

More on place and manner  
Non-obstruents, secondary  
articulations

# Places of articulation for non-obstruents

- We've looked at place for stops
- And for fricatives
- Now we'll look at places for other manners and also at new manners of articulation

## Place of articulation for nasals

Graphics unavailable. See first three rows of  
Main IPA Consonant Chart (Rogers appendix)  
See also diacritics for nasalization and nasal release

# Nasals: Not much new

- Nasals are articulated just like (fully) voiced stops but with velum down
- Every place you get a stop, you can get a nasal
- In addition a labiodental nasal is possible:  
[ɱ] ['bæɱf]
  - Labiodental stops are rare or non-existent : No official IPA symbol

## Example: Palatal nasal

Graphic unavailable

# All nasals

- bilabial [m] [ama]
- Labiodental [ɱ] [aɱa]
- Alveolar [n] [ana]
- Retroflex [ɳ] [aɳa]
- Palatal [ɲ] [aɲa]
- Velar [ŋ] [aŋa]
- Uvular [ɴ] [aɴa]

# Other manner and new place-manner combinations

- Lateral approximants... some additional places
- Lateral fricatives ... a new manner row in IPA table
- Trills
- Flaps and taps

## Alveolar Laterals: palatograms

Closure indicated by  
shaded areas

Laterals: Central closure  
But no closure on sides of tongue

Graphic unavailable

Compare with stops:  
Closure all around edges of tongue



## New lateral approximants

Graphic unavailable -- See Main IPA  
Table in Rogers Appendix  
Row labeled “Lateral Approximant”

# Other manner/place combinations

- Laterals... some additional places
  - Alveolar [ l ]
    - Dark alveolar (pharyngealized) [ ɭ ]
  - Palatal [ ʎ ]
  - Retroflex [ ɭ̡ ]
  - Velar ? [ ʟ ]

# Examples of laterals

- Most common Alveolar
  - [ l ] [ alɑ ]
    - Dark alveolar (pharyngealized) [ ɭ ]
- Palatal (e.g. Italian, Catalan, Quechua)
  - [ ʎ ] [ aʎɑ ] ital. [famija]
  - Retroflex [ ɭ ] (Malayam?)
  - Velar ? [ L ]

## Lateral fricatives

Graphic unavailable

See lateral fricative row in Main IPA Table

Rogers Appendix

Any supraglottal approximant can be made a fricative by squeezing a little more and blowing more air through!

Can get retroflex and palatal lateral-fricatives as well  
(Need to use raising symbol with approx. e.g. [ɭ̺̥] )

# Lateral fricatives

- [ ɬ ] Voiceless (most common)
  - Welsh ll, Dene
- [ ɮ ] Voiced (less common, Han-Dene)
- Can be in affricates
  - [ atɬa ] [ adɮa ]
- Ejective lateral affricates (Dene, Navaho)
  - [ atɬ'ɑ ]

# Trills, Flaps and Taps IPAChart

Graphic unavailable

See Trill, flap and tap rows in Main IPA Table

Rogers Appendix

# Flaps, taps and trills

- These are mostly r-like sounds
  - Also known as rhotics
- Most common place are in alveolar and retroflex for flaps, taps and trills
- Uvular trill is fairly wide spread
- Bilabial trill [B] is rare but possible

# Trills

- Trill like a multiple tap:
  - Aerostatic/aerodynamic/myoelastic forces conspire to make articulator(s) vibrate
  - Voicing could be (but usually isn't) described as a 'glottal trill'
- Bilabial trills: two lips vibrate
- Alveolar trills: tongue tip against alveolar ridge
- Uvular trill: uvula vibrates between narrowed passage at back of mouth (tongue and faucal pillars)



# Other trills?

- Lateral ?
- Bilateral ??
- Buccal?
- Velo-pharyngeal ???
  - Ingressive and egressive
  - Mostly nocturnal? [snoring]
- Not known as speech sounds

# Taps and flaps

- Tap like single pulse of a trill
  - Said to be ‘ballistic up and down’
    - Tongue tip returns to same place it started
- Flaps
  - May involve movement from starting to ending point with a quick contact in between
  - Backer to fronter tongue tip position in retroflex flap with contact by underside of tongue
- Dubious distinction... redundant with place of articulation flap = retroflex tap or tap = alveolar flap

## Other approximants IPA chart

Graphic unavailable  
See approximants row in Main IPA Table  
Rogers Appendix

# Approximants

- Old friends [w, j]
  - Note w is not in main chart as it involves double articulation labial velar
- New creatures
  - [ɻ] retroflex approximant
    - [ɻ<sup>w</sup>] really what N.A. English ‘r’ really is
  - [ɰ] velar approximant (Turkish) like unrounded [w]
- Note also rounded approximants
  - [w] rounded velar == [ɰ<sup>w</sup>]
  - [ɥ] rounded palatal == [j<sup>w</sup>]

# Raising and lowering: approximants $\langle == \rangle$ fricatives

- Raised diacritic [ ɹ̥ ] can be used to make ‘extra’ fricatives from approximants
  - [ ɹ̥ ] raised alveolar approximant == ‘fricative r’
- Lowered diacritic [ β̞ ] can be used to make ‘extra’ approximants from fricatives
  - [ β̞ ] lowered voiced bilabial fricative == bilabial approximant

# Secondary place articulations

- Secondary place diacritics
  - Raised [j] palatalized [d<sup>j</sup>]
    - Palatalized alveolars very similar to palatals  
[ ad<sup>j</sup>a ] [ a<sup>j</sup>a ] [ an<sup>j</sup>a ] [ a<sup>j</sup>na ]
  - Raised [w] labialized [d<sup>w</sup>]
    - (perhaps sometimes labial-velarized?)
  - Raised [ɥ] velarized [d<sup>ɥ</sup>]
  - Raised [ʕ] pharyngealized [d<sup>ʕ</sup>]
  - Alternate [~] through symbol **velarized** or **pharyngealized** as with dark [ɫ]

# Secondary manner?

- Nasalization of vowels, fricatives and approximants can be thought of a secondary manner
- Raised tilde above symbol
  - [õ ã ]

## Fricatives IPA EXTRA SYMBOLS

Graphic unavailable  
See “Other Symbols” table in Main IPA Table  
Rogers Appendix



## Extra varieties ejectives and clicks

- Ejectives usually voiceless [p' t' k']
  - Some languages may have partly voiced versions [ b' d' g' ] etc.
- Implosives usually voiced, but voiceless are theoretically possible. Probably best to use devoicing diacritic [ ḡ ]
- Clicks
  - Can be voiced ( ḡ̃ with tie bar )
  - Can be nasalized ( ḡ̃̃ with tie bar )