

Chapter 1

Articulation and acoustics

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1. Vocal tract and articulation positions

- (1) Browse the following sites to get more info about this topic:

<http://www.unil.ch/ling/page24434.html>

<http://www.sil.org/mexico/ling/glosario/e005bi%2Dorgansart.htm>

<http://www.umanitoba.ca/faculties/arts/linguistics/russell/138/sec1/anatomy.htm>

- (2) Side profile views of the head

<http://www.abdn.ac.uk/langling/resources/midsagsection.jpg>

<http://www.abdn.ac.uk/langling/resources/midsagsectionbw.jpg>

- (3) A website for you to practice the general picture of the articulation positions for each consonant

<http://www.chass.utoronto.ca/~danhall/phonetics/sammy.html>

- (4) A website for you to match the sound with the animated articulation positions

http://web.tiscali.it/davidbrett/phonology/Speech_anim.htm

2

2. The X-ray movie of the AP changes

The X-ray video
(The X-ray video
is provided by
Ladefoged,
UCLA)

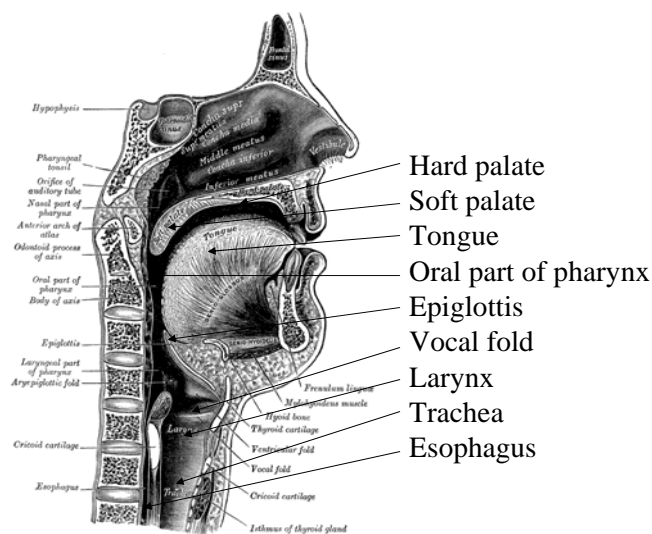
høpe	høte	høke
høpa	høta	høka
høde	høne	høse
høze	høsa	
høp	høt	høk
høp	høt	høk
høti	høti	høtæ
høtu	høtu	
høtet	høtat	høtek
høpen	hødi	hødi
høgi	høga	ia

Why did Ken put the soggy net on
top of his desk?

I have put blood on her two clean
yellow shoes.

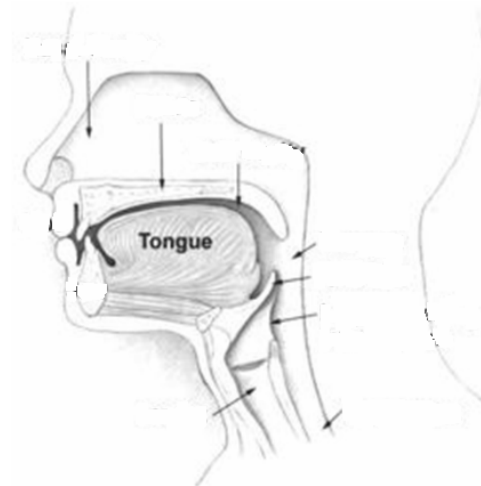
3

3. Vocal Organs (detailed info)



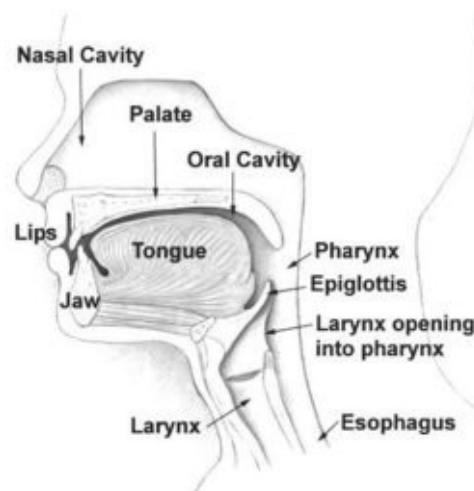
4

4. Can I name the articulation positions now?



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4. Can I name the articulation positions now?



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5. Vocal Organs

- (1) Vocal folds/ords

<http://www.humnet.ucla.edu/humnet/linguistics/faciliti/demos/vocalfolds/vocalfolds.htm>

<http://www.voicedoctor.net/media/video/female.html>

<http://www.sci.mus.mn.us/sound/vrml/vocal/vocalcu.htm>

- (2) A voyage to the vocal organs (a movie)

<http://www.ncvs.org/ncvs/tutorials/youngexp/fantasticvoyage.html>

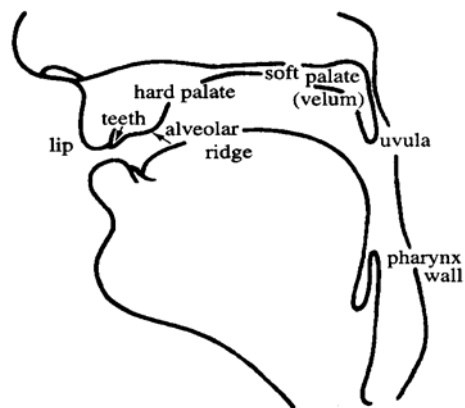
Voiced /b/

Voiceless /p/

7

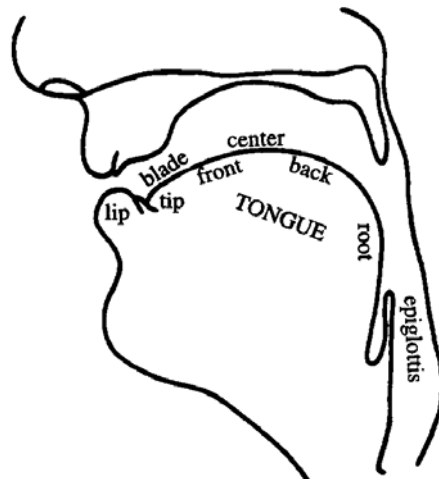
6. The articulators (the upper surface)

The principal parts of the upper surface of the vocal tract.



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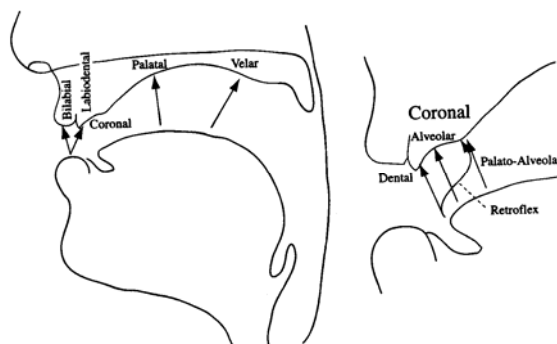
7. The articulators (the lower surface)



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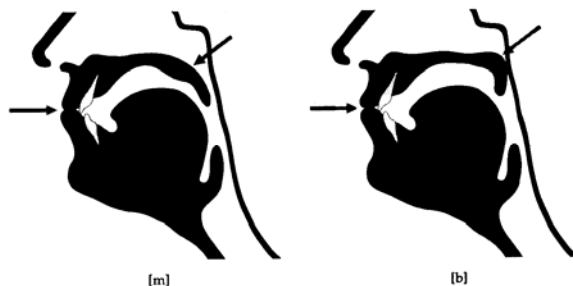
8. Places of articulation of English

- (1) Labial: using the lips
- (2) Coronal: using the tip or blade of the tongue
- (3) Dorsal: using the back of the tongue



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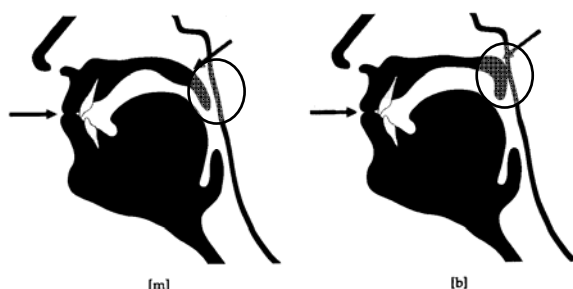
9. Bilabial



/m/ /b/ /p/

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9. Bilabial



/m/ /b/ /p/

12

10. Labiodental

f/ v/

13

11. Dental/interdental



θ/ and ð/

14

12. Alveolar

/t/



/n/ and /d/



[n]



[d]

15

12. Alveolar

/t/



/n/ and /d/



[n]



[d]

16

13. Retroflex

/r/



17

14. Palato-Alveolar/post-alveolar

/ʃ/ and /ʒ/



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15. Palatal

/i/



Consider this chart



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15. Palatal

/i/



Consider this chart



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16. Velar

/k/ and /g/



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17. The oro-nasal process

- (1) Velar in “hang” -- /ŋ/
- (2) Alveolar in “ran” -- /ɹ̥/
- (3) Bilabial in “ram” -- /m/



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17. The oro-nasal process

- (1) Velar in “hang” -- /ŋ/
- (2) Alveolar in “ran” -- /ɹ̥/
- (3) Bilabial in “ram” -- /m/



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18. Manners Stops

- (1) Stops
 - Oral stop: /t/ /d/
 - Nasal: /-n/ /-ɲ/ /-m/
- (2) Fricatives
 - Labiodental -- /f/ /v/
 - Dental -- /θ/ /ð/
 - Alveolar -- /s/ /z/
 - Palato-alveolar -- /ʃ/ /ʒ/
- (3) Affricates
 - Church, judge, etc. /tʃ/ /dʒ/
- (4) Lateral (Approximant)
 - Incomplete closure between one or both sides of the tongue and the roof of the mouth -- /l/ /r/
- (5) Approximant
 - The palatal area -- /j/
 - The alveolar region -- /-w/

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19. Additional terms

Trill (or roll) and tap (or flap)

Rye

<http://www.spanishprograms.com/pron.swf>

Pity, better, etc. /'piti/ /'betɐ/

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20. Articulation of vowel sounds

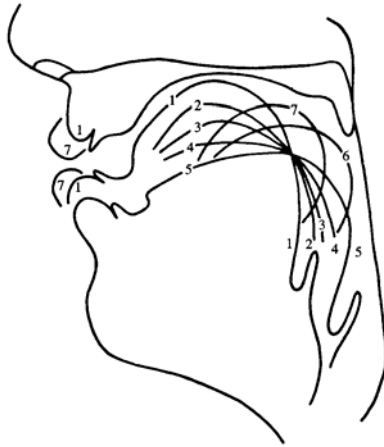
The positions of the vocal organs for the vowels in the words
1 heed, 2 hid, 3 head, 4 had, 5 father, 6 good, 7 food. The lip
positions for vowels 2, 3, and 4 are in between those shown for
1 and 5. The lip position for vowel 6 is between those shown for
1 and 7.



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21. Articulation of vowel sounds in motion

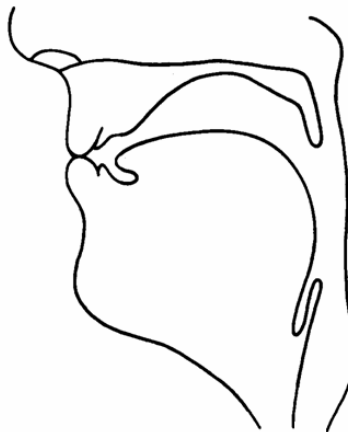
Locate the “vowel space” and get the basic qualities of the vowel of American English



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22. Practice the following items (Ex)

Example:
“Sting”



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Lateral (Approximant)

l

Incomplete closure between one or both sides of the tongue and the roof of the mouth -- /l/ /r/

