

NATIONAL PHONETIC ALPHABET (revised to 2020)

© 2020 IPA

	Dental		Alveolar		Postalveolar		Retroflex		Palatal		Velar		Uvular		Pharyngeal		Glottal	
			t	d			ʈ	ɖ	c	ɟ	k	g	q	ɢ			ʔ	
				n			ɳ	ɲ				ŋ		ɴ				
				r														
				ɾ				ɽ										
									ç	ʝ	x	χ	χ	ʁ	ħ	ʕ	h	ɦ
	θ	ð	s	z	ʃ	ʒ	ʂ	ʐ										
			ʈ	ɖ														
				ɹ				ɻ	j				ɥ					
								ɻ	ʎ				ʟ					
				ɭ				ɮ	ʎ				ʟ					

relationships between speech sounds

Phonetics

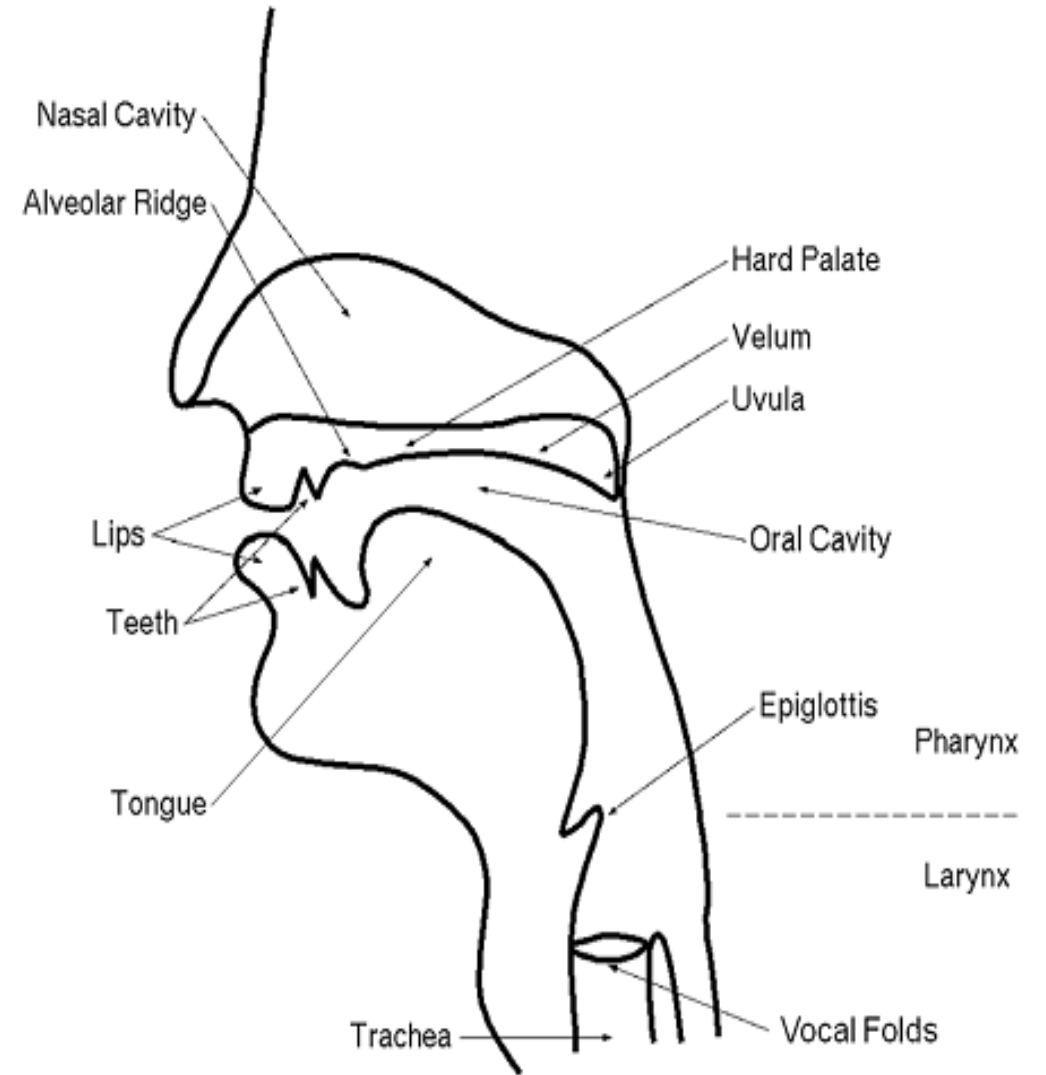
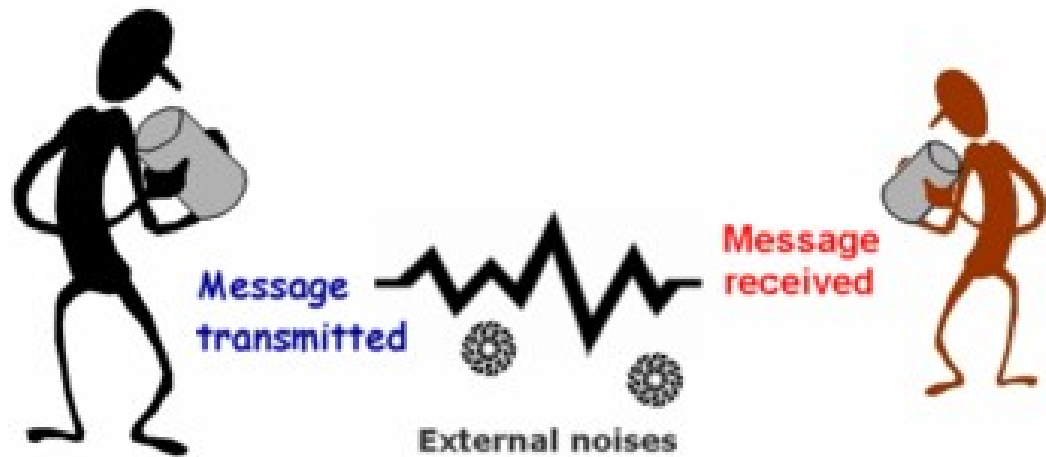
Introduction to Linguistics
 Kirsten Middeke
 Institut für Englische Philologie
 2020

right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

recap

THE IPA AND THE SOUNDS OF LANGUAGE

phonetics



THE INTERNATIONAL PHONETIC ALPHABET (revised to 2020)

CONSONANTS (PULMONIC)

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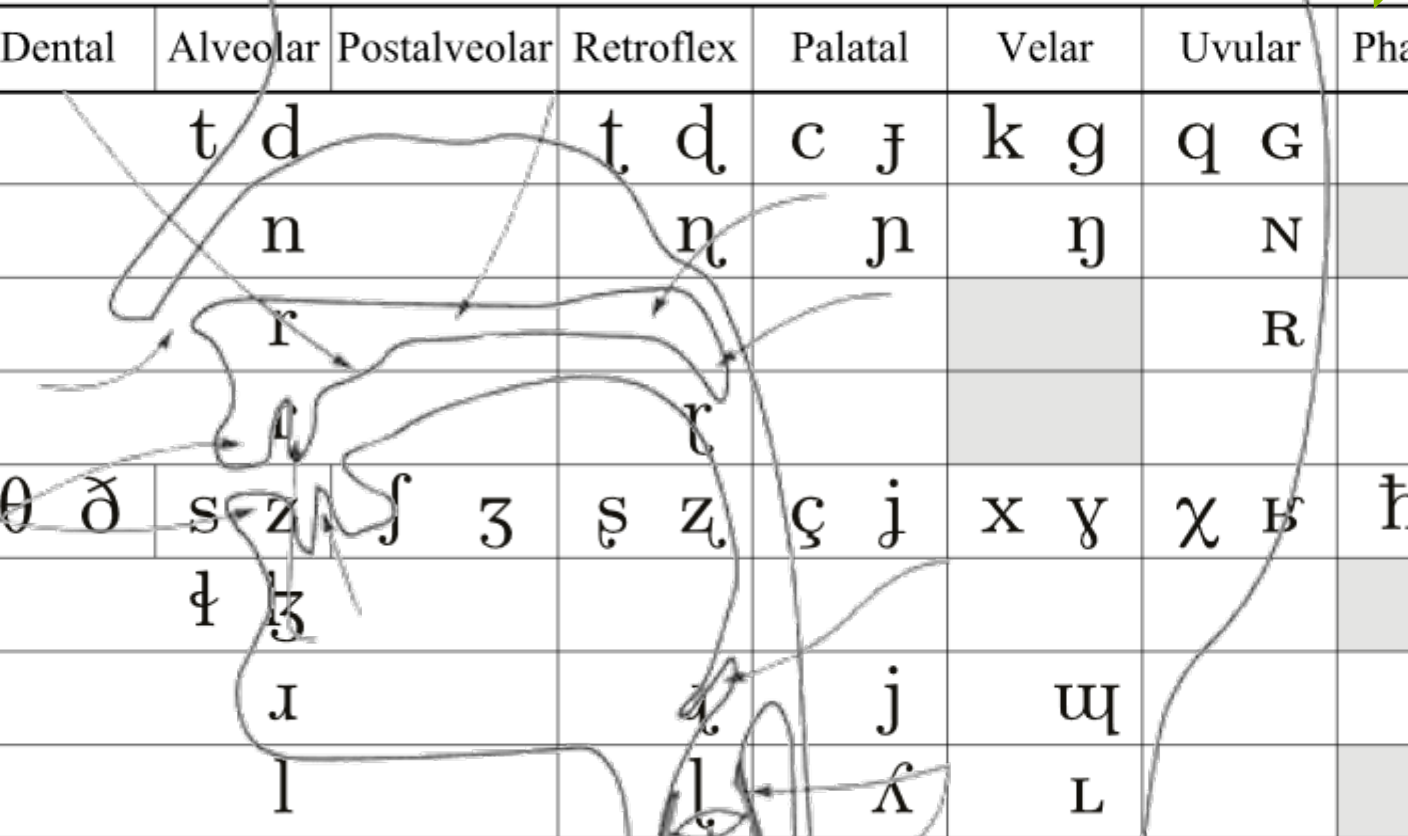
	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant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

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

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CONSONANTS (PULMONIC)

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Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			ʀ					ʀ		
Tap or Flap		ⱱ									
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			j	ɰ			
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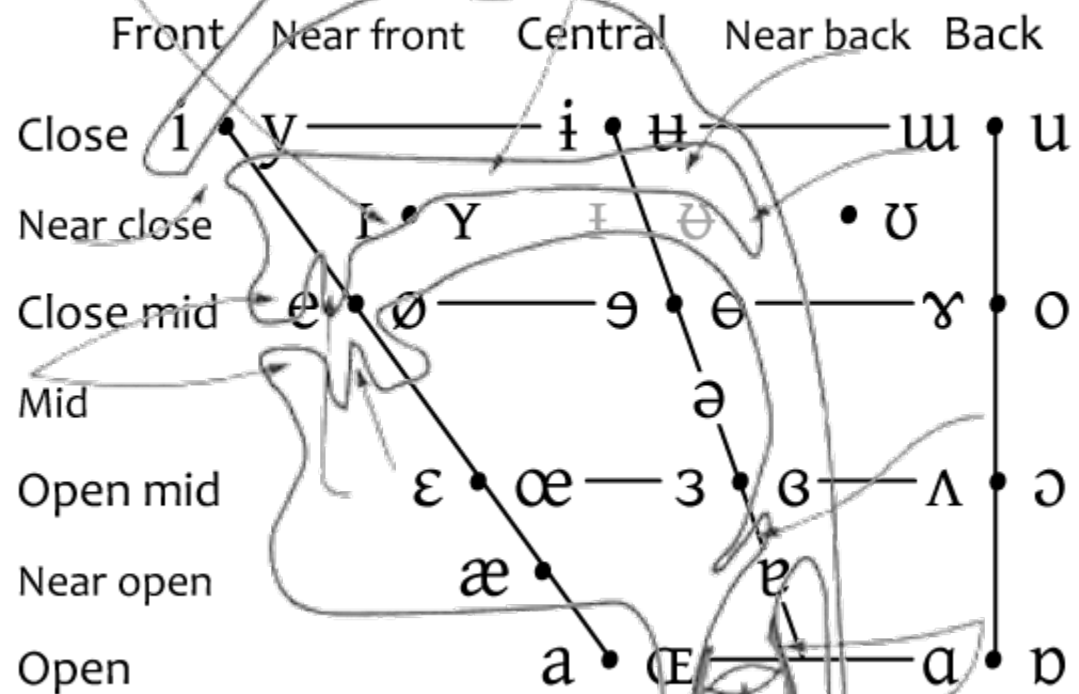
CONSONANTS (PULMONIC)

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Lateral fricative				ɬ ɮ							
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Lateral approximant				l		ɭ	ʎ	ʟ			

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vowels



Vowels at right & left of bullets are rounded & unrounded.

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CONSONANTS (PULMONIC)

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	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
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Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

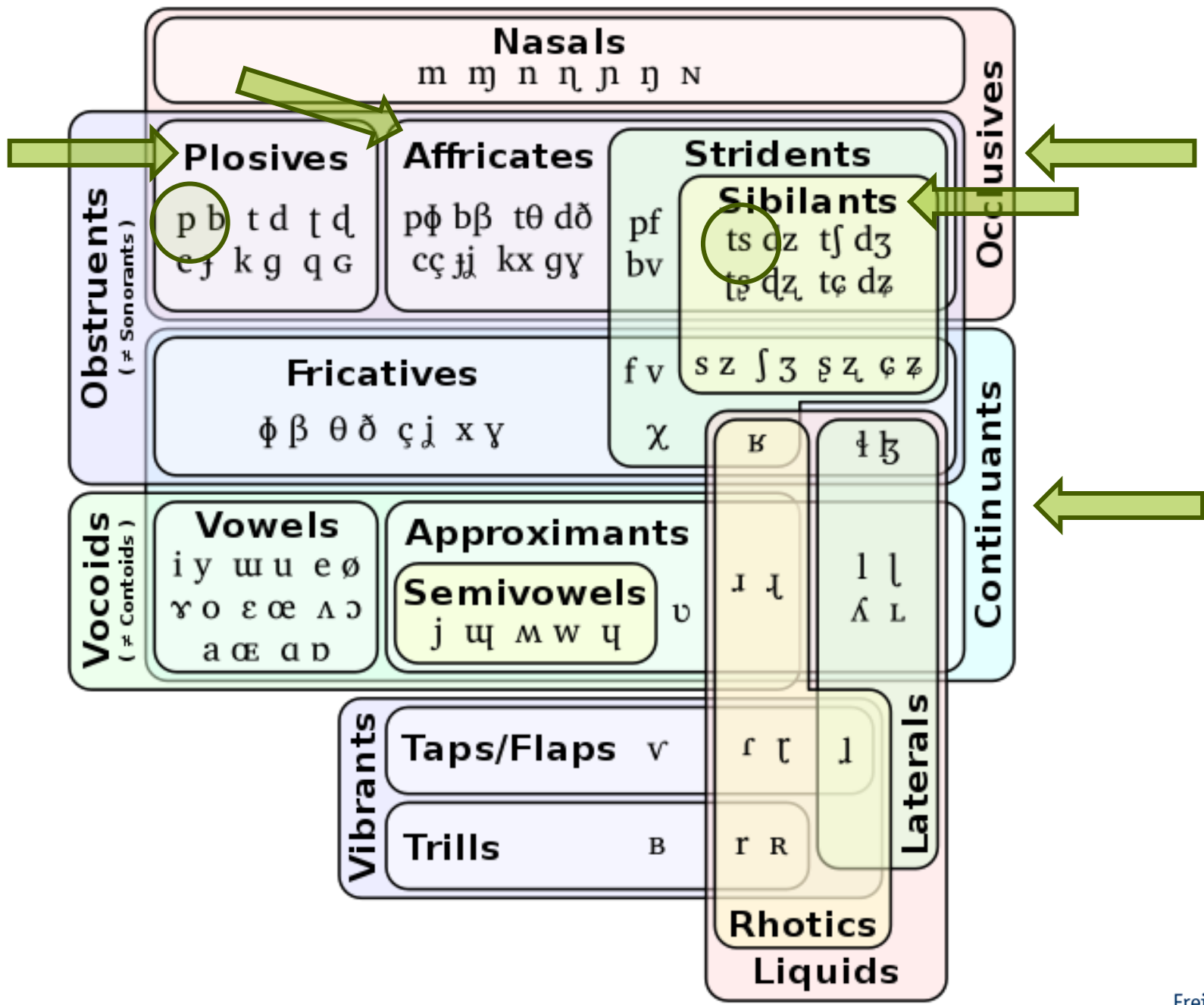
Clicks	Voiced implosives	Ejectives
◌ Bilabial	ɓ Bilabial	ʼ Examples:
Dental	ɗ Dental/alveolar	pʼ Bilabial
! (Post)alveolar	ɟ Palatal	tʼ Dental/alveolar
≠ Palatoalveolar	ɠ Velar	kʼ Velar
Alveolar lateral	ɠ Uvular	sʼ Alveolar fricative

	bilabial	labio-dental	dental	alveolar	palato-alveolar	palatal	velar	glottal
plosive	p b			t d			k ɡ	
fricative		f v	θ ð	s z	ʃ ʒ			h
affricate					tʃ dʒ			
nasal		m			n		ŋ	
approximant		w		(central) ɹ (lateral) l		j		

OTHER SYMBOLS

- ɱ Voiceless labial-velar fricative
- ɸ β Voiced labial-velar fricatives
- ɰ Voiced labial-velar approximant
- ɻ Voiced alveolar lateral flap
- ɰ Voiced labial-palatal approximant
- ɰ Simultaneous ʃ and x
- ɰ Voiceless epiglottal fricative

Plag 2009: 15



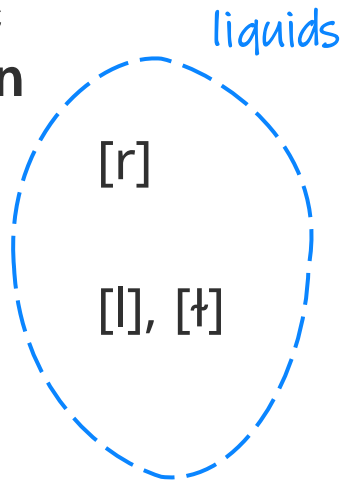
What are sound categories good for?

pre-
vocalic
position

troll
[trɒʊl]
laugh
[la:f]

post-
vocalic
position

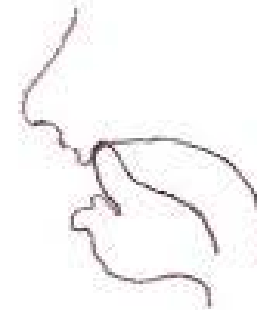
lord
[lɔ:d]
fall
[fa:f]



スリル
su-ri-ru
'thrill'



Japanese
らりるれる



English
"L"



English
"R"

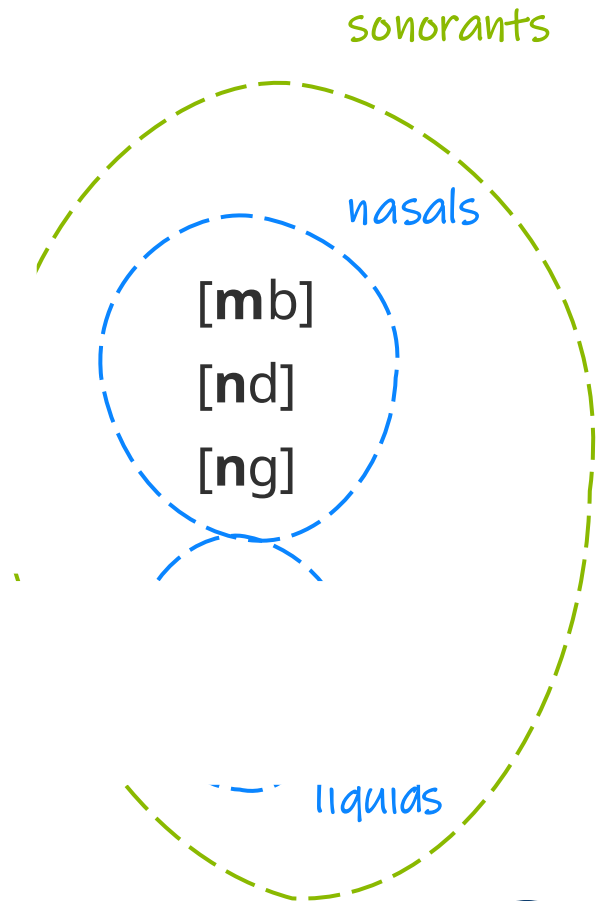
What are sound categories good for?

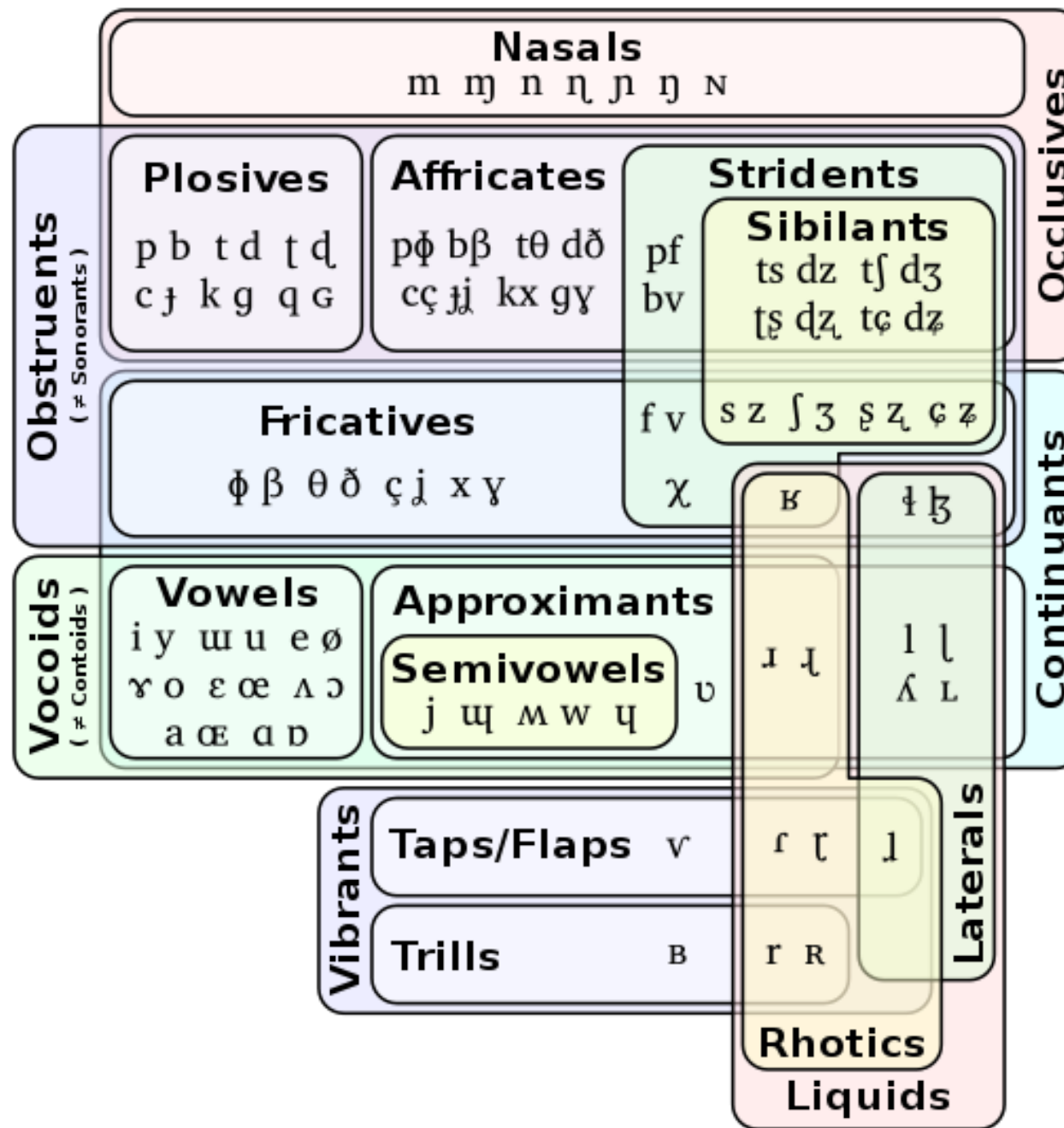
present

climban

findan

singan





Differing transcription practices? Use the IPA!

The sounds of English (RP); IPA transcription; pertinent letters in bold print

IPA symbol	example	IPA symbol	example
a. [p]	pie	b. [i:]	beat
[t]	tidy	[ɪ]	bit
[k]	kite	[e]	bed
[b]	buy	[æ]	bad
[d]	die	[ɜ:]	bird
[g]	guest	[ə]	along
[m]	mighty	[ʌ]	cut
[n]	night	[u:]	boot
[ŋ]	king	[ʊ]	book
[f]	fight	[ɔ:]	bought
[v]	van	[ɒ]	what
[θ]	think	[ɑ:]	bath
[ð]	they		
[s]	see	c. [eɪ]	day
[z]	zero	[aɪ]	buy
[ʃ]	shine	[ɔɪ]	boy
[ʒ]	vision	[əʊ]	boat
[h]	hide	[aʊ]	how
[w]	white	[ɪə]	here
[l]	light	[eə]	hair
[ɹ]	ride	[ʊə]	tour
[j]	young		
[tʃ]	church		
[dʒ]	George		

The sounds of General American; American transcription conventions
pertinent letters in bold print

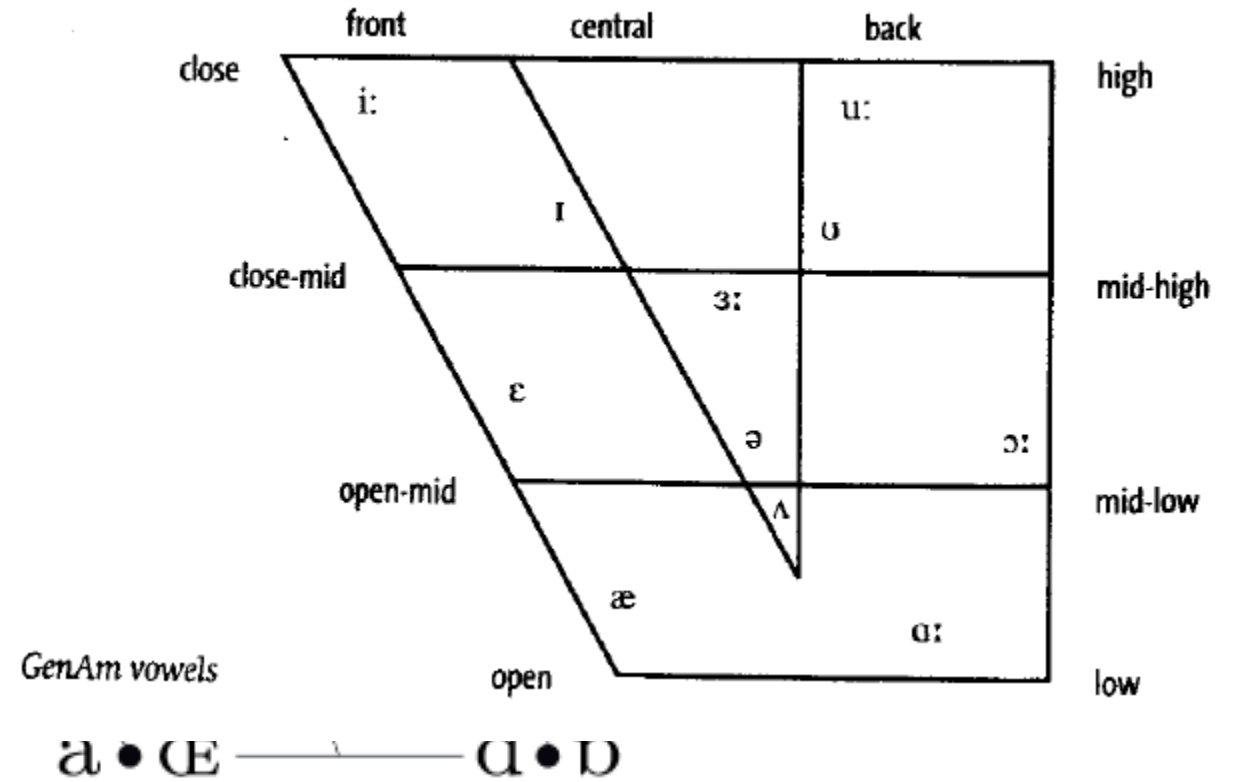
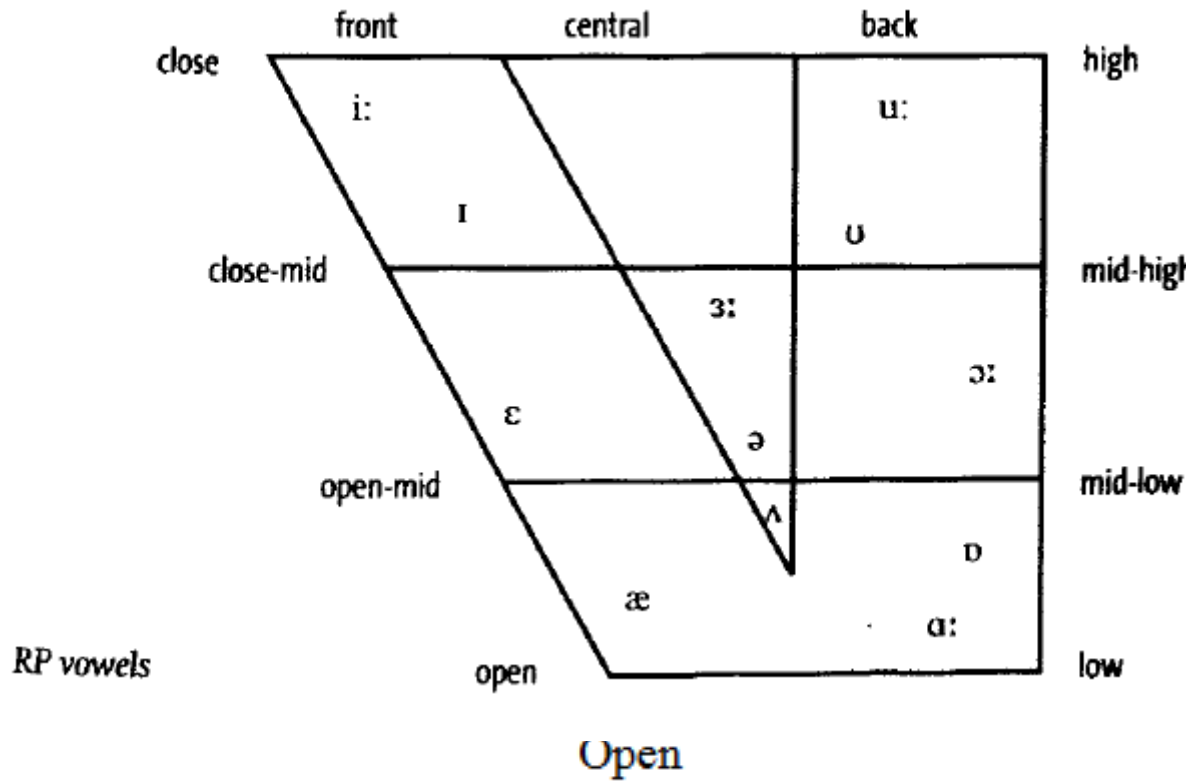
phonetic symbol	example	phonetic symbol	example
a. [p]	pie	b. [i]	beat
[t]	tidy	[ɪ]	bit
[k]	kite	[e]	late
[b]	buy	[ɛ]	bed
[d]	die	[æ]	bad
[g]	guest	[ə]	along
[m]	mighty	[ʌ]	cut
[n]	night	[ʊ]	book
[ŋ]	king	[o]	boat
[f]	fight	[ɔ]	bought
[v]	van	[ɑ]	what, father
[θ]	think		
[ð]	they	[aɪ]	buy
[s]	see	[ɔɪ]	boy
[z]	zero	[ɑw]	how
[ʃ]	shine		
[ʒ]	vision		
[h]	hide		
[w]	white		
[l]	light		
[r]	ride		
[j]	young		
[tʃ]	church		
[dʒ]	George		

using phonetic knowledge

VOWEL SYSTEMS

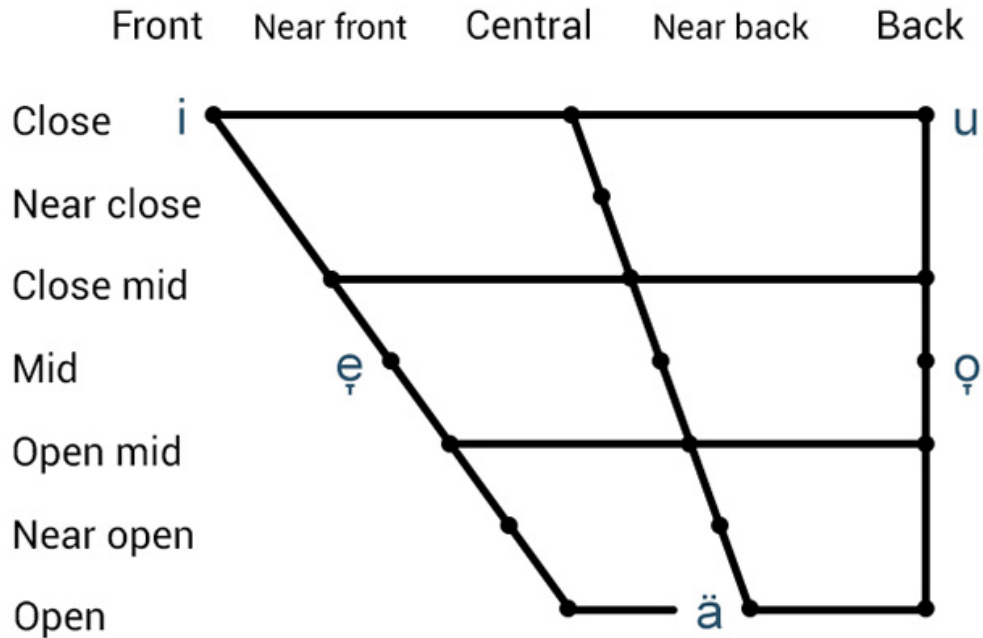
English and other languages

VOWELS

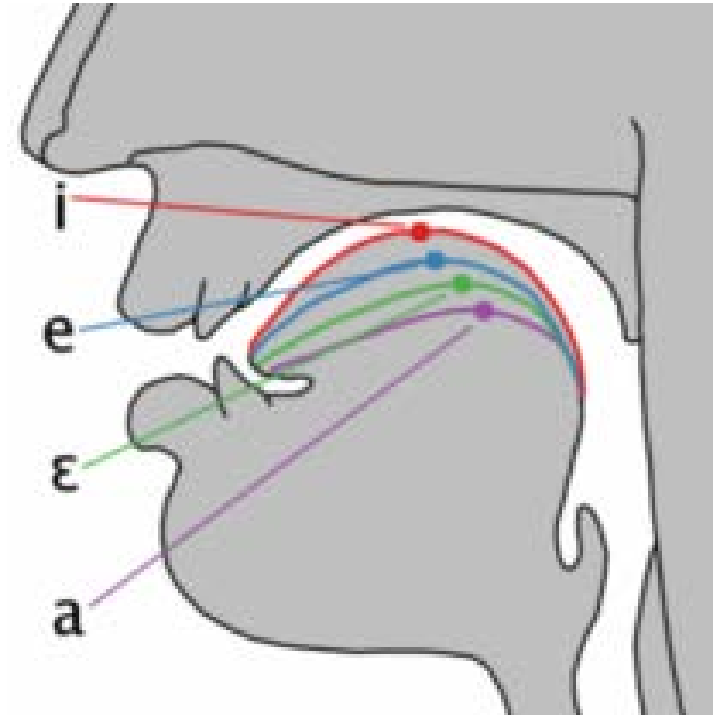


Where symbols appear in pairs, the one to the right represents a rounded vowel.

English and other languages

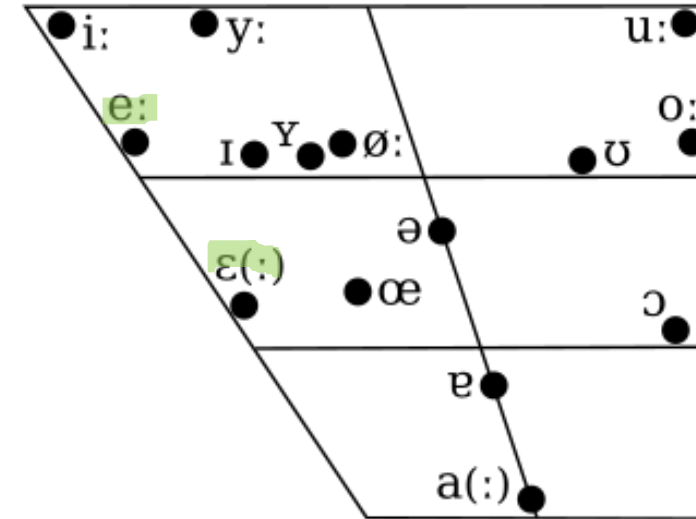
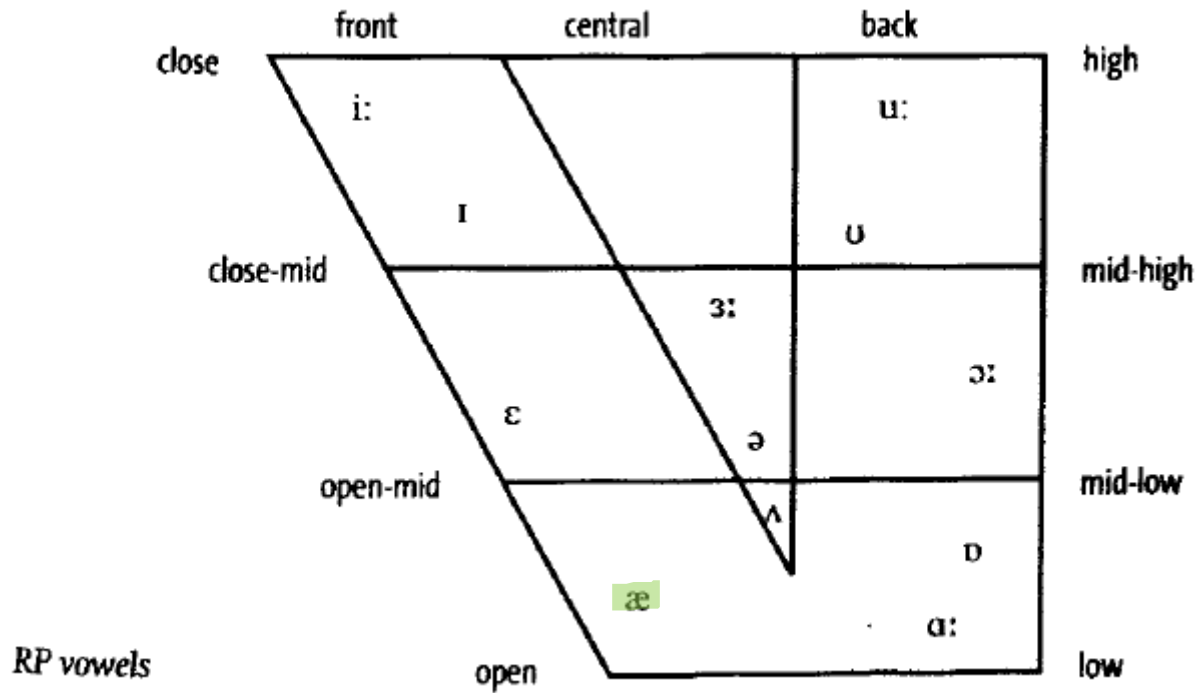


the monophthongs of Spanish; Marc,
<http://www.learnlanguagesonyourown.com/how-to-learn-Spanish-on-your-own.html>;



the monophthongs of standard German; Dudenredaktion,
Kleiner & Knöbl 2015:34

English and other languages



Bieswanger & Becker 2010: 56-57; adapted from Meyer 2005:96-97

the monophthongs of standard German; Dudenredaktion, Kleiner & Knöbl 2015:34

using phonetic knowledge

CONSONANTS

phonetics and grammar

violet
[vɪəliət] → [-voice]

violets
[vɪəliəts]

lilly
[lɪli] → [+voice]

lillies
[lɪliːz]

apple
[æpəl] → [+voice]

apples
[æpəlz]

rose
[rəʊz] → [+sibilant]

roses
[rəʊzɪz]

sibilants: [s], [z], [ʃ], [ʒ], ...



phonetics and pronunciation

Kuchen
[ku:xŋ]

[x]

voiceless velar fricative

gucken
[kʊkŋ]

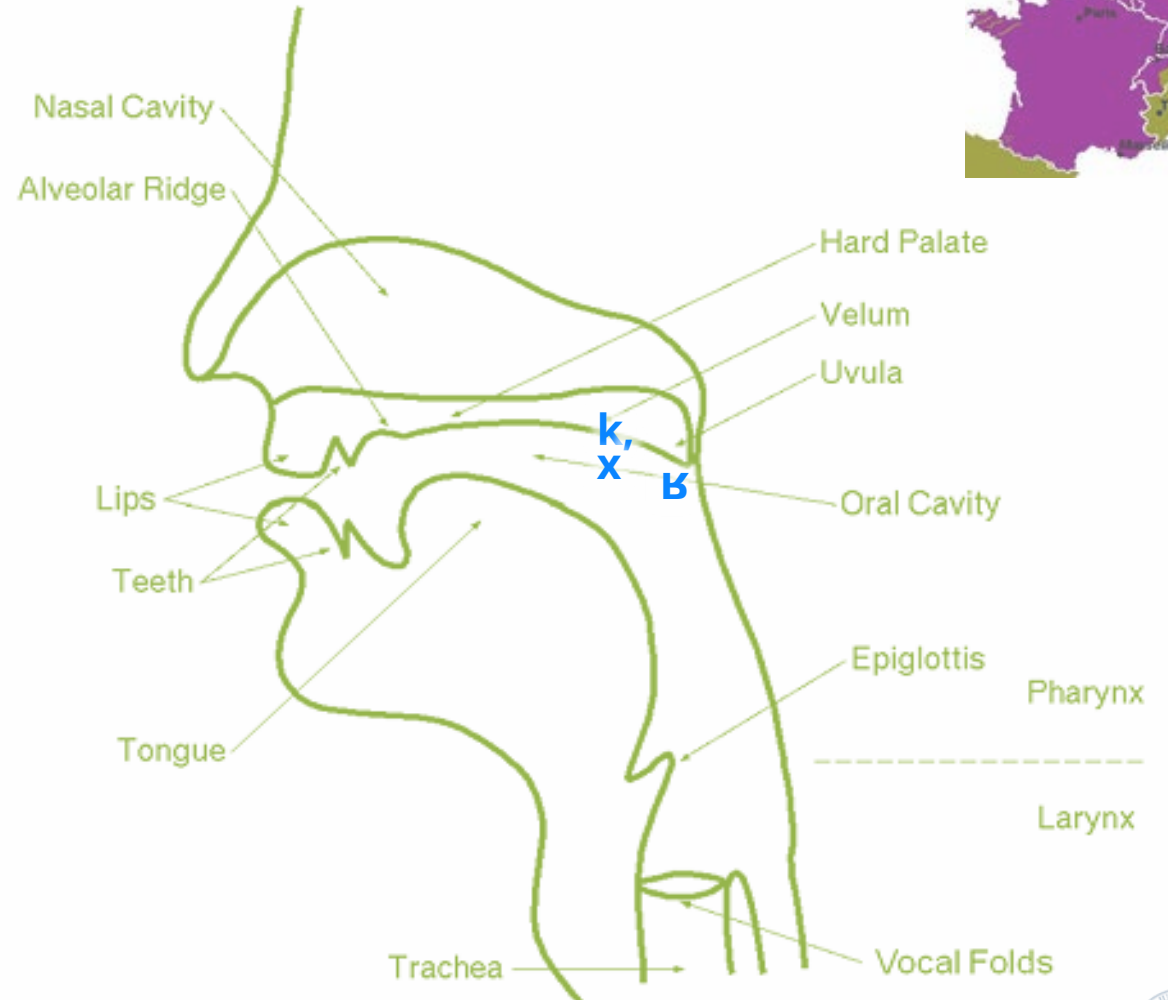
[k]

voiceless velar plosive

Kuren
[ku:ʁən]

[ʁ]

voiced uvular fricative



Critical period? Be flexible!

“[A]ny human, child or adult, can learn to pronounce all of these [speech] sounds, even the ones that do not usually occur in their native languages.” (Bieswanger & Becker 2010: 40)

What's it good for?

PHONETICS FOR SINGERS, TEACHERS, LANGUAGE LEARNERS, ...

Phonetics for singers (and teachers)

dağlar gibi dalgaları ben aşarım, aşarım

dağlar gibi dalgaları ben ?aşarım, ?aşarım

[ʔ]

the
glottal
stop



Phonetics for singers (and teachers)



[p] [p^h]
[t] [t^h]
[k] [k^h]

*l'inverno è passato, l' Aprile non c'è più,
è ritornato il Maggio al canto del cucù.*

Phonetics for singers (and teachers)



Phonetics for singers (and teachers)

- [x] ← velar fricative
 - [u:] ← rounded high back vowel
 - [w] ← labio-velar approximant
- ↙ ↘
co-articulation

Phonetics for singers (and teachers)

[ə wɛri lɔŋ taɪm]

a very long time

spelling-induced confusion

German:

<w> = [v]

English:

<v> = [v]

<w> = [w]



[x] ← velar fricative

[u:] ← rounded high back vowel

[w] ← labio-velar approximant



co-articulation

Phonetics

relationships between speech sounds

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2020