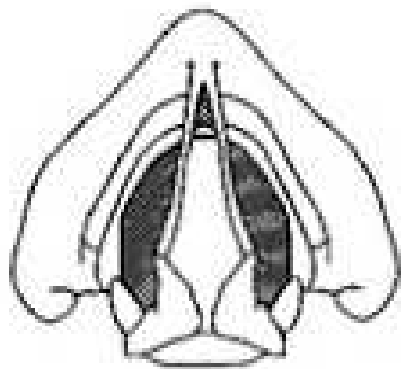


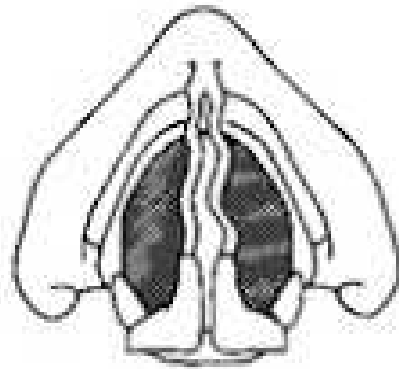
# Introduction to Phonetics & Phonology Ježek Session 3

Mgr. Miroslav Ježek, Ph.D.  
Brno, 23<sup>rd</sup> March  
2020

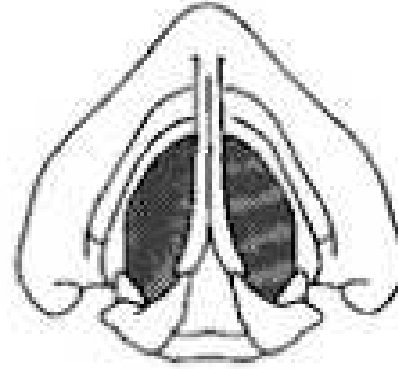
# Vocal folds



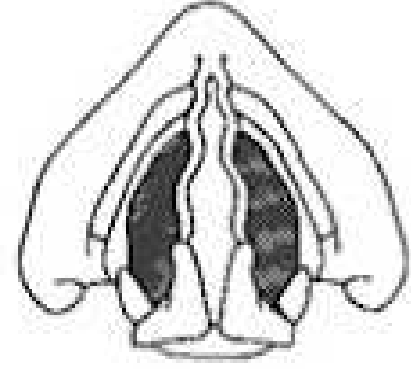
Voiceless



voiced



whisper



murmur

source: O'Grady, William D., Micheal Dobrowolsky & Francis Katamba, [ed.], (2001)

Contemporary Linguistics, Longman. (ISBN 0582246911)

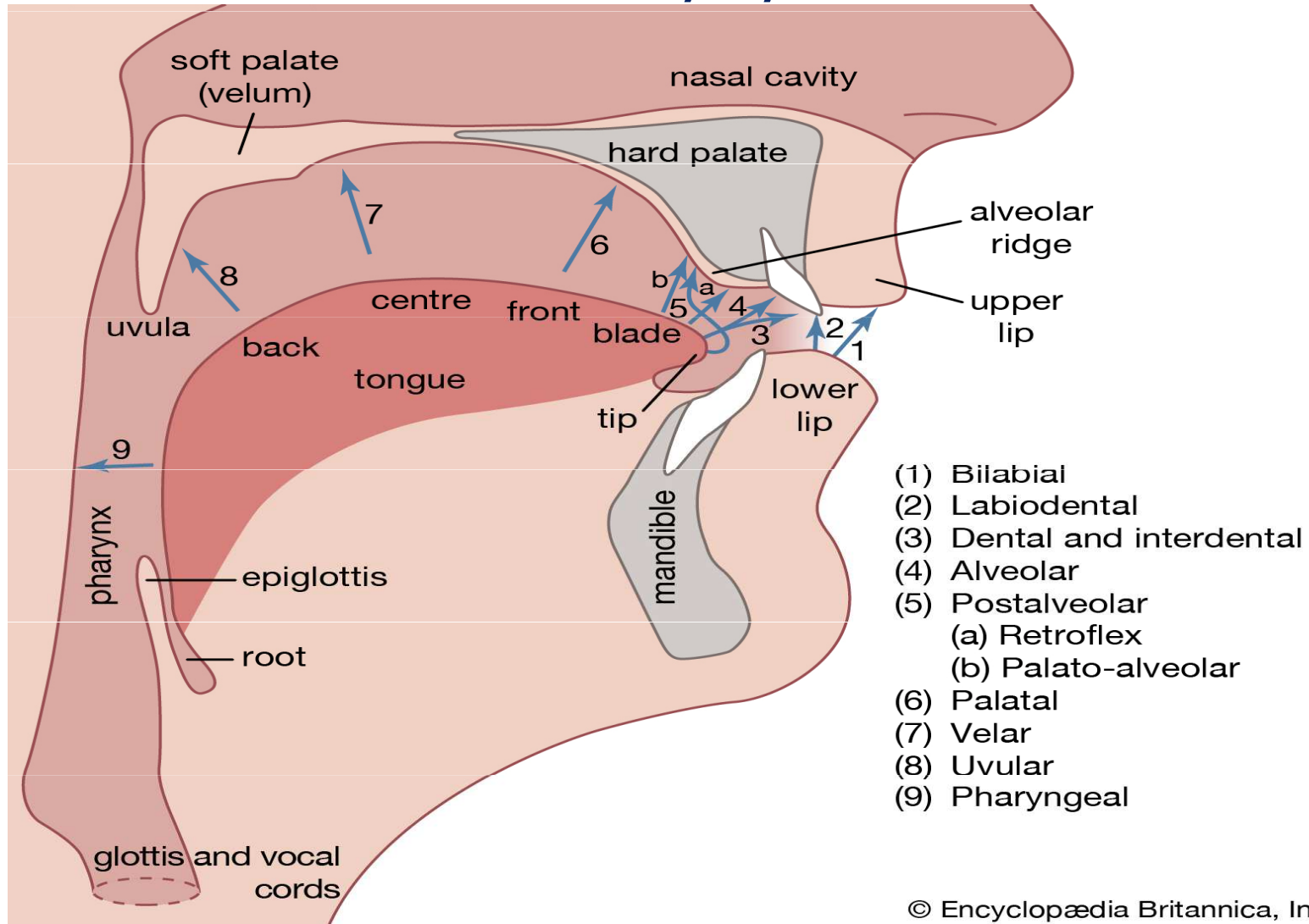
# Articulatory level

- Throat (pharyngeal cavity)
- Mouth (oral cavity)
- Nose (nasal cavity)



- Place of articulation (e.g. lips, teeth, alveolar ridge)
- Manner of articulation (e.g. plosive, fricative)
- Energy of articulation (fortis/lenis)

# Articulatory system



# Consonants

- Sounds produced by obstruction of the airflow somewhere in the vocal tract (i.e. in nasal, oral or pharyngeal cavity).
- The crucial criteria for the description of consonants are:
  - place of articulation (where the obstruction takes place);
  - manner of articulation (what type of obstruction it is);
  - energy of articulation (voiced v. voiceless; also devoiced).
- Phonologically, consonants are non-syllabic, i.e. they appear at the beginning and the end of syllables (**bit**).

# Consonants

## 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	ʙ		r						ʀ		
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.

# ENGLISH CONSONANTS

# Place of articulation

- **bilabial** (upper and lower lip): /p/ and /b/;
- **labio-dental** (lower lip and upper teeth): /f/ and /v/;
- **dental** (upper teeth and tongue tip): /ð/ and /θ/;
- **alveolar** (alveolar ridge and tongue tip): /t/ and /d/, /s/ and /z/;
- **post-alveolar, palato-alveolar** (behind alveolar ridge and tongue): /r/, /tʃ/ and /dʒ/, /ʃ/ and /ʒ/;
- **palatal** (hard palate and tongue): /j/;
- **velar** (soft palate (velum) and tongue): /ŋ/, /k/ and /g/;
- **glottal** (glottis): /h/ and [ʔ].



# Manner of articulation

- **plosives** (stops): complete obstruction in oral cavity; closing, compression, release stages; /p/ and /b/, /t/ and /d/, /k/ and /g/ + /ʔ/;
- **nasals**: complete closure in mouth so air escapes through nasal cavity; they are frictionless continuants /m/, /n/, and /ŋ/;
- **affricates**: release stage is prolonged so friction occurs at the place where plosives are articulated; /tʃ/ and /dʒ/;
- **fricatives**: two articulators held sufficiently close so escaping air causes friction; /f/ and /v/, /ð/ and /θ/, /s/ and /z/ + /h/;
- **approximants**: articulators narrowly close but not enough to cause friction; between fricatives and vowels; /r/, /j/, /l/, /w/;

# Manner of articulation

- **taps** (flaps): single contraction where one articulator is thrown against another; US [ɾ];
- **trills**: vibrations between active and passive articulators; Scottish or Czech [r];
- **laterals**: consonants (affricates, fricatives, approximants, taps) where airflow is blocked in the centre of the tongue and the air escapes through the sides of the tongue; lateral approximant /l/.

## PLUS SOME MORE TERMS OFTEN MENTIONED IN ACADEMIC LITERATURE:

- obstruents: a single term covering plosives, fricatives and affricates.
- sonorants: continuous non-turbulent airflow; term covering nasals, approximants, flaps, some trills + vowels.
- continuants: no complete closure in oral cavity; term covering fricatives, approximants + vowels

# Energy of articulation

- Voiced consonants (e.g. /b/, /d/, /g/, /v/...); lenis articulation; vocal cords vibrating.
- Voiceless consonants (e.g. /p/, /t/, /k/, /f/...); fortis articulation; vocal cords open.
- Devoiced consonants (e.g. *cod* in pre-pausal environments)
  - Cf. *Eat the cot.* v. *Eat the cod.* v. *Eat the cod on the table.*

# Description of consonants

- Combines the three modes of articulation (energy + place + manner), thus:
  - /b/ is a voiced bilabial plosive;
  - /f/ is a voiceless labio-dental fricative, etc.

# Secondary articulation

- **labialisation**: lip-rounding; e.g. *swan*; *rude*
- **palatalisation**: centre of tongue closer to hard palate; e.g. *tune*, Czech *t'ukat*
- **nasalisation**: part of airflow escapes through nasal cavity; e.g. *morning*; French *bon*
- **velarisation**: back of tongue closer to soft palate; e.g. dark [ɫ] *pill*
- **uvularisation**: back of tongue close to uvula; sounds in Arabic, Semitic languages
- **pharyngealisation**: pharynx (epiglottis) is constricted; some Danish consonants
- **glottalisation**: addition of the glottal stop; e.g. *put* (see below)

# SELECTED CONSONANTAL PHENOMENA

# Glottalisation

- Insertion of the glottal stop [ʔ] before voiceless plosives (p, t, k) - **pre-glottalisation** (also **glottal reinforcement**); e.g. *pot* [pʊʔt].
- Insertion of the glottal stop in place of voiceless plosives (p, t, k) - **glottalisation** (also **glottal replacement**), e.g. *pot* [pʊʔ].
- Though not present in any transcription model of RP, glottal replacement is a very frequent feature (even in RP) especially before obstruents (*quite good, quite cheap, quite strong*) and approximants (*quite well, quite light*)
- RP speakers avoid glottal replacement especially before syllabic nasals and syllabic /l/ (*button, bottom, little*), and in intervocalic positions (*butter, water, matter*)

## /g/-dropping

- alveolar [n] instead of velar [ŋ] in –ing endings; e.g. *doin'*
- Dropped /g/ stigmatised because of strong relation to orthography (but, curiously, [ŋg] forms stigmatised as well; e.g. West Midlands and Liverpool).
- upper class the same as lower working class: [n]
  - Why? No social pressure; i.e. no danger for members of the upper-class of being mistaken for lower classes.



## /th/-fronting

- Dental fricatives replaced by labio-dental ones; thus /ð/ and /θ/ are replaced by /f/ and /v/ respectively.
- *nothing, brother, southern, etc.*
- possible **age-grading** feature?
  - Age-grading refers to features that occur in younger speakers but later disappear. This, however, does not signal linguistic change taking place as it reoccurs with every generation.
- Typically associated with London / Estuary English, but first spotted in Yorkshire in 1876 (Upton 2012: 395).

# /h/-dropping

- Refers to the omission of /h/ in word-initial positions.
- Stigmatised due to influence of spelling.
- Found in many regional dialects in England.
- /h/ has always been subject to great variation (e.g. *historical*, *hotel* in today's English).
- hypercorrection (*hour*, *honest* as well as *horange*)
- In some words /h/ was added where there was none in the original source (e.g. Latin *eremita*, ModE *hermit*).
- Differences between GB v. US (e.g. *herb*)

# /h/-dropping

- Subject to heavy stigmatisation: 'so important indeed is the question of the use of h's in England ... that no marriage should take place between persons whose ideas on this subject do not agree' (Hill 1902: 13, qtd. in Beal 2008: 27)
- Many anecdotes, e.g.:
  - Doctor: I can tell you what you are suffering from, my good fellow. You're suffering from acne!
  - Patient: 'Ackney??! I only wish I'd never been near the place!  
(*Mr Punch's Cockney Humour*, 1841)

## /h/-dropping



## /ɫ/-vocalisation

- Dark /ɫ/ [ɫ̥] is not released laterally (sides of tongue) and becomes a rounded vowel.
- The vowel is somewhere between [o] and [ʊ], sometimes this symbol is chosen [ɤ].
- Spreading rapidly, but not accepted in RP yet.
- If it becomes an RP feature, then new diphthongs *silk* /ɪʊ/ and *help* /ɛʊ/ appear.

# /r/-dropping

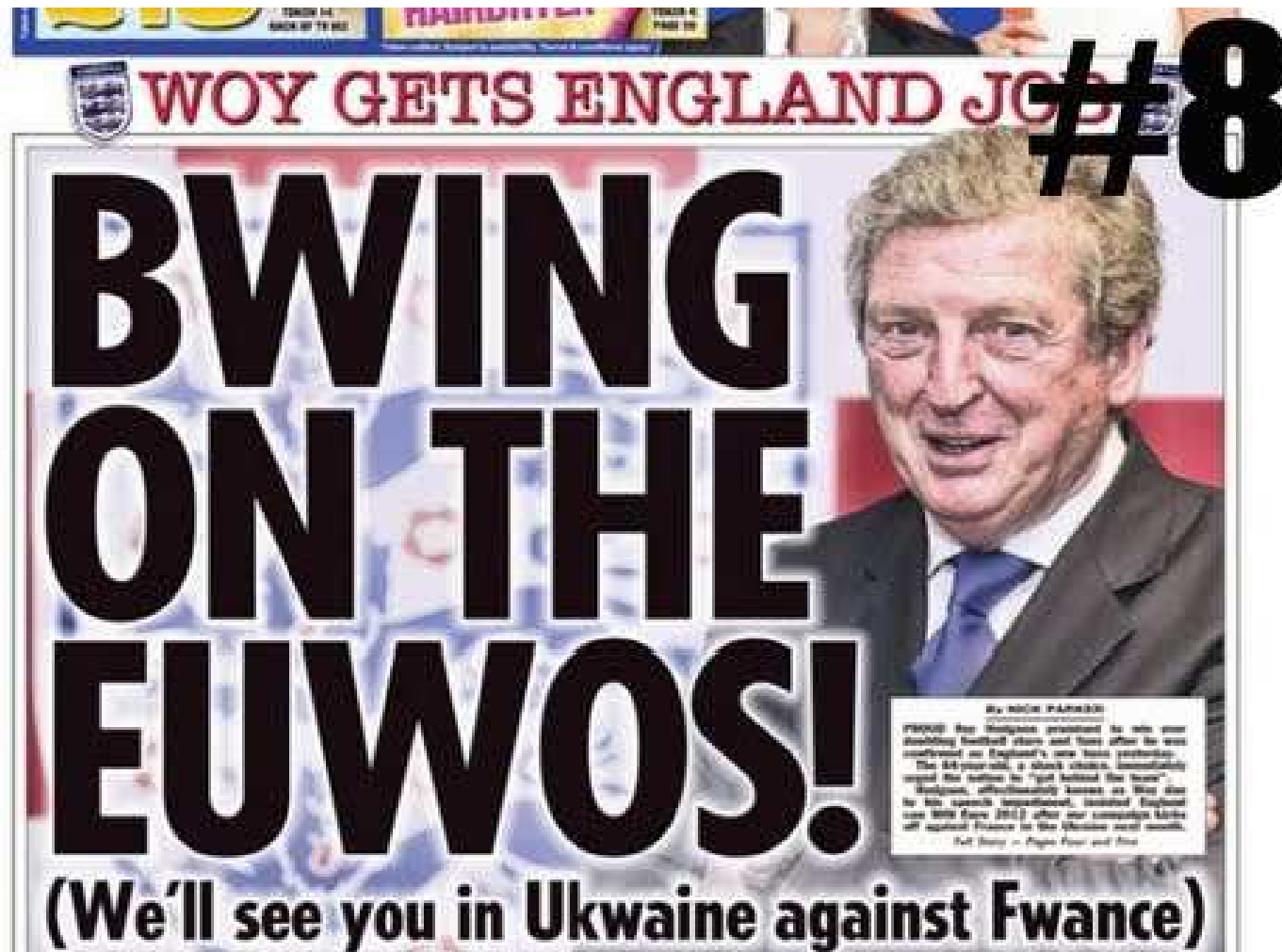
- Started in the 18<sup>th</sup> C, that's why US English is (predominantly) rhotic (exceptions e.g. New York working-class English).
- In the past, stigmatised for the lack of accordance with spelling.
  - rhymes such as *morn* / *dawn* considered vulgar
- Dropped /r/ created new diphthongs, namely /ɪə/, /ɛə/, /ɔə/, and /ʊə/
  - Interestingly, in modern RP there is no /ɛə/ and /ɔə/ and the status of /ʊə/ is increasingly less certain.

## labio-dental /r/

- /r/ is replaced by a labio-dental approximant [ʋ].
- No phonemic contrast between *ring* v. *wing*.
- Considered a speech defect (imperfect children's pronunciation maintained into adulthood) by some, for others it is a modern variant of the phoneme.

# labio-dental /r/

Roy Hodgson-  
former England  
football  
manager.  
Notoriously  
known for  
labiodental /r/.





# Intrusive /r/

- Linking /r/ supported by spelling (e.g. *here is*).
- Intrusive /r/ not supported by spelling but inserted to avoid a vocalic hiatus across word boundaries (e.g. *I saw him, law and order*) as well as word-internally (e.g. *drawing*).
- Used after /ɑ:/, /ɔ:/ and, in particular /ə/.
- Extremely frequent in RP, even non-native learners encouraged to adopt it (e.g. Trudgill 2002).

# yod-dropping

- Yod refers to the /j/ sound present in some words of the GOOSE and CURE sets (*boom* v. *mute* ; *poor* v. *pure*).
- In the past, yod was far more common: (e.g. *chew*, *juice*, *rude*, *crew*, *blue*, *flew*, etc.; now in RP these words are /j/-less).
- Yod now dropped in *tune*, *student*, *duke*, *reduce*, *new*, *numerous*, *suit*, *solution*; in RP all of them /j/-full apart from the last two; in US English all of them /j/-less.
- Yod-dropping frequent in Cockney, East Anglia (GB) and US English

# yod-coalescence

- Alternatively, yod can coalesce (merge) with the preceding plosives and fricatives to produce palatalised consonants:
  - within one word: *tune, duke, issue* ;
  - across word boundaries: *could you, don't you, this year*.
- historically, yod-coalescence was stigmatised in many words where it is common today: e.g. *sugar* only [sju:gə] in the 18<sup>th</sup>C.
- In modern RP common in unaccented syllables (*perpetual, graduate*), not so in accented ones (*Tuesday, dew*)

## whale-wale merger

- In the past, two different phonemes /hw/ v. /w/ (phonetically [ʍ] v. [w]).
- Educated speakers retained /hw/ well into the 20<sup>th</sup> C.
- Now rare in RP, but the standard form in Scottish English.

# Pronouncing dictionaries: ODP (2003), LPD (2008), CEPD (2011) - consonants

- /t/-glottalisation: being an allophone, [ʔ] is absent from the transcriptions, but commented on in glossaries (extra information boxes)
- Intrusive /r/:
  - In ODP present in e.g. *Clara* /kla:rə(r)/, *drawing* /drɔ:(r)ɪŋ/;
  - In LPD present in *drawing* / drɔ:ˈrɪŋ/;
  - In CEPD not present, only explained in Glossary.
- Yod-coalescence:
  - ODP gives *tune* both as /tju:n/ and /tʃu:n/- no variant preferred.
  - LPD gives *tune* both as /tju:n/ and /tʃu:n/- first variant preferred.
  - CEPD also gives both /tʃu:n/ and /tju:n/ for *tune*, but in the reversed order compared to LPD.
  - the dictionaries comment on coalesced yod across word boundaries (e.g. *could you*), agreeing it belongs to RP.

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