	'considerate'
⇒ ɲâ	'fish'	ɲâ	'borrow'

### E

'kɫantʃʊps'kweidʒ

'zizmʰspobmʰ

'tsɪʔi'beʔidɫ

mbu'tɫɪgŋ

'tɰaɪbɪeʔɪp

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# 4 English Vowels

## [American and British vowels \(Chapter 2\)](#)

English Phonetic Dictionaries

Vowel Quality

Unstressed Syllables

Tense and Lax Vowels

Rules for English Vowel Allophones

Exercises

[Performance Exercises](#)

## Performance Exercises Chapter 4

### A

↓	↓
[eɪ]	[oʊ]
[e]	[o]
[ðe kem let]	[dɒnt go hom]

### B

↓	↓
ma'ŋa	he'maŋe
'ŋeme	'ŋambɔ̃be!
'ŋale	'spoʔetŋʔɔɪ
'moʔi	'wɔθʃo'ɟesfi
'lele	'tlepɟidzi'kuz

### E

θe'mife'ðime

'seɹapo'sapofi'pos

mo'pɹeteplete'ki

ŋa'koto'takpoto

la'kimiti'none?e

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## 5 English Words and Sentences

Strong and Weak Forms

[Table 5.11](#)

Stress

Degrees of Stress

Sentence Stress

Intonation

[Examples 17-19,20-24](#)

Target Tones

Exercises

[Performance Exercises](#)

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## Table 5.1

Strong and weak forms of some common English words.

Click on a phrase to hear it pronounced.

Word	Strong form	Weak form	Example of a weak form
a	eɪ	ə	a cup [ə 'kʌp]
and	ænd	ənd, ɪd, ən, ɪ	you and me ['ju: ən 'mi:]
as	æz	əz	as good as [əz 'gʊd əz]
at	æt	ət	at home [ət 'hoʊm]
can	kæn	kən, kɪ	I can go [aɪ kɪ 'gou]
has	hæz	həz, əz, z, s	he's left [hɪz 'left]
he	hi	i, hi, ɪ	will he go? [wɪl ɪ 'gou]
must	mʌst	məst, məs, mɪ	I must sell [aɪ mɪ 'sel]
she	ʃi	ʃɪ	did she go? [dɪd ʃɪ 'gou]
that	ðæt	ðət	he said that it did [hi 'sed ðət ɪt 'dɪd]
to	tʊ	tʊ, tə	to Mexico [tə 'meksɪkou]
would	wʊd	wəd, əd, d	it would do [ɪt əd 'du:]

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## Examples 17-19

(17)	Laura	(statement)
(18)	Laura	(vocative)
(19)	Laura	(chant)

## Examples 20-24

(20)	Amelia	(statement)
(21)	Amelia	(question)
(22)	Amelia	(addressing)
(23)	Amelia	(questioning)
(24)	Amelia	(reprimanding)



## Performance Exercise A Chapter 5.

### British English

What are you doing?	'wɒdʒə'duɪn
I can inquire.	'aɪkɪ:'kwɑɪə
Did you eat yet?	'dʒi?jɛ?
I don't believe him.	aɪ'doʊmbə'lɪvɪm
We ought to have come.	wɪ'ɔtʃ'kʌm

### American English

What are you doing?	'wʌtʃə'duɪn
I can inquire.	'aɪkɪ'kwɑɪə
Did you eat yet?	'dʒɪtjɛ?
I don't believe him.	aɪ'doʊnbə'lɪvɪm
We ought to have come.	wɪ'ɔfʃ'kʌm

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# 6 Airstream Mechanisms and Phonation Types

## Airstream Mechanisms

[Hausa ejective and laryngealized sounds](#)

[Table 6.1 -Lakhota](#)

[Table 6.2 - Sindhi](#)

[Table 6.3 - Xhosa](#)

[Zulu clicks](#)

[Nama Clicks](#)

[!Xóõ Clicks](#)

## States of the Glottis

[Table 6.5- Gujarati](#)

[Table 6.6 Thai](#)

## Voice onset time

[Table 6.7 Hindi](#)

## Exercises

[Performance Exercises](#)



## Table 6.2 Sindhi stops

ḍani 'field'		ḍinu 'festival'	fatu 'illiterate'	ḡanu 'handle'
banu 'forest'	ḍaru 'door'	ḍoru 'you run'	ʃatu 'illiterate' [variant]	ḡuḡu 'quality'
panu 'leaf'	ṭaru 'bottom'	ṭanu 'ton'	caṭu 'to destroy'	kanu 'ear'
pʰaḡu 'snake hood'	tʰaru (district name)	tʰaḡu 'thug, cheat'	cʰaṭu 'crown'	kʰaḡu 'you lift'
bʱaḡu 'manure'	dʱaru 'trunk'	ḍʱaḡu 'bull'	ʃʱaṭu 'a grab'	ḡʱaḡu 'excess'

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## Chapter 6 Performance exercises

[A and B](#)

[C](#)

[D](#)

[F and G](#)

[H and I](#)

[J,K and L](#)

[M](#)

[N](#)

[P](#)

[Q](#)

[S and T](#)

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## 7 Place and Manner of Articulation

[Ewe](#)

[V'enen Taut](#)

[Malayalam](#)

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[French Uvulars](#)

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## Performance Exercises Chapter7

[A, B, C](#)

[D & E](#)

[F & G](#)

[H & I](#)

[J, K & L](#)

[M](#)

[N & O](#)

[P](#)

[Q](#)

[S & T](#)

[U](#)

[W](#)

## Diagrams for Chapter 8

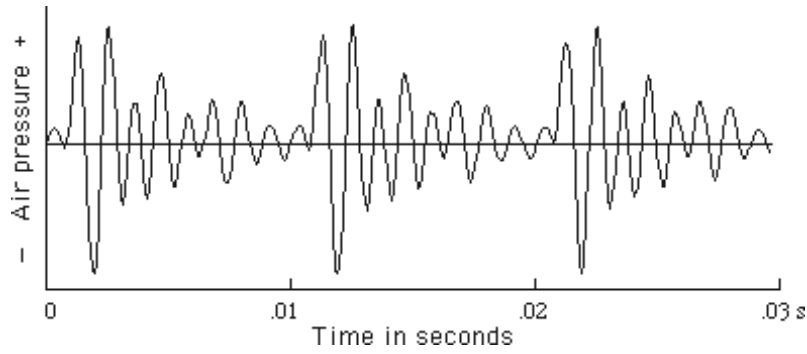


Figure 8.1 *The waveform during a short period (a little over two vocal fold vibrations) in my pronunciation of [A], as in "caught."*

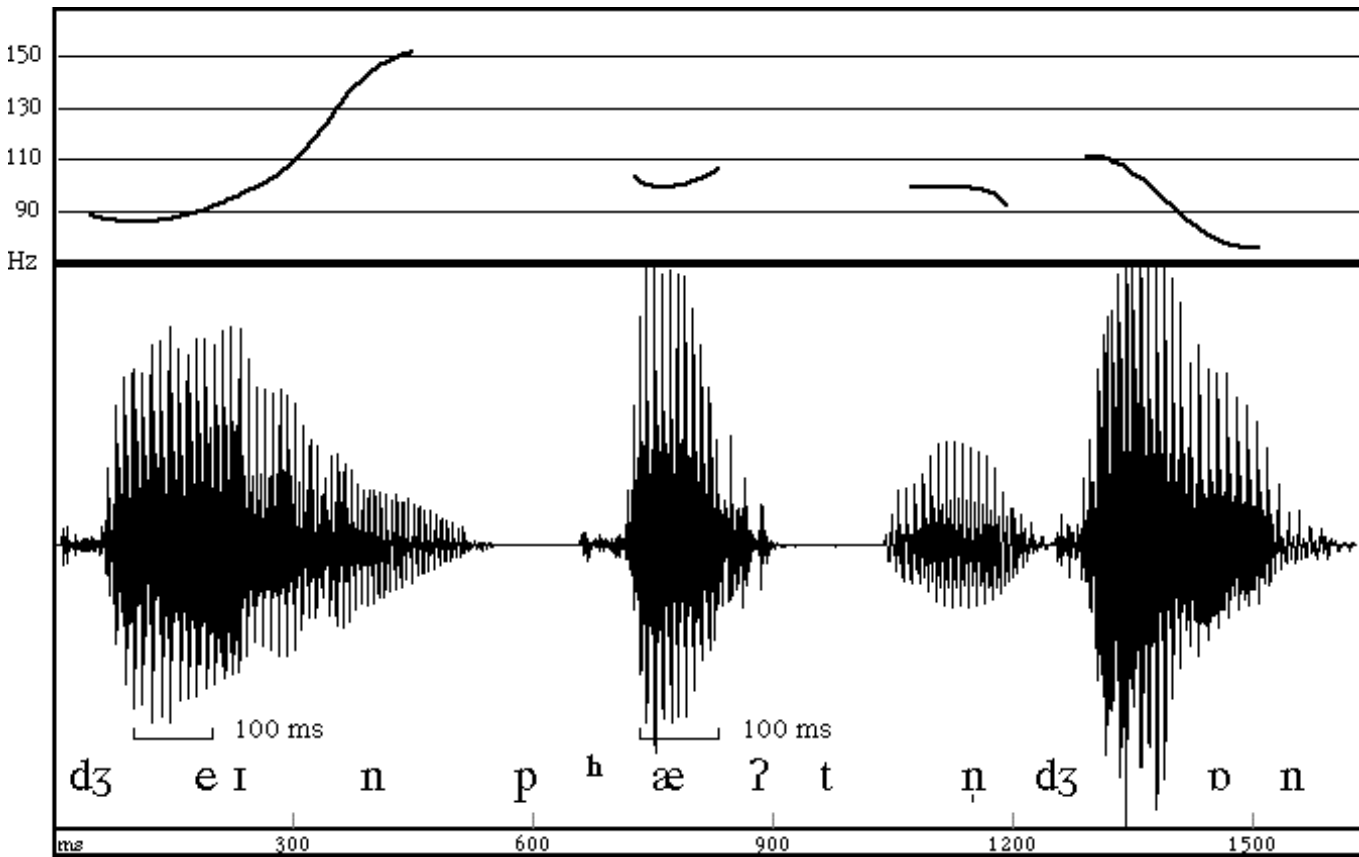


Figure 8.2 *Acoustic records of the phrase "Jane, Pat and John" The upper part of the figure shows the fundamental frequency (pitch). The waveform, with a narrow phonetic transcription, is below it. At the bottom there is a time scale.*



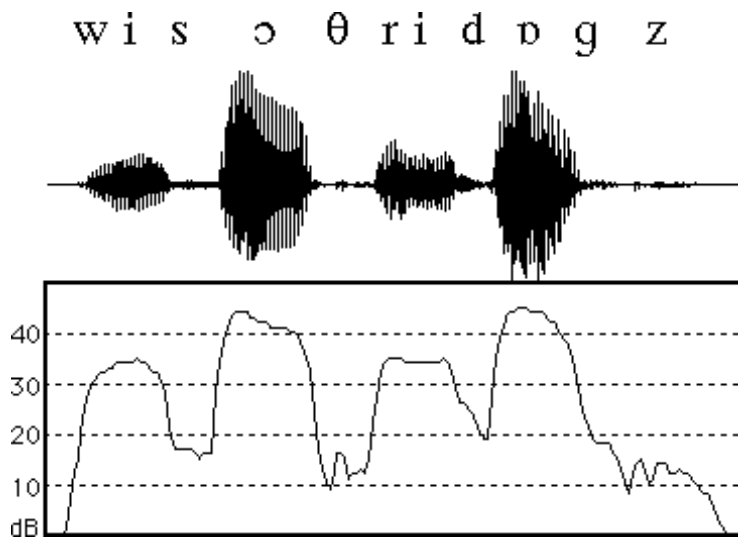


Figure 8.3 *The waveform of the phrase "We saw three dogs" and underneath its record of the intensity in dB.*

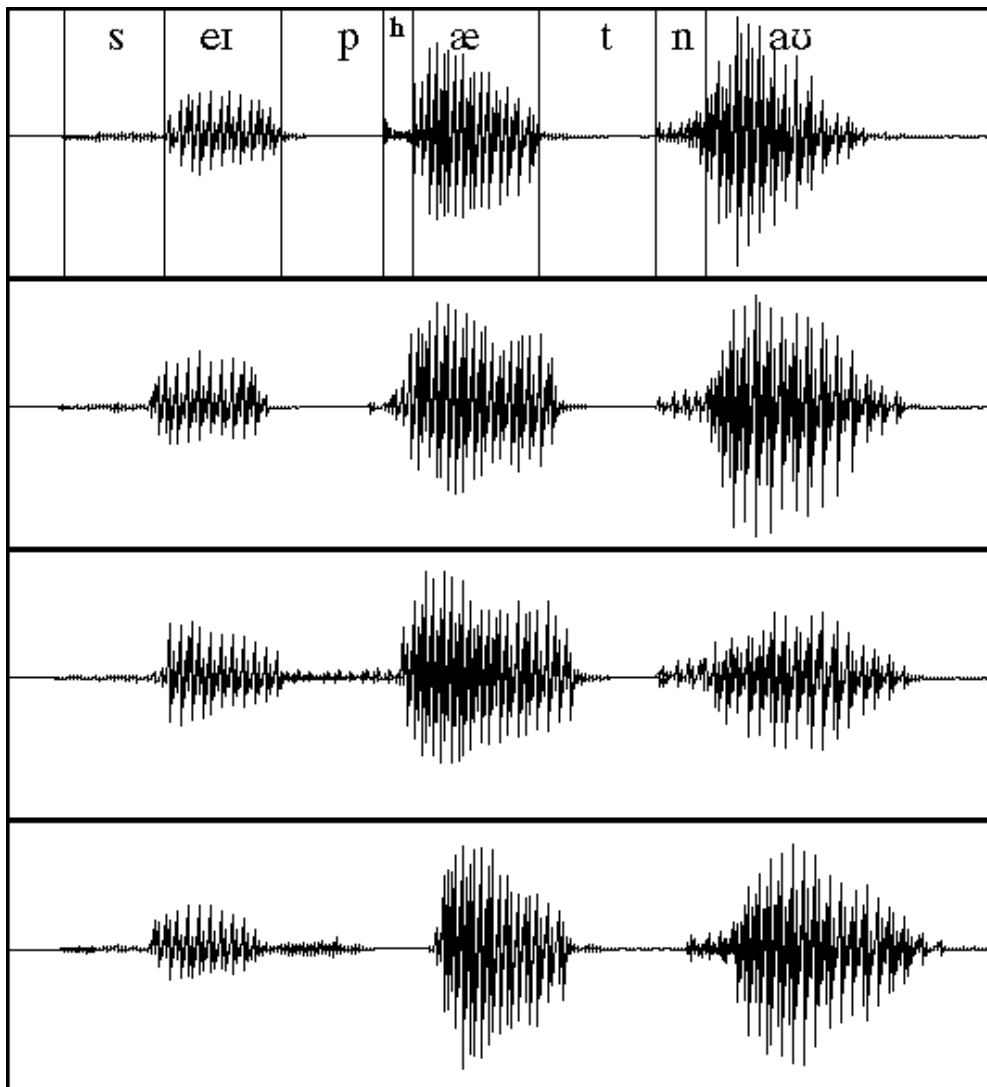


Figure 8.4 *Waveforms of "Saypat now; say pad now; say bad now; say spat now." Only the first of these phrases has been segmented. You should try to segment the other three phrases yourself.*

Figure 8

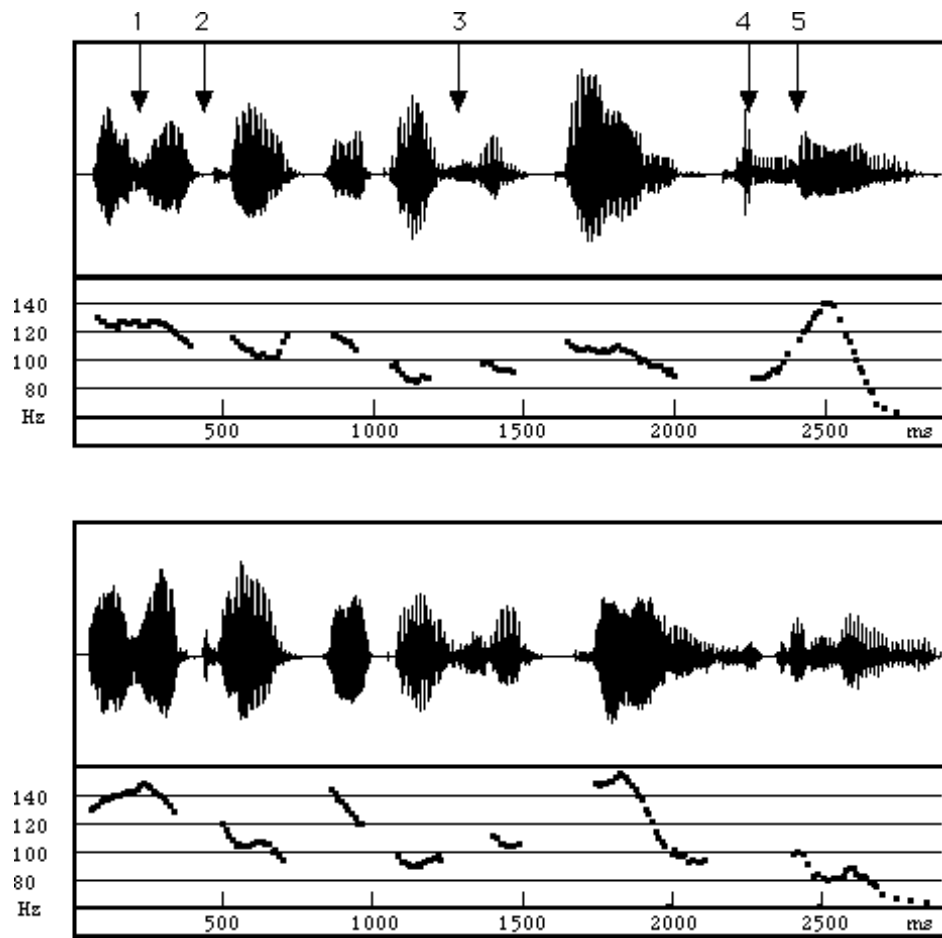


Figure 8.5 Waveform and pitchrecords of "Bonny told Peter she'd plans to leave,"said in two different ways.

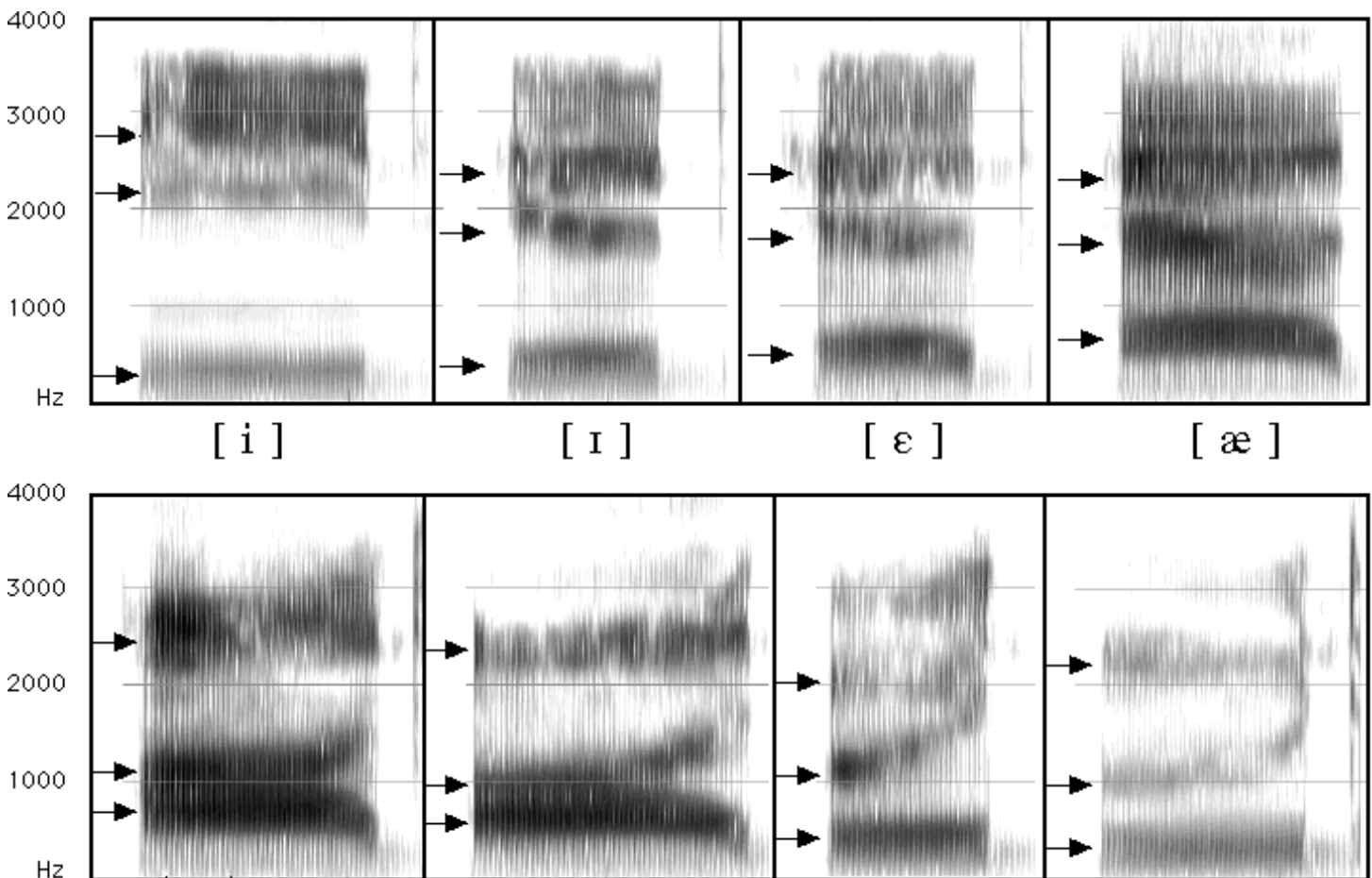


Figure 8

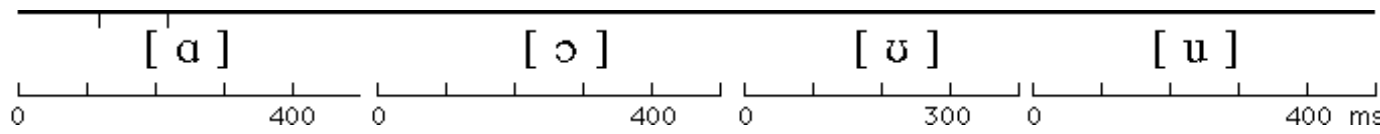


Figure 8.7 A

spectrogram of the words "heed, hid, head, had, hod, hawed, hood, who'd" as spoken by a male speaker of American English. The locations of the first three formants are shown by arrows.

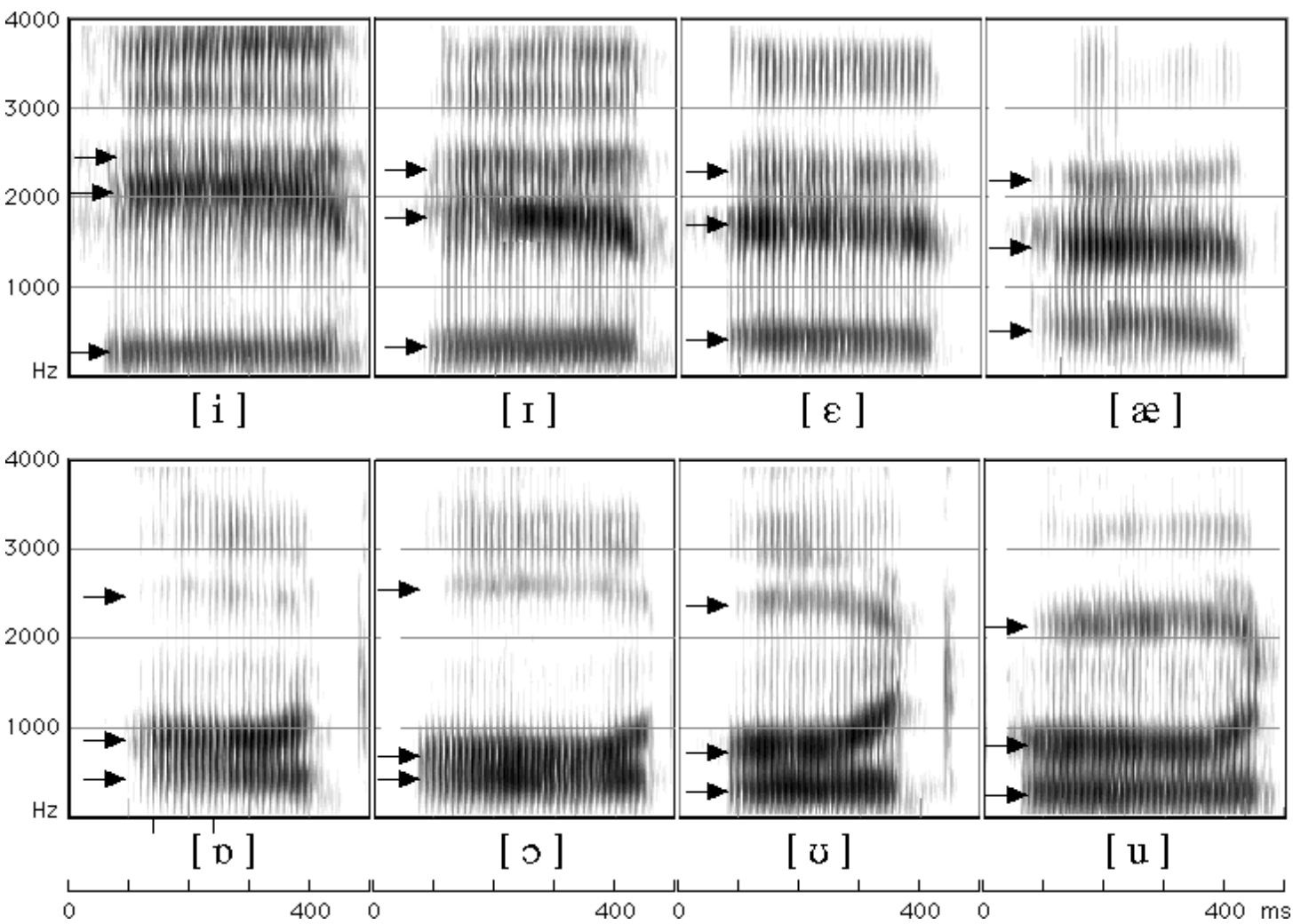


Figure 8.8 A spectrogram of the words "heed, hid, head, had, hod, hawed, hood, who'd" as spoken in a British accent. The locations of the first three formants are shown by arrows.

Figure 8

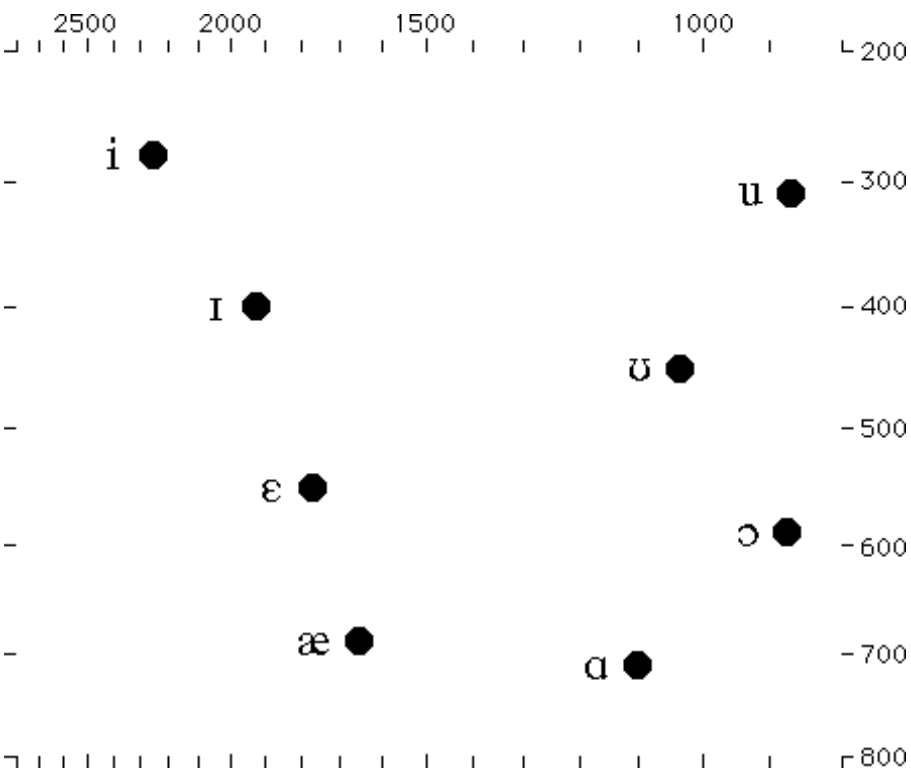


Figure 8.9 A formant chart showing the frequency of the first formant on the ordinate (the vertical axis) plotted against second formant on the abscissa (the horizontal axis) for eight American English vowels. The scales are marked in Hz, arranged at Bark scale intervals.

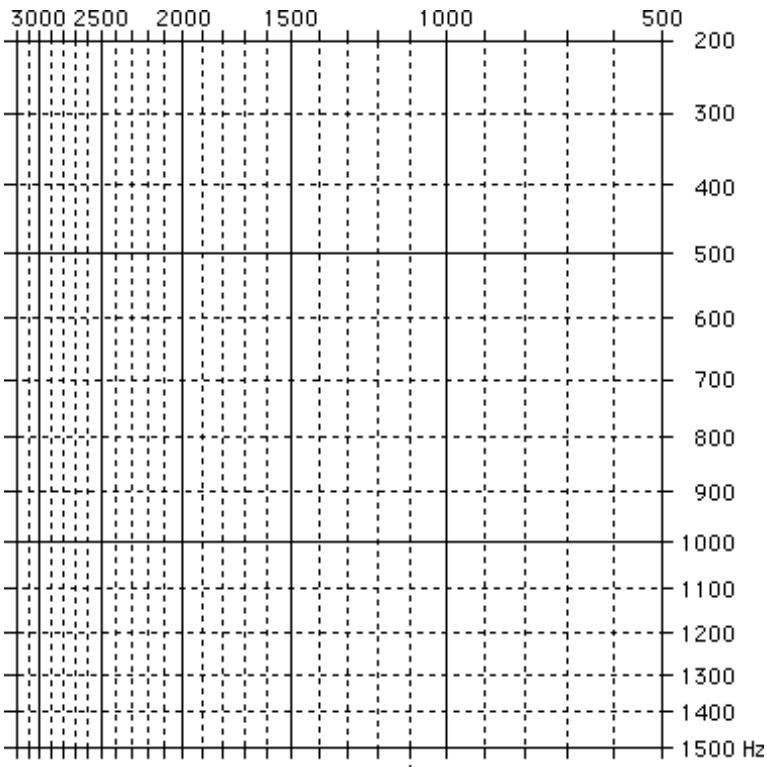


Figure 8.10 A blank formant chart for showing the relation between vowels. Using the information in Figures 8.7 and 8.8, plot the frequency of the first formant on the ordinate (the vertical axis) and the second formant on the abscissa (the horizontal axis).

Figure 8

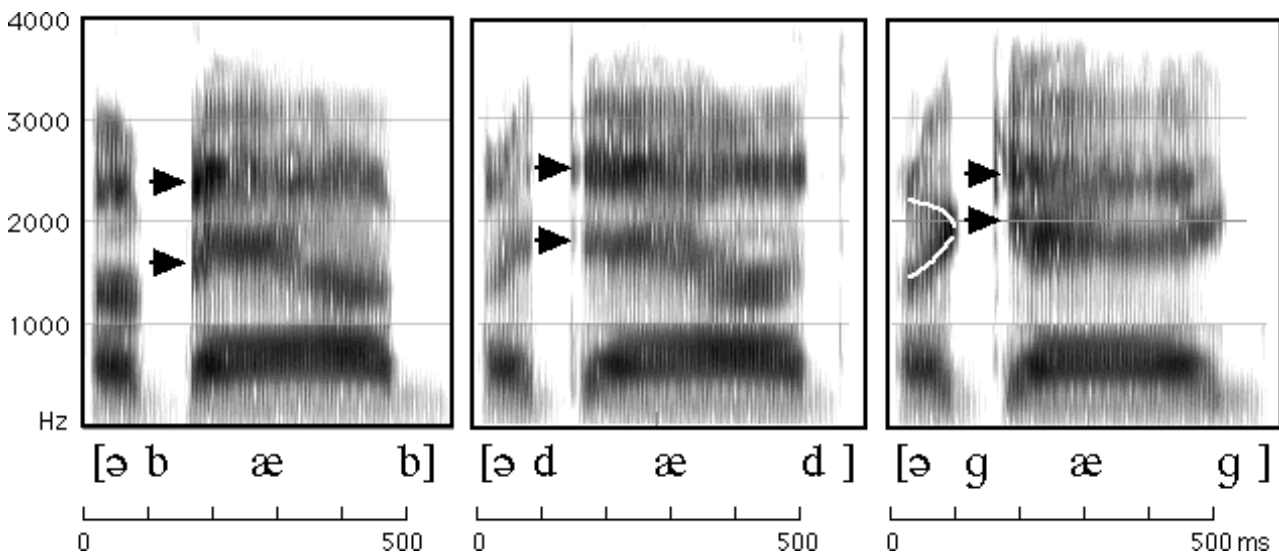


Figure 8.11 A spectrogram of the words "a bab, a dad, a gag".

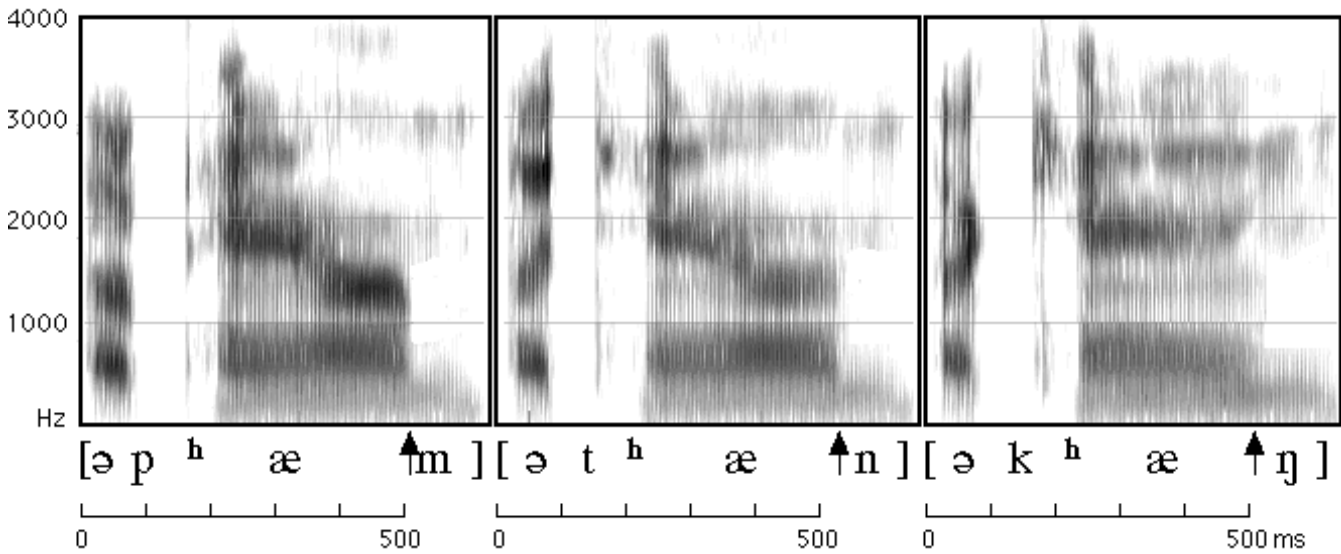


Figure 8.12 A spectrogram of "a Pam, a tan, a kang". The arrows indicate the oral closures forming the nasal consonants.

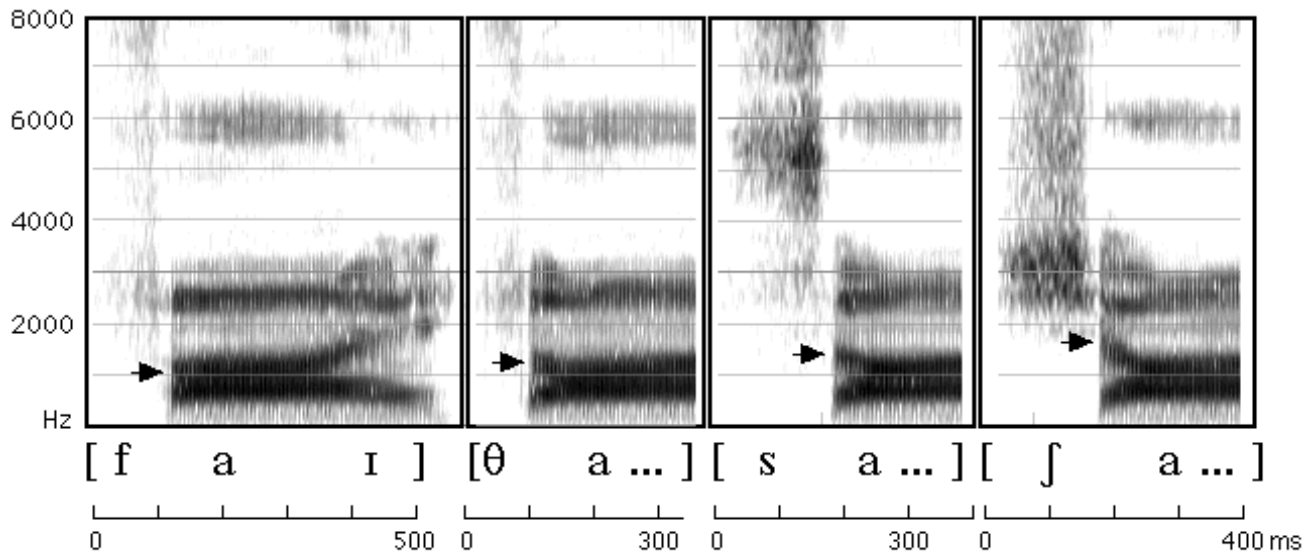


Figure 8

Figure 8.13 A spectrogram of "fie, thigh, sigh, shy". The frequency scale goes up to 8,000 Hz in this figure. The arrows mark the onsets of these second formant transitions. Only the first word is shown in full. The second part of the diphthong has been deleted for the other words.

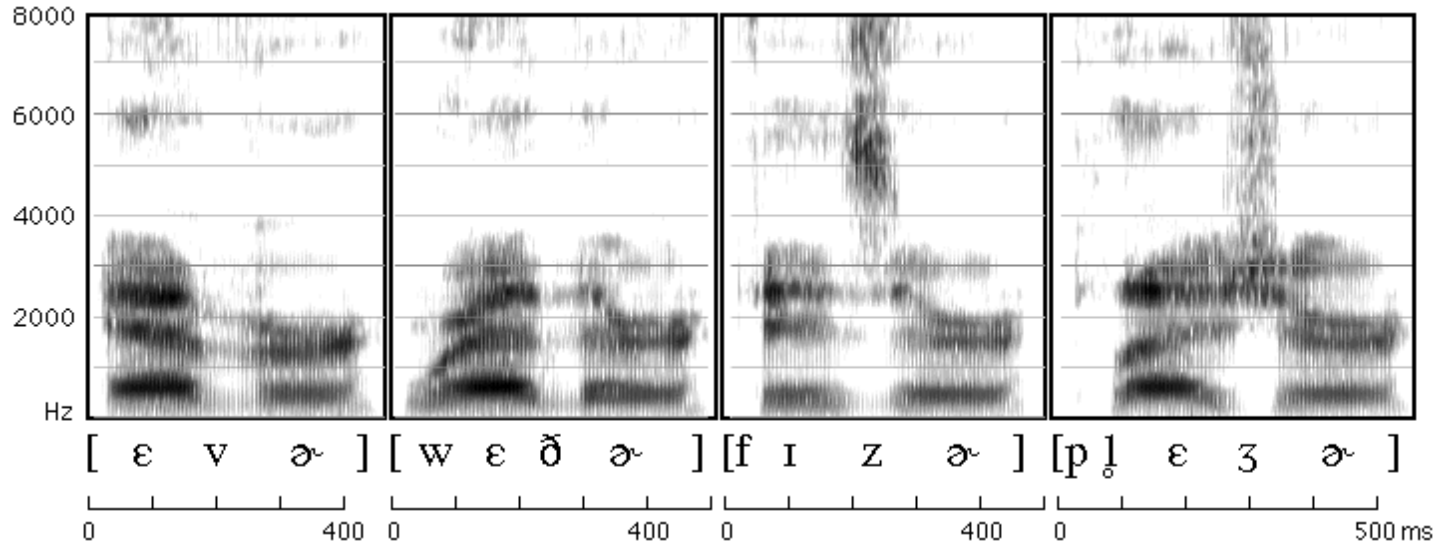


Figure 8.14 A spectrogram of "ever, weather, fizzer, pleasure".

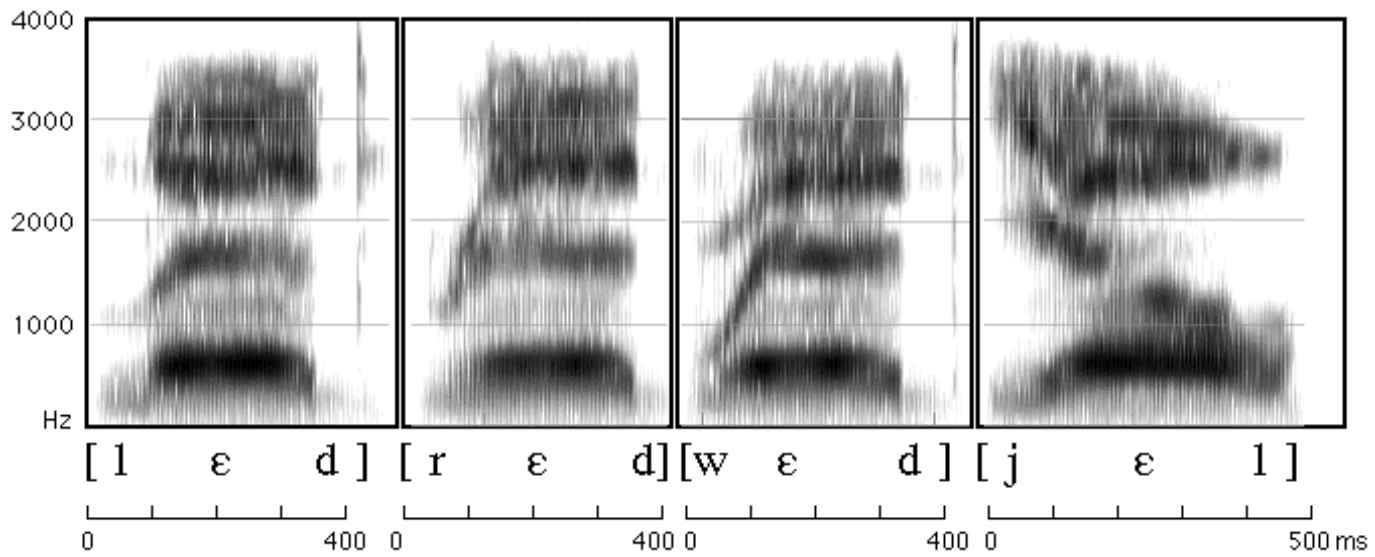


Figure 8.15 A spectrogram of "led, red, wed, yell".



Figure 8

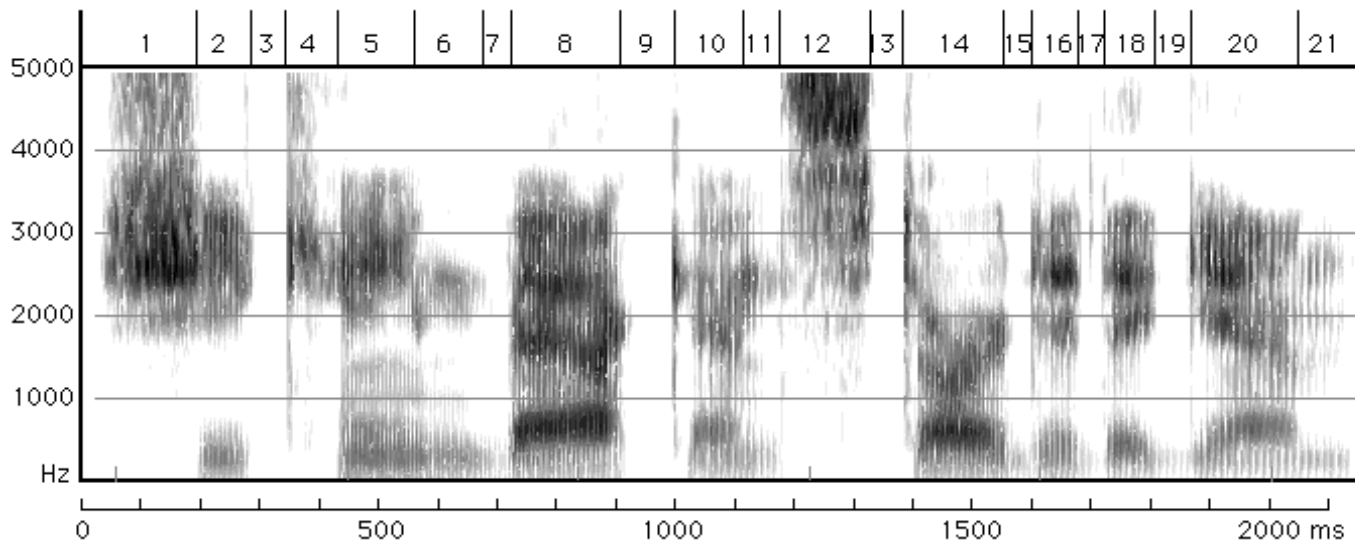


Figure 8.16 A spectrogram of "She came back and started again".

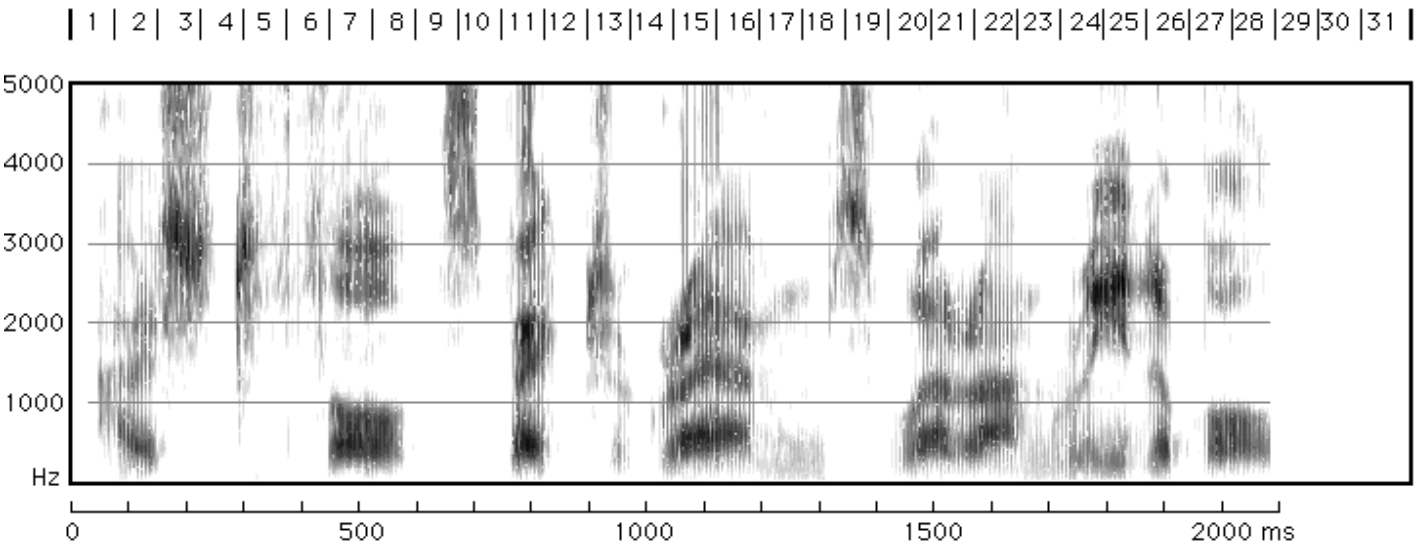


Figure 8.17 A spectrogram of "I should have thought spectrograms were unreadable." Spoken in a normal, but rapid, conversational style (British English).

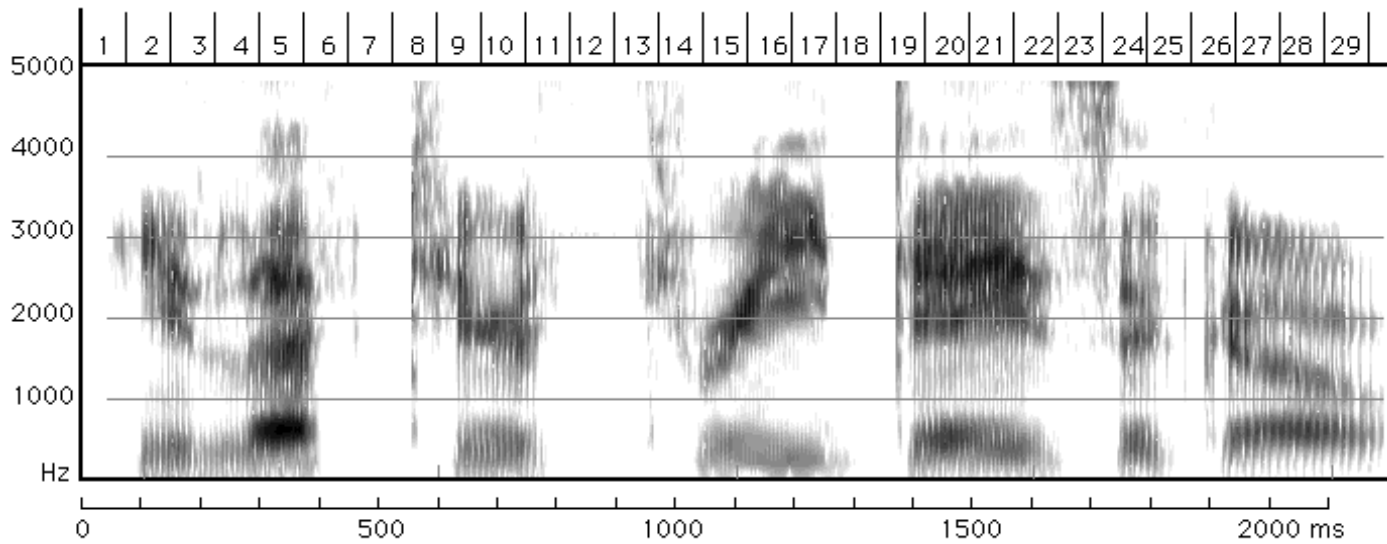


Figure 8

Figure 8.18 A spectrogram of "He left here three days ago".

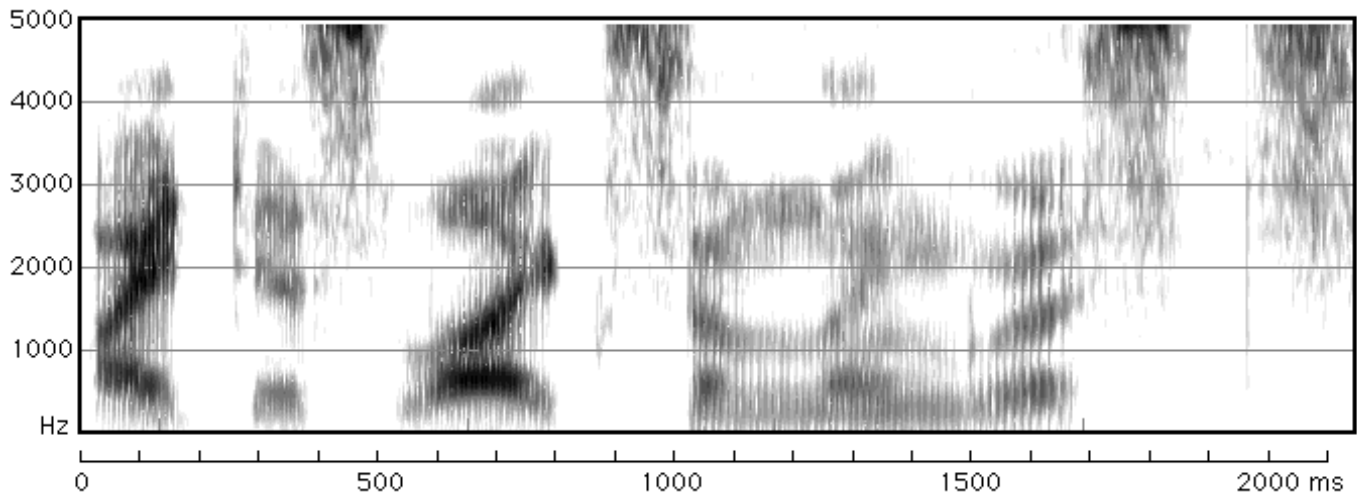


Figure 8.19 A spectrogram of an ordinary English sentence containing no names (British accent).

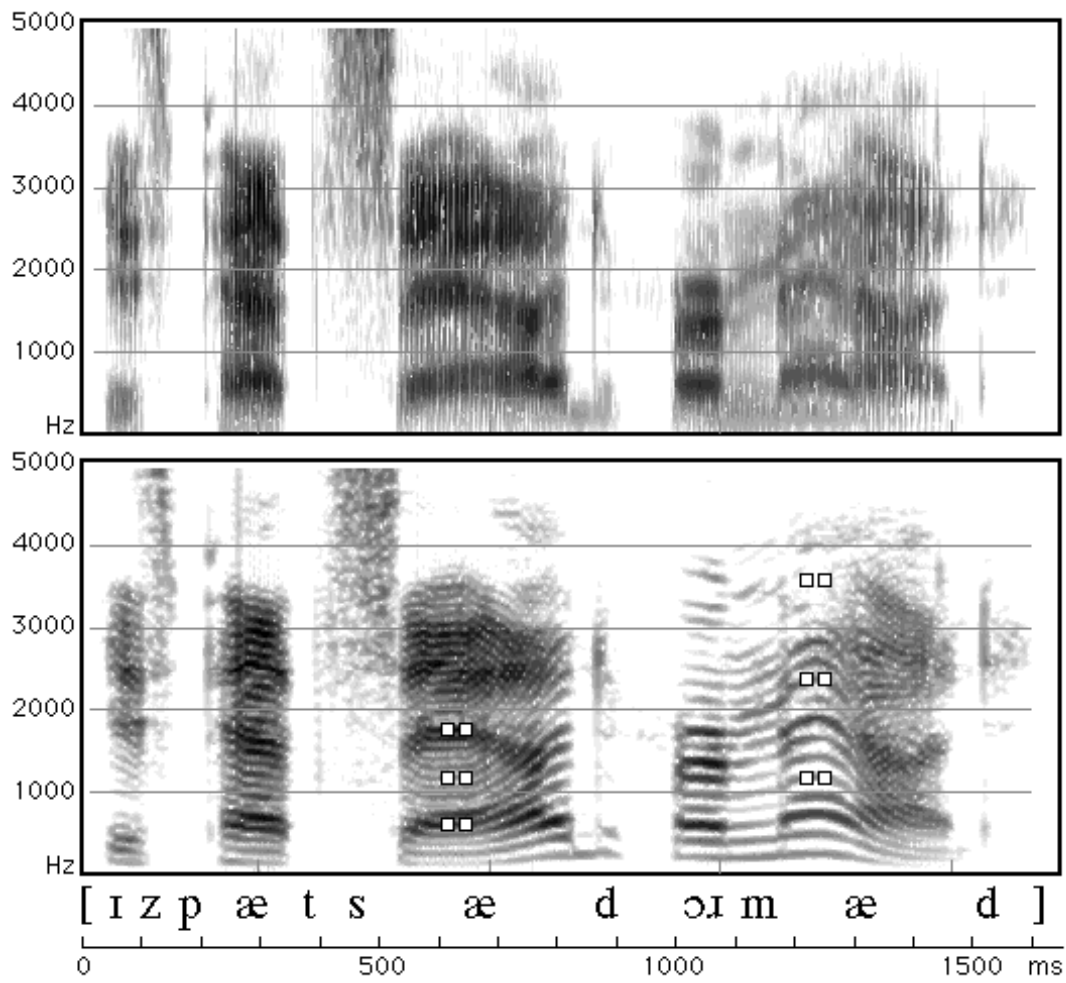


Figure 8.20 Wide-band (upper part of the figure) and narrow-band (lower part) spectrogram of the question "Is Pat sad, or mad?" The 5th, 10th and 15th harmonics have been marked by white squares in two of the vowels.



Figure 8

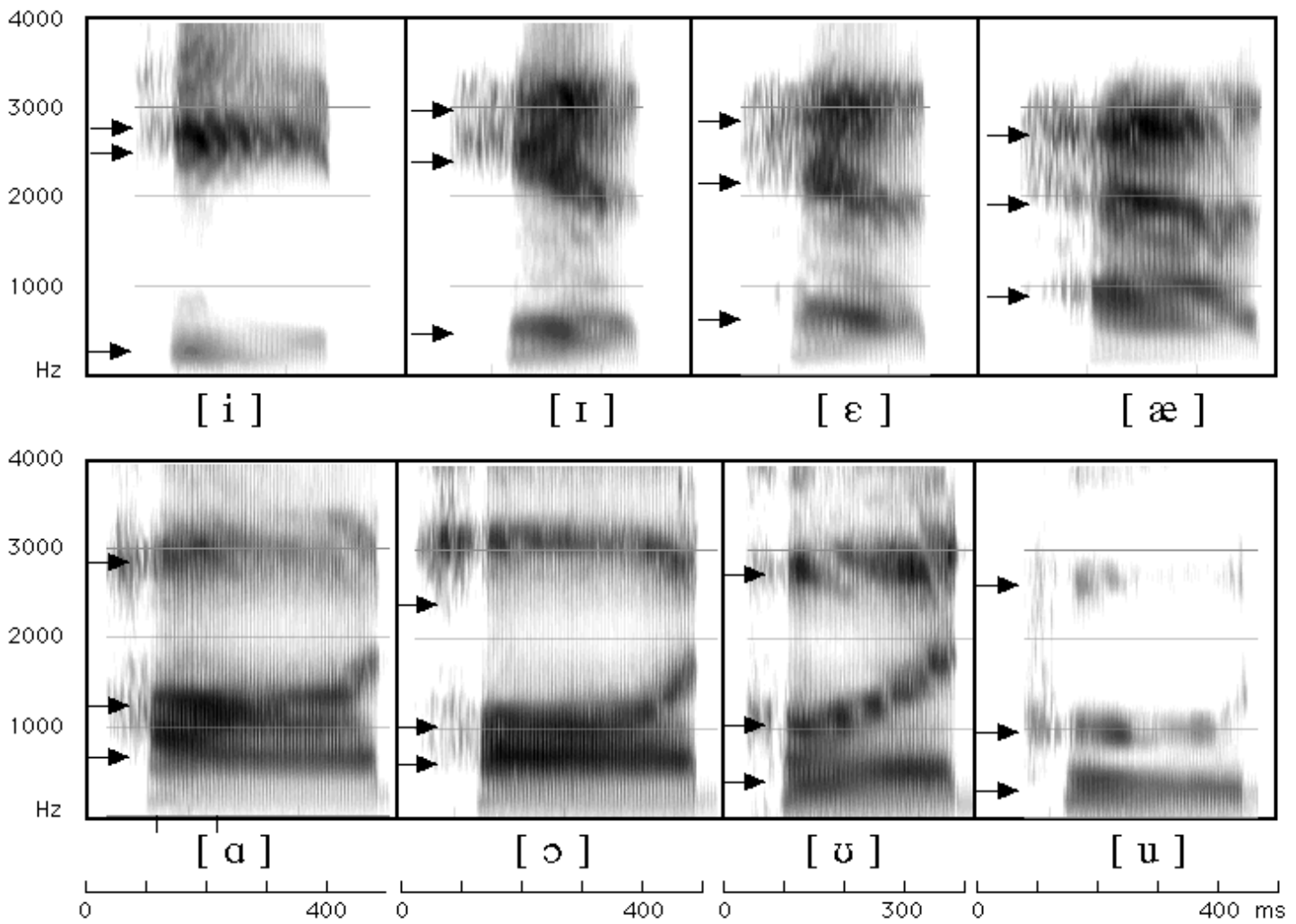


Figure 8.21 A spectrogram of the words "heed, hid, head, had, hod, hawed, hood, who'd" as spoken by a female speaker of American English. The locations of the first three formants are shown by arrows.

Figure 8

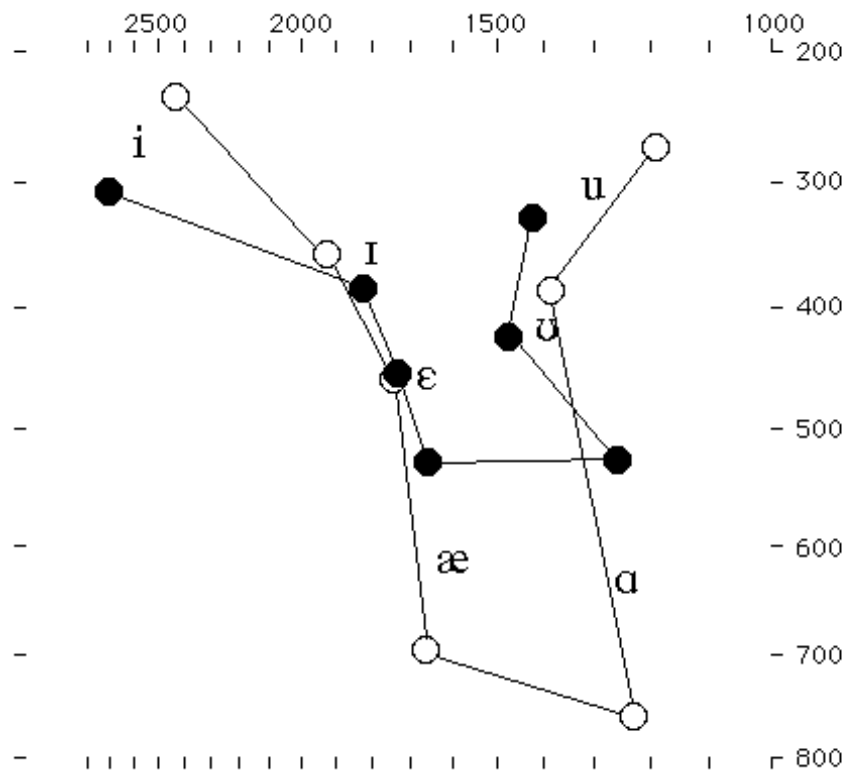
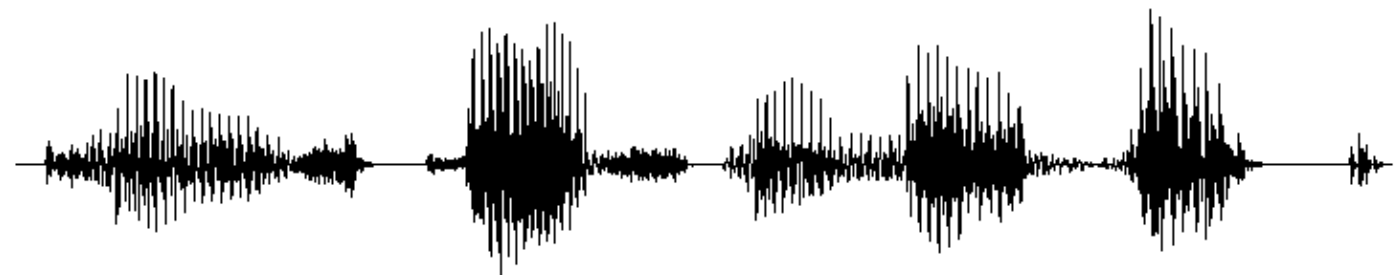
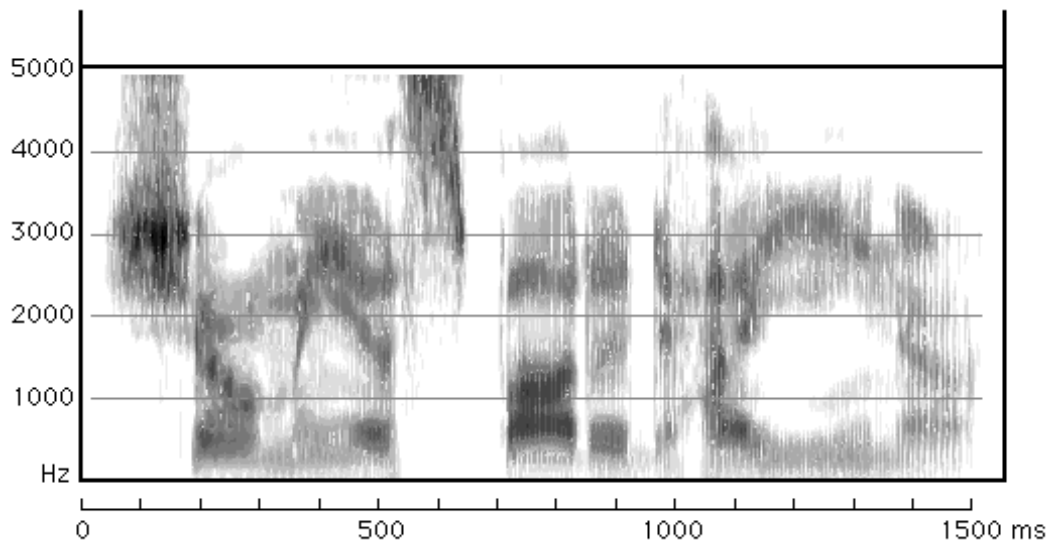


Figure 8.22 A formant chart showing some of the vowels of two speakers of Californian English. The frequency of the first formant is plotted on the ordinate (the vertical axis), and the difference between the frequencies of the second and first formants is plotted on the abscissa (the horizontal axis).

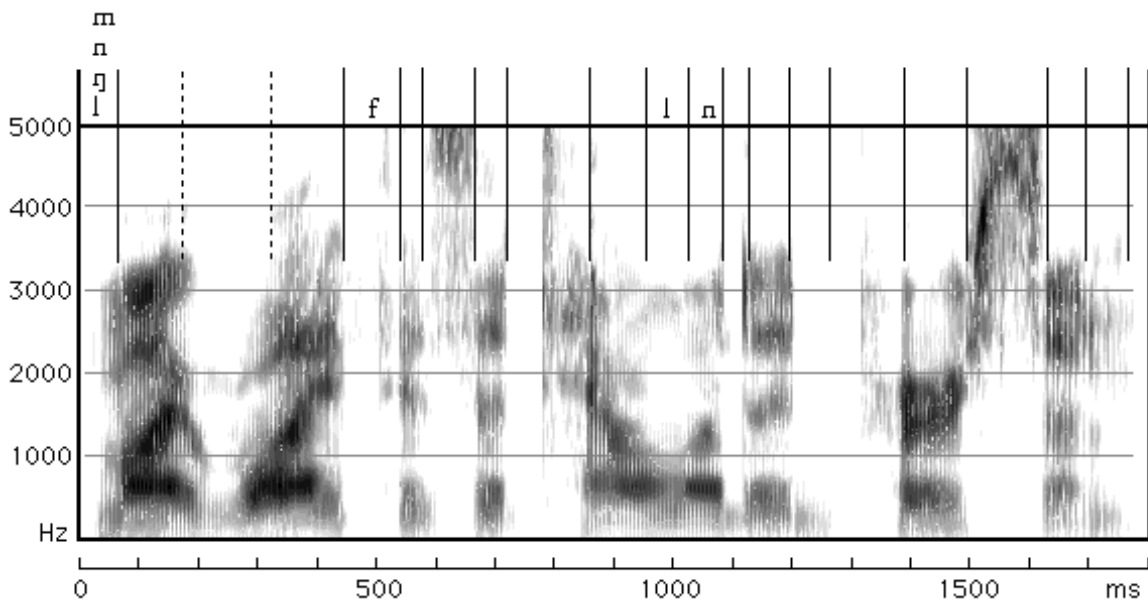


Exercise A

Figure 8



8. Exercise B



8. Exercise C

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# Chapter 9

[Cardinal Vowels](#)

[Secondary Cardinal Vowels](#)

Vowels in Other Languages

[Spanish](#)

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Summary of Vowel Quality

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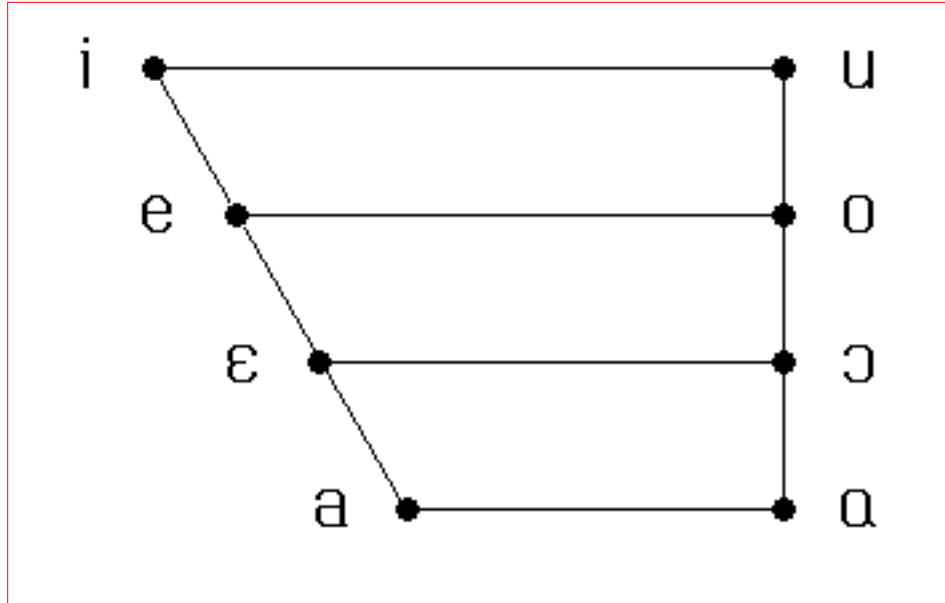
[Performance Exercises](#)

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# Cardinal Vowels

Sets of cardinal vowels produced by Daniel Jones in 1956

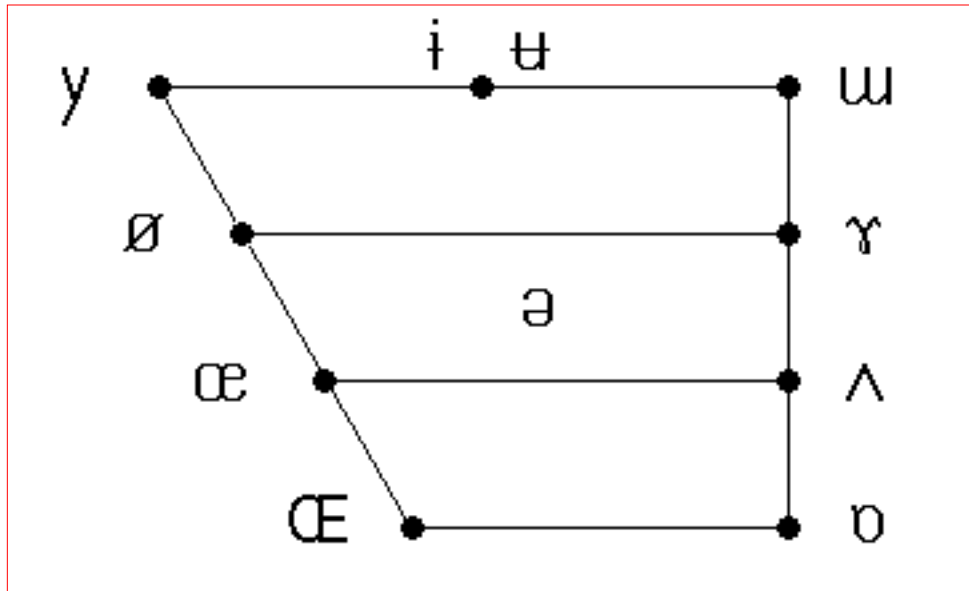


[Set 1](#)

[Set 2](#)

[Set 3](#)

## Secondary Cardinal Vowels



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## Spanish Vowels

<b>misa</b> 'mass'	<b>musa</b> 'muse'
<b>mesa</b> 'table'	<b>mosca</b> 'fly'
<b>masa</b> 'dough'	

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# Japanese Vowels

mi 'fruit, nut'	mu 'nothing'
me 'eye'	mo 'algae'
ma 'interval'	



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## Danish Vowels

vi:ðə  
'white'  
[def]

vilə  
'wild'  
[def]

vi:lə  
'rest'

ve:ðə  
'wheat'

menə  
'remind'

me:nə  
'mean'

vɛ:ðə  
'wet'

lɛsə  
'load'

lɛ:sə  
'read'

væ:ðə  
'wade'

mæsə  
'mass'

mæ:sə  
'mash'

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## Russian palatization

forma	'form'	f <sup>j</sup> erma	'farm'
vit <sup>j</sup>	'to howl'	v <sup>j</sup> it <sup>j</sup>	'to weave'
sok	'juice'	s <sup>j</sup> ok	'he lashed'
zof	'call'	z <sup>j</sup> of	'yawn'

## Akan Vowels

[+ATR]	[-ATR]	[+ATR]	[-ATR]
sɨ 'wash'	sɨ 'say'	bɨ 'break'	bɨ 'get drunk'
wabɛtu 'pull it out'	sɛ 'to resemble'	ɔwia 'he steals'	ɔwia 'he crawls'
	sɑ 'to cure'		

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mjɛt 'crumb'	mɥɛt 'mute'	mwɛt 'gull'
lje 'tied'	lɥi 'him'	lwi (name)
	ɥit 'eight'	wi 'yes'

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## Thai tones

<b>Low falling</b>	ᨾàː 21	(name)
<b>High falling</b>	ᨾâː 51	'face'
<b>High rising</b>	ᨾáː 45	'aunt'
<b>Low falling-rising</b>	ᨾǎː 215	'thick'
<b>Mid falling</b>	ᨾaː 32	'field'

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## Chinese(Standard) tones

STANDARD CHINESE <b>ma</b>			
Chinese Character	Tone symbol	Tone description	English gloss
媽	ˊ	high level	'mother'
麻	ˊ	high rising	'hemp'
馬	ˋ	low falling	'horse'
罵	ˋ	high falling	'scold'



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## Japanese

[ k a k e m o n o ]	'scroll'
[ s u k i j a k i ]	'beef stew'
[ n i p p o ŋ ]	'Japan'

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