LEsson II

ENGLISH SOUNDS AND THEIR TRANSCRIPTION SYMBOLS

Human Speech Organs

As discussed in Lesson I, there are 44 different sounds (or phonemes) in English, including 12 vowels, 8 diphthongs, and 24 consonants (see Table 1: English Sounds). Those speech sounds are produced by our speech organs, including our mouth: lips, tongue, teeth, hard and soft palates, and alveolar ridge; nasal cavity; pharynx and larynx. (See the diagram below).

Articulation happens when the air stream is interrupted, shaped, restricted, or diverted.

1. Upper lip 10. Larynx
2. Nasal cavity 11. Lower teeth
3. Upper teeth 12. Lower lip
4. Alveolar ridge 13. Tongue
5. Hard palate a. tip
6. Soft palate b. blade
7. Uvula c. front
8. Pharynx d. centre
9. Glottis e. back

Figure: Human Speech Organs

The articulation of Vowels

Vowel Sounds are produced when the air stream is voiced through the vibration of the vocal cords in the larynx, and then shaped using the tongue and the lips to modify the overall shape of the mouth. The description of vowels refers to the height of the tongue, the part of the tongue which is raised, and the lip positions. Based of the height of the tongue, vowels are classified into close, mid, and open vowels. Close vowels are those produced with the tongue is quite high in the mouth, while open vowels are those produced with the tongue is low in the mouth. Mid vowels are those produced with the tongue is neither high nor low in the mouth. In connection with the part of the tongue which is raised, vowels are classified into front, centre,
and back vowels. While in reference to the lip position, vowels are produced with the lips rounded, spread, or neutral.

The following diagram summarizes vowels of English.

Figure 2: English Vowels

**Diphthongs**

A crude definition of diphthong might be a combination of vowel sounds. A slightly closer analysis shows us that there is a glide (or a movement of the tongue, lips, and jaw) from one pure vowel sound to another. The first sound in each phoneme is longer and louder than the second. English is usually described as having 8 diphthongs, and are grouped into centring diphthong, and closing diphthongs. Centring diphthongs end with a glide towards /ə/. They are called centring because /ə/ is a central vowel (refer to the above diagram). This group includes /Iə/, /υə/, and /eə/. Closing diphthongs end with a glide towards /i/ or towards /u/. The glide is towards a higher position in the mouth. This group includes /ei/, / /, /aɪ/, /əʊ/, and /au/.

**The articulation of Consonants**

Consonants can be described from three standpoints: the presence or absence of voicing (voiced or voiceless), the manner of articulation, and the place of articulation.

With regard to the manner of articulation the vocal tract may be completely closed so that the air is so temporarily unable to pass through. Alternatively there may be a closing movement of the lips, tongue, or throat, so that it is possible to hear the sound made by air passing through. Or, as in case of the nasal sounds, the air is diverted through the nasal passages. The various terms used are explained in the following table:
Manner of articulation

<table>
<thead>
<tr>
<th>Manner of Articulation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plosive</td>
<td>A complete closure is made somewhere in the vocal tract, and the soft palate is also raised. Air pressure increases behind the closure, and is then released ‘explosively’, e.g. /p/, /b/</td>
</tr>
<tr>
<td>Affricate</td>
<td>A complete closure is made somewhere in the mouth, and the soft palate is raised. Air pressure increases behind the closure, and is then released more slowly than in plosive, e.g. /tʃ/ and /dʒ/</td>
</tr>
<tr>
<td>Fricative</td>
<td>When two vocal organs come close enough together for the movement of air between them to be heard, e.g. /f/, and /v/</td>
</tr>
<tr>
<td>Nasal</td>
<td>A closure is made by the lips, or by the tongue against the palate, the soft palate is lowered, and air escapes through the nose, e.g. /m/, /n/, /ŋ/</td>
</tr>
<tr>
<td>Lateral</td>
<td>A partial closure is made by the blade of the tongue against the alveolar ridge. Air is able to flow around the side of the tongue, e.g. /l/</td>
</tr>
<tr>
<td>Approximant</td>
<td>Vocal organs come near to each other, but not so close so as to cause audible friction, e.g. /r/, and /w/</td>
</tr>
</tbody>
</table>

With regard to the place of articulation, the following table summarizes the main movements of the various articulators:

<table>
<thead>
<tr>
<th>Place of Articulation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilabial</td>
<td>Using closing movement of both lips, e.g. /p/, /m/</td>
</tr>
<tr>
<td>Labio-dental</td>
<td>Using the lower lip and the upper teeth, e.g. /f/, and /v/</td>
</tr>
<tr>
<td>Dental</td>
<td>The tongue tip is used either between the teeth or close to the upper teeth, e.g. /θ/, and /ð/</td>
</tr>
<tr>
<td>Alveolar</td>
<td>The blade of the tongue is used close to the alveolar ridge, e.g. /t/, and /s/</td>
</tr>
<tr>
<td>Palato-alveolar</td>
<td>The blade (or tip) of the tongue is used just behind the alveolar ridge, e.g. /tʃ/ and /dʒ/</td>
</tr>
<tr>
<td>Palatal</td>
<td>The front of the tongue is raised close to the palate, e.g. /j/</td>
</tr>
<tr>
<td>Velar</td>
<td>The back of the tongue is used against the soft palate, e.g. /k/, /ŋ/</td>
</tr>
<tr>
<td>Glottal</td>
<td>The gap between the vocal cords is used to make audible friction, e.g. /h/</td>
</tr>
</tbody>
</table>
Voicing, manner, and place of articulation are together summarized in the following table:

<table>
<thead>
<tr>
<th>Manner of articulation</th>
<th>Place of articulation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Front</td>
</tr>
<tr>
<td></td>
<td>bilabial</td>
</tr>
<tr>
<td>plosive</td>
<td>p b</td>
</tr>
<tr>
<td>affricate</td>
<td></td>
</tr>
<tr>
<td>fricative</td>
<td>f v θ ð s z ʃ ʒ</td>
</tr>
<tr>
<td>nasal</td>
<td>m</td>
</tr>
<tr>
<td>Lateral</td>
<td>l</td>
</tr>
<tr>
<td>approximant</td>
<td>(w)</td>
</tr>
</tbody>
</table>

**Exercise 1**

We saw in Lesson two that there are 12 pure vowels and 8 diphthongs in English.

**English pure Vowels**

Listen to the tape and repeat after it.

1. /i/  
   - bead  
   - cheese  
   - police  
   - quay

2. /I/  
   - hit  
   - biggest  
   - mountain  
   - women

3. /u/  
   - book  
   - good
woman          push
pull

4. /u:/    food         rude
true         who
fruit        soup

5. /e/    egg          left
said         head
read         instead
any          leisure
leopard

6. /ə/    about        paper
banana       nation
the (before consonant)

7. /з:/    shirt        her
word         further
pearl        serve
myrtle

8. / /    fork         call
snore        taught
bought       board
saw          pour
broad        all
law          horse
hoarse

9. /æ/    hat           attack
antique      plait

10. /ʌ/    run           uncle
front        nourish
does         come
flood

11. /a:/    far           part
half class
command clerk
memoir aunty
hearth

dog often
cough want
because knowledge
Australia

Diphthongs

1. /iə/
   beer beard
   fear pierce
   Ian here
   Idea

2. /uə/
   sure moor
   tour obscure

3. /eə/
   where wear
   chair dare
   stare there

4. /ei/
   cake way
   weigh say
   pain they
   vein

5. /ai/
   toy avoid
   voice enjoy
   boy

6. /ai/
   high tie
   buy kite
   might cry
   eye

7. /au/
   go snow
   toast home
Exercise 2: Pronounce the following pairs

/i:/ and /u/

bead - bid  lead – lid  deed – did  heed – hid
reed – rid  greed – grid  greased – grist  scheme – skim
gene – gin  ease – is  leave – live  each – itch
beach – bitch  peach – pitch  reach – rich  leak – lick
peak – pick  teak – tick  check – chick  sleek – slick
seek – sick  week – wick  deal – dill  meal – mill
real – rill  seal – sill  teal – till  steal – still
eel – ill  feel – fill  heel – hill  kneel – nil
peel – pill  spiel – spill  team – Tim  deem – dim
bean – bin  dean – din  lean – Lynn  keen – kin
green – grin  seen – sin  teen – tin  heap – hip
cheap – chip  leap – lip  reap – rip  deep – dip
sheep – ship  sleep – slip  sneaker – snicker  eat – it
beat – bit  heat – hit  cheat – chit  feast - fist
wheat – whit  neat – knit  seat – sit  feet - fit

I and ei

bib – babe  limb – lame  hissed – haste  lid – laid
mid – maid  rid – raid  grid – grade  ridge – rage
give – gave  kick – cake  lick – lake  flick – flake
brick – brake  sick – sake  tick – take  stick – stake
quick – quake  wick – wake  nil – nail  bill – bale
bill – dale  fill – fail  gill – gale  hill – hale
skill – scale  mill – mail  pill – pail  rill – rail
trill – trail
dim – dame
chin – chain
grin – grain
drip – drape
his – haze
fit – fate
slit – slate
fist - faced
till – tail
bin – bane
kin – cane
sin – sane
grip – grape
hit – hate
spit – spate
list – laced
till – tail
fin - fain
pin – pane
win – wane
tip – tape
it – ate
skit – skate
wit – wait
wrist – raced
till – tail
still – stale
stale – quill
spin – Spain
riп – rape
shiver – shaver
bit – bait
lit – late
script – scraped
wrist – raced
mix - makes
dim – dame
chin – chain
grin – grain
drip – drape
his – haze
fit – fate
slit – slate
fist - faced
till – tail
fin - fain
pin – pane
win – wane
trill – trail
dim – dame
chin – chain
gin – Jane
spin – Spain
rip – rape
shaver – shaver
bit – bait
lit – late
script – scraped
wrist – raced
mix - makes
dead – dad
end – and
mend – manned
dense – dance
flesh – flash
peck – pack
gem – jam
gem – jam
gem – jam
men – man
leather – lather
bet – bat
set – sat
adept – adapt
guest – gassed
e and æ
dead – dad
end – and
mend – manned
dense – dance
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peck – pack
gem – jam
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dense – dance
flesh – flash
peck – pack
gem – jam
gem – jam
gem – jam
men – man
leather – lather
bet – bat
set – sat
adept – adapt
guest – gassed
æ and ^
cab – cub
sand – sunned
paddle – puddle
hag – hug
sang – sung
cab – cub
sand – sunned
paddle – puddle
hag – hug
sang – sung
cab – cub
sand – sunned
paddle – puddle
hag – hug
sang – sung
cab – cub
sand – sunned
paddle – puddle
hag – hug
sang – sung
lack – luck    track – truck    sack – suck    stack – stuck
bank – bunk    drank – drunk    mask – musk    task – tusk
cam – come    dam – dumb    ham – hum    tan – ton
sadden – sudden    cap – cup    clamp – clump    bass – bus

Exercise 3

Listen to the tape and repeat after it

(Plosive Consonants):
/p/     pin    cap    happen
/b/     bin    cab    cabbage
/t/     to    hat    hotter
/d/     do    had    harder
/k/     cot    pick    packet    queue
/g/     got    pig    forget

Affricate Consonants:
/tʃ/ church    nature
/dʒ/ judge    larger

Fricative Consonant:
/f/      fan    hoof    café    phase
/v/      van    hooves    cover    above
/θ/      think    both    mathematics
/ð/      the    bathe    father
/s/      sue    this    icy
/z/      zoo    these    lazy
/ʃ/      she    beige    nation
/ʒ/      fish    measure
/h/      hello    behind

Nasal Consonant:
/m/    more   room   camera
/n/    no      on     infant    know
/ŋ/    sing    sink    singing    sinking

Lateral Consonant:
/l/    live    pool    pulling

Approximants:
/r/    red     hurry    party    car
/j/    yes      young    usual    few    queue
               educate    suit
/w/    wood     walk     wet      wheat    hallway

Exercises 4: Pronounce the following pairs
p  and f
packed – fact    pail – fail
pan – fan    passion – fashion    past – fast
pig – fig    pile – file
pit – fit    plea – flea
pour – four    praise – phrase
leaped – leafed    lapped – laughed
leaping – leafing    snapping – sniffing
supper – suffer    reaps – reeds
cope – coughs    cups – cuffs
stripe – strife    wipe – wife
leap – leaf    reap – reef
skip – skiff    clip – cliff

f  and v
fail – veil    fairy – very
fat – vat    fault – vault

| feel – veal | feign – vain | fender – vendor | ferry – very |
| few – view | file – vile | final – vinyl | fine- vine |
| first – verse | focal – vocal | foist – voiced | fuse – views |
| shuffled – shoveled | infested – invested | rifle – rival | refuse – reviews |
| leafing – leaving | safer – saver | wafer – waiver | belief – believe |

| v and w |
| veil – wail | vain – wane | vary – wary | veered – weird |
| vend – wend | vent – went | veer – we’re | vet – wet |
| vile – wile | vine – wine | viper – wiper | visor – wiser |
| verse – worse | roved – rowed | moving – mooing | roving – rowing |
| dove – dough | groove – grew | grove – grow | stove – stow |

| θ and t |
| thank – tank | theme – team | thick – tick | thicker – ticker |
| thicket – ticket | thigh – tie | thin – tin | thong – tong |
| thorn – torn | thought – taught | thrash – trash | three – tree |
| threw – true | thrill – trill | thrust – trust | thug – tug |
| rethread – retread | ether – eater | deaths – debts | oats – oats |
| faiths – fates | tenths – tents | fourths – forts | sheath - sheet |
| myths – mitts | bath – bat | death – debt | heat – heat |
| math – mat | path – pat | wrath – rat | with – wit |
| both – boat | booth – boot | tooth – toot | broth – brought |
| froth – fraught | dearth – dirt | hearth – heart | growth – groat |

| ð and d |
| than – Dan | their – dare | then – den | thence – dense |
| they – day | those – doze | though – dough | thy – die |
| breathing – breeding | breathing – reading | loathing – loading | seething – seeding |
| other – udder | breathes – breeds | loathes – loads | worthy – wordy |
| bathe – bayed | sheathe – she’d | soothe – sued | scythe – side |
Exercise 5: Read the following dialogue
Listen to conversation between two friends.

Woman: Wasn’t that a fascinating lecture on dolphins? I didn’t know that dolphins traveled in such large groups, or were able to communicate with other members of their group with those whistle-like sounds.
Man: And they also use clicks as a sort of sonar.

Woman: I really couldn’t understand that part of the lecture. You could?

Man: Yes, the dolphins use clicks to identify objects in the water; they can even identify tiny objects more than 100 meters away using these clicks. Scientists believe that a dolphin may even have a sonar-like image in its brain of a distant object so that it can identify the object long before the dolphin can actually see the object.

Woman: So the dolphins use these clicks mostly to identify objects in the water?

Man: I think so, and they have considerably more ability to do this than humans do.

Woman: It is hard to believe that, in addition to these sonar clicks, dolphins are actually learning some human language.

Man: Yes, I believe that the lecturer said that some dolphins had already learned around fifty human commands, and that those dolphins were able to understand not only individual words but words clustered together in sentences!

Woman: Dolphins must certainly be amazing animals to do all of that.

Man: I’m sure they are, and we’re only just beginning to find out how intelligent they are.