PHONETIC AND PHONOLOGY

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FEREWORD

All praise and gratitude for the presence of Allah SWT on all occasions. Sholawat accompanied by greetings and prayers we convey to the Prophet Muhammad SAW. Alhamdulillah, for His Grace and Grace, the writer has finished this Phonetic And Phonology book.

This book discusses The production of speech sounds, The phoneme, Fricatives and africates, Nasals and other consonants, The syllable, Strong and weak syllables, Stress in simple words, Complex word stress, Problem in phonemic analysis, phonology.

The process of writing this book was successfully completed with the cooperation of the writing team. For the sake of better quality and reader satisfaction, we really look forward to suggestions and constructive feedback from readers.

The author would like to thank all those who have supported the completion of this book. Especially those who have helped to publish this book and have entrusted it to encourage and initiate the publication of this book. Hopefully this book can be useful for the people of Indonesia.

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Padang, September 2023

Author

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BAB 1
THE PRODUCTION SPEECH OF SOUND

By Andri Kurniawana

1.1 Articulators Above the Larynx

Humans can communicate verbally and in writing. The speech sound is crucial in spoken discourse. The study of speech sounds is known as phonetics. The study of speech sounds thus focuses on three areas: sound production, sound transmission, and sound perception. Phonetics of sound studies how speech sounds are conveyed and their physical properties, such as intensity, frequency, and duration, whereas auditory phonetics examines how speech sounds are perceived. Articulatory phonetics studies how speech sounds are created. The following topic does not include acoustic or auditory phonetics.

The study of articulatory phonetics has two subfields. We start by looking at the articulation, or production, of speech sounds. Secondly, categorizing sounds based on the attributes they possess.

When we speak, our muscles contract, which produces all of the noises that come out. The breathing muscles in the chest create the airflow needed for almost all speech sounds, and the larynx causes a range of changes in the airflow from the chest to the mouth. The vocal tract, which is where the mouth and nose are located, is where the air travels after passing through the larynx. This is where lungs' air exits into the atmosphere. It is essential to familiarize yourself with the

various parts of the vocal tract in order to comprehend how speech sounds are created. We have a large and intricate collection of muscles that can alter the curvature of the vocal tract. These parts are referred to as articulators, and the study of these numerous components is known as articulatory phonetics.

1. The pharynx
   A tube that starts just above the larynx is the pharynx. It measures around 7 cm in length in women and 8 cm in males, and it is split in half at its top end, with one part going through the back of the mouth and the other beginning to go through the nasal cavity.
   The back of the pharynx can be seen in your bathroom mirror if you look in it while opening your mouth.

2. The velum of soft palate
   The soft palate, also known as the or velum, is displayed in a position that allows air to pass through the mouth and nose. Yours is likely in that position right now, but during speech, it is frequently lifted to prevent air from escaping via the nose. The velum's ability to be touched by the tongue makes it one of the articulators that is also significant. We refer to the sounds [k] and [g], which are made when the tongue comes into contact with the velum's bottom side, as velar consonants.

3. The hard palate
   Called the "roof of the mouth" is another name for the hard palate. Your tongue can touch its silky, curving surface.

4. The alveolar ridge
   The alveolar ridge is a bulge directly behind the teeth. It is situated between the hard palate and the upper front teeth.

Your tongue can detect its form. Its surface has tiny ridges and is actually much rougher than it appears to be. Only a mirror that can fit into your mouth (like the ones dentists use) will allow you to see these. The sounds made here with the tongue in contact, such as [t] and [d], are known as alveolar sounds.

5. The tongue

   The tongue may be moved into a variety of postures and forms and is obviously a very important articulator. Even though the tongue has no borders, it is sometimes divided into different segments. The tongue can be divided into a number of portions to describe sounds, despite the fact that the surface of the tongue itself does not appear to have any divisions. A bigger version of the tongue with these parts highlighted:

   a. To tip or point
   b. Blade— this is located below the alveolar ridge.
   c. Front—this is the central region below the hard palate.
   d. Back— this region is located across from the velum and uvula.
   e. Root— a portion that is relatively vertical and faces the pharynx's back wall.
   f. The teeth, you should keep in mind that most speakers have teeth that extend practically to the soft palate on either side of their lips. For many speaking sounds, the tongue makes contact with the upper-side teeth. Dental noises are those produced when the tongue touches the front teeth.
   g. The lips play a crucial role in speech. When making the sounds [p], [b], [f], or [v], they can be squeezed together, brought into contact with the teeth, or rounded to create the lip-shape for vowels like [u:].

Lips-to-lip sounds are referred to as bilabial sounds, whereas lips-to-teeth sounds are referred to as labiodentals.

Three different mechanisms are involved in the creation of speech sound. They are phonation, articulation, and initiation.

1. Initiation
   Any speaking sound must be produced by an airstream being created in the vocal tract. The air in the tract may be compressed or rarified to produce the airstream. Lungs are what start the airstream in English. An airstream flows outward when the lungs constrict, pushing air outward. This is referred to as pulmonic egressive since it originates from the lungs and flows outward.

2. Phonation
   The vocal cords can alter the voice is created by the pulmonic egressive airstream as it passes through the larynx.
   Speech would be reduced to a whisper without voice.
   Air leaving the lungs causes the vocal cords to vibrate when they are brought together, which results in voice production. Voiced sounds are those made while the vocal chords are vibrating. The voice cords cannot vibrate if they are pulled back. Voiceless sounds are those made without the vocal chords vibrating. When breathing, the vocal chords are pulled back, allowing air to easily enter and exit the lungs.

3. Articulation
   The movement of the articulation, or the lips' and tongue's various degrees of obstruction of the airstream's passage

through the vocal tract, can alter how the airstream behaves as it travels through the vocal tract. We refer to this procedure as articulation. The area on the roof of the mouth, such as the alveolar ridge, hard palate, etc., is an active articulator moving toward a passive articulator and produces obstruction of the airstream at any point in the vocal tract.

In short, there are various steps involved in creating sounds. The larynx, also referred to as the voice box, houses the vocal cords and receives air from the lungs through the trachea. The passage of air causes the vocal cords to vibrate if they are just slightly tense, which gives the air stream, which continues into the throat, establishing a fundamental sound quality for voice. Voice quality establishes the distinctive qualities of each speaker's voice, making it possible to identify someone just by listening to their speech. The uvula, a moveable flap located above the pharynx, regulates airflow across the nasal cavity.

When someone breathes via their nose, their uvula is constantly open. However, when they are speaking, their uvula is only occasionally open. When speaking, typically, the velum (or soft palate) is closed, and the air is exhaled through the mouth, whose size changes in response to the interplay of the tongue and lips. These modifications lead to the distinctive sounds that are shared by all native speakers of a language. Phonetics is the study of these speech sounds.

Any spoken sound is produced by the movement of an airstream. By forcing air from the lungs out of the body through the mouth and occasionally the nose, the majority of speech sounds are created. These noises are known as pulmonic sounds because lung air is utilized, and egressive sounds because air is pushed out of the body. A pulmonic

egressive airstream mechanism produces the vast majority of sounds utilized in languages around the world. This method is used to make all of the sounds in English.

1.2 Phonetic Transcription

A standard technique for transcription of speech sounds has been sought after since the sixteenth century. The International Phonetic Alphabet (IPA) is the scheme that is best known. The correspondence between the symbols and sounds in this alphabet is one to one.

Symbols	**Examples**
p	apple, plenty, plague, appear, tap, pit, spit, tip
b	brick, amble, black, bubble, bat, tab
m	Emmy, camp, comb, mat, tam, smack, amnesia, ample
t	Kissed, kicked stuffed, Tap, pat, stick, mentor, scenting
d	dip, cad, drip, guard, sending, mender, loved, cured, robbed, batted
n	nap, can, snow, know, mnemonic, any, pint, diagnostic, design, sign, thin
k	antic, close, mechanic, exceed,

Symbols	Examples
	kit, cat, charisma, character, stick, critique
g	guard, burg, bag, agnostic, longer, designate
N	long, think, finger, ankle, singer (The sound indicated by the n in thin is not created in the same manner as the sound represented by the n in thin; compare the tongue gestures of the two words to see how they differ.)
f	fat, fish, philosophy, fracture, flat, phlogiston, coffee, reef, cough, comfort
v	vat, dove, rival, gravel, anvil, ravage
s	pats, packs, democracy, scissors, fasten, deceive, descent, sclerosis, sap, skip, snip, psychology, pass, pseudo, rhapsody, peace, potassium
z	zip, jazz, razor, pads, kisses, Xerox, xylophone, design, lazy, maize, lies, physics, peas,

Symbols	Examples
	magnesium
θ	thigh, through, wrath, thistle, ether, wreath, think, month, arithmetic, teeth, Matthew
ð	the, their, then, wreathe, lathe, mother, either, rather, teethe
Σ	deduction, Russian, logician, shoe, shy, mush, marsh, mission, nation, fish, glacial, sure,
Z	measure, vision, azure ± choke, church, match, feature, rich, lunch, righteous, constituent
→	judge, midget, George, magistrate, jello, gelatine, region, residual
l	leaf, feel, lock, call, palace, single, mild, plant, pulp, applaud
r	reef, fear, rock, cars, Paris, singer, prune, carp, furl, cruel
j	you, yes, playing, feud, use
w	with, swim, mowing, queen
€	which, where, what, whale

Symbols	Examples
h	who, hat, rehash, hole, whole
♣	bottle, button, Latin, glottal

Vowels and consonants make up the main division of sounds. This distinction is made in all languages. Vowels are those sounds made when the oral cavity is comparatively exposed to the airflow. Consonants, in contrast to vowels, are spoken sounds that are generated with enough vocal tract narrowing to prevent them from acting as syllable nuclei (the nucleus is the "heart" of the syllable, including stress, loudness, pitch information, and frequently consisting of a vowel). Condensed, consonants are sounds made when the oral cavity is constricted or occluded.

1.3 Voiced and Voiceless sound

In articulatory phonetics, we look into how our very sophisticated oral apparatus produces speech sounds. The air that the lungs exhale first pushes up through the trachea (or windpipe) to the larynx is where we begin. The vocal cords are located inside the larynx and can be found in two basic positions.

1. Air from the lungs goes through the vocal chords unhindered when they are split apart. Such sounds are referred to as voiceless sounds.
2. The air from the lungs repeatedly pulls the voice cords apart as it passes through while they are drawn together, producing a vibrating effect. This type of sound production is referred to as voiced.

You may feel your larynx in your neck below your chin, or at the top of your "Adam's apple," by gently pressing a fingertip there, and then make noises like Z-ZZ-Z or V-V-V-V, you can actually feel the difference. You ought to feel some vibration since they are vocal noises. Now, while maintaining your fingertip's position, utter the letters S-S-S-S or F-F-F-F. There shouldn't be any vibration because these noises lack voice. Another approach is to place a finger, not too far in, in each ear and create voiced noises, such as Z-Z-Z-Z, to hear and feel some vibration; however, if you make voiceless sounds, such as S-S-S-S, There will be no sound or vibration.

1.4 Place/Point of Articulation

The articulators' movement, or the lips' and tongue's various degrees of obstruction of the airstream as it goes through the vocal tract, can alter how it behaves. We refer to this procedure as articulation. The occlusion of the airstream results from an active articulator moving in the direction of a passive articulator and can happen anywhere along the vocal tract. The lips and tongue are the active articulators, whereas the alveolar ridge, hard palate, and other structures on the roof of the mouth are the passive articulators.

We typically separate the articulatory process according to the location in the vocal tract where airflow blockage takes place. It speaks of the location or point of articulation. A language may have different articulation points than another. However, there are seven groups of consonants in English: bilabial, labiodental, dental/interdental, alveolar, palatal, velar, and glottal/pharyngeal.

1. Bilabial

   Bilabial sounds are made using both lips. Five similar sounds are possible in English: [p] pat, [b] bat, [m] mat, [w] with, and [wh] where (only found in some dialects). We

could argue that the lower lip is the active articulator and the upper lip is the passive articulator, even though the upper lip usually moves at least somewhat as well.

2. Labiodental
   The lower lip is placed up against the top front teeth to produce labiodental consonants. The two labiodentals in English are [f] for fat and [v] for vat. The lower lip is the active articulator, while the top teeth are the passive one.
3. Dental/Interdental
   To form interdentals, the tongue tip is positioned in between the front teeth. There are two interdental sounds in English: [θ] thigh and [ð] thy.
4. Alveolar
   There is a little ridge located directly below your top front teeth known as the alveolar ridge. At or near this crest, English speakers can hear seven different sounds: [t] tab, [d] dab, [s] sip, [z] zip, [n] noose, [l] loose, and [r] red.
5. Palatal
   The front portion of your mouth's roof is hard, whereas the posterior portion is soft, as can be seen if you run your finger back along it. The term "palatal" refers to sounds produced close to the hard palate. The palatal area of the English language produces five sounds: [Σ] leash, [Z] measure, [±] church, [→] judge, and [j] yes.
6. Velar
   The term "vellum" refers to the soft part of the palate that lies behind the hard palate. Velar sounds are those produced close to the velum. The English language has three velar sounds: [k] kill, [g] gill, and [ŋ] sing.
7. Glottal/Pharyngeal
   The glottis is the area between the vocal folds. The glottis produces two sounds in English. First one is simple to pronounce: [h] as in high and history. The second sound is

referred to as a glottal stop and is phonetically represented by the letter [♣] (a question mark without the dot). Each vowel sound in the word "uh-oh" is preceded by this sound.

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BAB 2
PHONEME

By Nike Puspita Wanodyatama Pasaribu

2.1 What is a phoneme?

Phonemes are the smallest sounds that can distinguish meaning, while letters are sound symbols or phoneme symbols. For example in the words sewing and evil, what distinguishes these words is the sound /i/ which is symbolized by the letter i and the sound /a/ which is symbolized by the letter a. Sounds /i/ and sounds /a/ are also called phonemes. So it can be concluded that phonemes are not letters, but phonemes are the sounds of letters, and letters are symbols of sounds.

(Carr, 1999) describes a phoneme is the smallest unit of meaningful sound within a specific language. When we exchange one phoneme for another, it will likely change the meaning of the word. For example, changing the phoneme **/p/** to **/t/** changes the word *sheep* to *sheet.* In phonetics, a phoneme is a minimal unit that cannot be broken up into smaller units, and it is represented by the *slash brackets*, as in /n/.

2.2 English phonemes

English has 26 letters in its alphabet but 44 different phonemes. The 44 phonemes can be divided up into two groups, there are 20 vowel sounds and 24 consonant sounds.
Short and long vowel sounds:

Short vowel sounds	Long vowel sounds
a - cat, bat, ant	ai - paid, way, stay
e - bed, red	ee - bee, heat, feet
i - big, sit	ie - sky, high
o - dog, log	oe - bpw, roe
u - put, book	ue - cue, moon

Other vowel sounds:

Vowel phonemes	Examples
ar	car, far, star
er/ir/ur	fern, bird, turn
or	born, core
ow/ou	now, cow
oy/oi	toy, joy
eer/ear	hear, fear, deer
air, ere	stair, chair, there

our	four, your
schwa (ə)	balloon, bottom, family

Consonant phonemes:

Consonant phonemes	**Examples**
b	box, black
c	cup, cake
ch	chop, change
d	day, dog
f	fast, feet
g	get, gap
h	hit, horse
j	jar, June
l	long, left
m	met, mat
n	not, next

Consonant phonemes	Examples
p	part, post
r	rat, rest
s	seat, soft
sh	ship, shift
t	tip, test
th	thin
th	these, those
v	vest, vote
w	we, wore
y	yet, your
z	zoo, zip
ng	ring, sing
ge	collage

Letters of the alphabet and phonemes are quite closely linked, which is why is can be referred to as the 'phonemic

alphabet'. For instance, the grapheme ‘f’ shows the pure /f/ sound, while the grapheme ‘a’ represents the short ‘a’ sound. When two letters come together to represent a single sound, we call it a digraph. There are also some trigraphs, which is where three letters form one sound. In fact, a grapheme can consist of up to four letters.

The 44 English phonemes are divided into three distinct categories:

1. Monopthongs
   Pure vowel sounds, spoken with one tone and one mouth shape.
2. Diphthongs
   Sounds created with two vowel sounds. Diphthongs are also called gliding vowels, as one vowel sound glides into the other.
3. Consonants
   Basic speech sounds produced by obstructing breath in the vocal tract.

The monophthongs are arranged in accordance with the mouth shape we make when producing the sound.
Left → right = lips wide → lips rounded. For example, sheep → too.
Top → bottom = jaw closed → jaw open. For example, book → part.

“The diphthongs are arranged in the same way as monophthongs and are based on the final vowel sound”. The first two lines of consonants are arranged in voiced and voiceless pairs. As examples, let’s look at the consonant pairs /p/ and /b/. These two sounds are consonant pairs as the sounds are very similar, and the mouth shape needed to produce the sounds is almost identical. However, the difference

between the two phonemes is that /p/ is voiceless and /b/ is voiced.

Diphthongs are two vowels that are pronounced at the same time. A combination of vowels is called a diphthong if it produces only one sound.

A combined vowel is called a diphthong when it is still in the same syllable. Conversely, if it is in a different syllable then the vowel combination cannot be called a diphthong.

Monophthongs are two vowels that are pronounced as a single vowel. The single vowel is produced from a syllable that has the quality of articulation of the speech apparatus consistently and remains from beginning to end. Monophthongs or pure vowels can be contrasted with diphthongs. The process of change is called monophthongization.

1. **What are some examples of a phoneme?**

   /θ/ is an example of a phoneme. The /θ/ symbol represents the voiceless 'th' sound in English i.e. ***th****rough.* Another example is the minimal pair of pat and bat. The difference between the /p/ and /b/ phonemes changes the entire meaning of the words. The basic form of a sound as sensed mentally rather than spoken or heard, that is phoneme. Each phoneme – a mental abstraction in itself – is manifested aurally by one or more sounds, called allophones, which are the perceivable sounds corresponding to the phoneme in various environments. The phoneme /p/ is pronounced with the aspiration allophone [ph] in *pit* but without aspiration [p] in *spit*. Phonological rules operate on phonemes to make explicit which allophones are pronounced in which environments (Fromkin, 2014). Phoneme is the single abstract unit of sound type which is represented by a single symbol. The phoneme system of a speaker's native language, and

specifically the difference between pairs of sounds which contrast and pairs which do not, strongly condition her perceptions.

2. How to Find Phonemes

(Katamba, 1988) describes Phonemes are the dark matter of phonology; they are not physical sounds and directly observable. The phonological rules of the language apply to phonemes to determine the pronunciation of words. The process of substituting one sound for another in a word to see if it makes a difference is a good way to identify the phonemes of a language. Here are twelve words differing only in their vowels:

beat [bit] [i]	boot [but] [u]
bit [bɪt] [ɪ]	but [bʌt] [ʌ]
bait [bet] [e]	boat [bot] [o]
bet bought [bɔt] [ɔ]	bat [bæt] [æ]
bout [baʊt] [aʊ]	bite [baɪt] [aɪ]
bot [bat] [a]	

Any two of these words form a minimal pair: two different words that differ in one sound in the same position. The two sounds that cause the word difference belong to different phonemes. The pair [bid] and [bĩd] are not different words; they are variants of the same word. Therefore, [i] and [ĩ] do not belong to different phonemes. They are two actualizations of the same phoneme. From the minimal set of [b_t] words we can infer that English has at least twelve vowel phonemes. (We consider diphthongs to function as single vowel sounds.) To that total we can add a phoneme corresponding to [ʊ] resulting from minimal pairs such as book [bʊk] and beak [bik]; and we can add one for [ɔɪ] resulting from minimal pairs such as

boy [bɔɪ] and buy [baɪ]. Minimal pair analysis has revealed eleven monophthongal and three diphthongal vowel phonemes, namely, /i/, /ɪ/, /e/, /ɛ/, /æ/, /u/, /ʊ/, /o/, /ɔ/, /a/,/ʌ/, and /aɪ/, /aʊ/, and /ɔɪ/. Each of these vowel phonemes has (at least) two allophones (i.e., two ways of being pronounced: orally as [i], [ɪ], [e], etc., and nasally as [ĩ], [ɪ] , [ẽ], etc.), as determined by the phonological rule of nasalization.

A particular realization (pronunciation) of a phoneme is called a phone. The aggregate of phones that are the realizations of the same phoneme are called the allophones of that phoneme. Each vowel phoneme has both an oral and a nasalized allophone. The choice of the allophone is not random or haphazard, it is rule-governed. To distinguish graphically between a phoneme and its allophones, we use slashes / / to enclose phonemes and continue to use square brackets [ ] for allophones or phones. [i] and [ĩ] are allophones of the phoneme /i/; [ɪ] and [ɪ] are allophones of the phoneme /ɪ/, and so on. Thus we will represent bead and bean phonemically as /bid/ and /bin/. We refer to these as phonemic transcriptions of the two words. The rule for the distribution of oral and nasal vowels in English shows that phonetically these words will be pronounced as [bid] and [bĩn]. The pronunciations are indicated by phonetic transcriptions, and written between square brackets.

Minimal pairs illustrate that some speech sounds in a language are contrastive and can be used to make different words such as *big* and *dig*. These contrastive sounds group themselves into the phonemes of that language. Some sounds are non-contrastive and cannot be used to make different words. The sounds [th] and [ɾ] were cited as examples that do not contrast in English, so [raɪthər] and

[raɪrər] are not a minimal pair, but rather alternate ways in which *writer* may be pronounced. Oral and nasal vowels in English are also non-contrastive sounds. The oral and nasal allophones of each vowel phoneme never occur in the same phonological context. Where oral vowels occur, nasal vowels do not occur, and vice versa. In this sense the phones are said to complement each other or to be in complementary distribution. Complementary distribution is a fundamental concept of phonology, and interestingly enough, it shows up in everyday life. Here are a couple of examples that draw on the common experience of reading and writing English.

Morpheme is the smallest unit of a word that has meaning. Each word consists of one or more morphemes. Morphemes can be in the form of base words (or stems), namely the basic form of a word, or affixes (prefixes, insertions, or suffixes), namely forms added to base words to form new words with different meanings.

2.3 What are vowels?

Letters and speech sounds are divided into two categories: sounds where the air is blocked by the lips, tongue, or throat before leaving the mouth and sounds where the air is not blocked. Consonants represent sounds that are blocked; vowels represent sounds that are not blocked. While consonant sounds are differentiated by how the air is blocked—such as sticking the tongue behind the front teeth for *d* and *t*, or closing the lips for *b*, *m*, and *p*—vowel sounds are differentiated by pitch, accent, volume, and duration. The letters *a*, *e*, *i*, *o*, *u*, and sometimes *y* that are vowels. Some consonants, like *h*, *r*, and *w*, can also make vowel sounds. These letters are still considered consonants and don't follow the vowel rules.

Vowels play a major role in both spelling and grammar. They also have a direct impact on how consonants are used, such as spelling words with double consonants. Consider the difference between *hop* and *hope*—which, as present participles, become *hopping and hoping*. The presence of the silent *e* at the end changes the rules for how to conjugate certain words. Every word needs at least one vowel. There are a small number of exceptions, which we explain below, but in general, this is the rule. "The shortest words in the English language are one letter, and they're both vowels; the article *a* and the pronoun *I*." Every syllable also needs a vowel sound. If a word has more than one syllable, it then needs more than one vowel.

1. **Short vs. Long Vowels**

   "Short vowels are the standard pronunciation of vowels usually when there is only one vowel in the word, especially in short words".

   a. *a* as in *cat*
   b. *e* as in *wet*
   c. *i* as in *big*
   d. *o* as in *clock*
   e. *u* as in *but*

   Long vowels are a little more complex. Generally, they're created by combining two vowels, where one is typically silent. They're pronounced like the name of the vowel; for example, the long vowel sound in *eat* is pronounced like the name of letter *e*.

   a. *a* as in *cake*
   b. *e* as in *street*
   c. *i* as in *like*
   d. *o* as in *phone*
   e. *u* as in *use*

These are the basics of vowel pronunciation.

2. **Vowel sounds and syllable stress**

Vowel sounds and syllables are closely related. (Hazen, 2015) explains Syllables are naturally occurring units of sound that create the rhythm of spoken English. Words with multiple syllables always have one syllable that is stressed. Unstressed syllables may contain schwa /ə/, and can have almost any spelling. In addition, three consonant sounds, the n sound, l sound, and r sound (called 'schwa+r' /ɚ/ when it is syllabic) can create a syllable without an additional vowel sound. These are called syllabic consonants.

2.4 Phonemes and Allophones

An allophone is a variation of a phoneme. A phoneme, on the other hand, is a category that exists in our minds. So, if we want to convey the idea of/t/ (phoneme), we have to choose one of the ways (allophones) to produce it. These various ways to convey each building block are the allophones. Not every difference in pronunciation can (or should) be cued. Cued speech represents phonemes not allophones. So, understanding the difference is important. Let's look at some more phoneme examples, starting with the word 'rate'. If you changed the phoneme **/eɪ/** (the long 'a' sound) in the word *rate* to the phoneme **/æ/** (the short 'a' sound), you would get a whole new word - *rat*. This is because phonemes are meaningful units of sound and have an impact on the meaning of words. Take a look at the word *thought*. The phonemic transcription is: **/θɔːt/.** In order to understand allophones and how they function, it helps to have a basic understanding of linguistics, the study of language, and phonology (or how sound functions within a language). One of the basic building blocks of language

is phonemes. They are the smallest sound units capable of conveying a distinct meaning, such as the *s* in "sing" and the *r* of "ring."

Allophones are a kind of phoneme that changes its sound based on how a word is spelled. Think of the letter *t* and what kind of sound it makes in the word "tar" compared with "stuff." It's pronounced with a more forceful, clipped sound in the first example than it is in the second. Linguists use special punctuation to designate phonemes. The sound of an *l*, for instance, is written as "/l/." Substituting one allophone for another allophone of the same phoneme doesn't lead to a different word, just a different pronunciation of the same word. For this reason, allophones are said to be noncontrastive. For example, consider the tomato. Some people pronounce this word "toe-MAY-toe," while others pronounce it "toe-MAH-toe." The definition of "tomato" doesn't change, regardless of whether it's pronounced with a hard *a* or a softer tone. An allophone is an imperceptibly slight variation on a given vocal sound of a language. For example, the letter *k* in *kill* and *skill* may sound the same to most people, but are very different sounds under critical phonetic analysis. If the two variations of the letter were mispronounced, by say a non-native speaker, the meaning of the word will not have changed, but most people will instantly hear it initially as less than intelligible. The Greek root *phone* means “sound,” and the prefix *allos* means “other. The study of language, a phoneme is the smallest distinctive unit of sound. The consonant *k* is a phoneme, and replacing it with another sound unit such as *t* will change the meaning of the word. Each of these singular phonemes however can have multiple ways to be voiced.

We can distinguish between allophones and phonemes by looking at the letter and how it's being used. The letter *p* is pronounced the same way in "pit" and "keep,"

making it an allophone. But *p* makes a different sound than *s* in "sip" and "seep." In this instance, each consonant has its own consistent allophone, but they each produce different sounds, making them unique phonemes. For non-native English speakers, allophones and phonemes prove a special challenge. A letter that has one pronunciation in their native language may sound utterly different in English. For example, the letters *b* and *v* have distinct phonemes in English, which is to say they sound different when pronounced. However, in Spanish those same two consonants are pronounced similarly, making them allophones in that language.

Phonemes are abstractions of speech sounds, not the sounds themselves, they have no direct phonetic transcription. When they are realized without much allophonic variation, a simple broad transcription is used. However, when there are complementary allophones of a phoneme, the allophone becomes significant and things then become more complicated. Often, if only one of the allophones is simple to transcribe, in the sense of not requiring diacritics, that representation is chosen for the phoneme. However, there may be several such allophones, or the linguist may prefer greater precision than that allows. In such cases, a common convention is to use the "elsewhere condition" to decide the allophone that stands for the phoneme. The "elsewhere" allophone is the one that remains once the conditions for the others are described by phonological rules. English has both oral and nasal allophones of its vowels. The pattern is that vowels are nasal only before a nasal consonant in the same syllable; elsewhere, they are oral. Therefore, by the "elsewhere" convention, the oral allophones are considered basic, and nasal vowels in English are considered to be allophones of oral phonemes. In other cases, an allophone may be chosen to represent its phoneme because it is more common in the languages of the world than the other

allophones, because it reflects the historical origin of the phoneme, or because it gives a more balanced look to a chart of the phonemic inventory. An alternative, which is commonly used for archiphonemes, is to use a capital letter, such as /N/ for [m], [n], [ŋ].

"The concepts of phonemes and allophones become clearer by analogy with the letters of the alphabet. We recognize that symbols are despite many variations in size, colour, and (to some extent) shape. The representation of the letter a is influenced in handwriting by the letters preceding it or afterwards which are joined. Writers can form idiosyncratic letters and can change their writing according to whether they are tired or in a hurry or nervous. The variations in visual representation are analogous to allophones of phonemes, and what is different from other letters of the alphabet is analogous to phonemes."

1. **Phonemes: phonemic transcription**

   When transcribing phonemes, we use the broad transcription (this means we only include the important phonemes that are vital to the correct pronunciation of the word) and place the transcription between two slashes (/ /). The phonemic transcription of the word '*language*' looks like this /ˈlæŋgwɪʤ/.

   Phonemic transcriptions are the most common type of transcription. If you want to learn the correct pronunciation of a word, a dictionary will provide the phonemic transcription. You may have seen transcriptions between two square brackets ([ ]) before; these are called phonetic transcriptions. This brings us to our next topic, phonemes vs. phones.

2. **Phonemes: minimal pairs**

   "Minimal pairs are two words that sound similar but have one phoneme different, positioned in the same place

in the word". For example, *lock* and *rock*. The difference between the **/l/** and **/r/** phonemes changes the entire meaning of the words.

Another common example of a minimal pair is the words *ship* and *sheep*. Here, the vowel phonemes in the middle of the word differ, creating two completely different words.

a. A phoneme is the smallest unit of meaningful sound.
b. We study phonemes in phonology, the branch of linguistics that helps us understand the relationship between speech sounds and meaning within a specific language.
c. Phonemes are language-specific - there are 44 phonemes in the English language (20 vowel and 24 consonant sounds).
d. When transcribing phonemes, we use the English phonemic chart and place the transcription between two slashes (/ /).

2.5 Speech Perception

A phoneme can be defined as the smallest class of sounds that leads, in a specific language, to differences in meaning, as stated by (McMahon, 2002). For example, in English, /l/ and /r/ are two phonemes because replacing one with the other produces words with different meanings, as is apparent with '*r*oyal' and '*l*oyal.' (Note that phonemes are usually indicated by two slashes.) By contrast, /l/ and /r/ do not affect meaning in languages such as Japanese and Thai and thus are two instances of a single phoneme. Infants face two sources of difficulty in finding out which phonemes to use (Rowland, 2014). The sound pattern of phonemes lacks acoustic invariance. Phonemes vary considerably in the way they are pronounced (the variations are called 'phones'),

people speak with different accents, different speeds, and different pitches of voice (e.g., male vs female voices).

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BAB 3
FRICATIVES AND AFRICATES

By Djoko Sutrisno

3.1 Introduction

Fricatives and affricates are fundamental concepts in the realm of phonetics, the scientific study of speech sounds. They are pivotal elements that shape the auditory landscape of language, influencing the richness and complexity of human communication. By modulating the flow of air through the vocal tract, these consonant sounds contribute to the diverse tapestry of linguistic expression.

In the intricate symphony of spoken language, consonants serve as the building blocks that construct words and convey meaning. Among these, fricatives and affricates stand out as distinct categories, each bearing its own unique acoustic signature and articulatory nuances. These two types of consonants share a common thread: they both involve a controlled obstruction or constriction of the airflow as it traverses the vocal tract. Yet, their manner of articulation, acoustic properties, and perceptual characteristics set them apart in the intricate dance of phonetic elements.

Fricatives, the first of our focal points, are the auditory result of a remarkable interplay between airflow and constriction. When producing fricatives, speakers intentionally narrow the passageway within their vocal tract, causing the passing airstream to encounter resistance. This resistance gives rise to the distinctive auditory hallmark of fricatives: a continuous and audible turbulence, akin to the gentle rustling of leaves in the wind. Unlike other consonants that involve a

complete closure of the vocal tract, fricatives maintain a partial constriction, allowing for a sustained stream of sound. The vocal cords, however, usually remain uninvolved in this process. As air is propelled through the constricted channel, it generates friction, producing a distinct sound that we recognize as fricatives.

Consider the fricative /s/ as in the word "sun." As air flows through the narrowed gap between the tongue and the alveolar ridge, it generates a hissing sound, creating an audible friction. Similarly, the fricative /ʃ/ in words like "shoe" is produced by shaping the vocal tract to channel the airstream through a constricted groove, resulting in the characteristic hushing sound.

Affricates, on the other hand, add a layer of complexity to the consonant soundscape. They combine the attributes of both stops and fricatives, encompassing a distinct articulatory trajectory. Affricates commence with a momentary closure of the vocal tract, creating a complete obstruction of airflow. This closure is akin to the silence between heartbeats, a brief pause that anticipates the release. As the closure is gradually relaxed, the airflow is released, generating a transition from silence to sound. This moment of release gives birth to the fricative component of the affricate, characterized by the friction-induced resonance that follows the initial stop.

For instance, consider the affricate /ʧ/ in the word "church." The sequence begins with a stop closure, as the tongue momentarily halts the airflow. Subsequently, the closure is lifted, and the airstream is directed through a narrow passage, resulting in the fricative sound that follows the stop. A similar pattern is observed with the affricate /ʤ/ in words like "judge."

In the grand tapestry of language, fricatives and affricates serve as unique threads that interweave to form the phonetic fabric

of communication. They contribute to the auditory distinctiveness of languages, allowing speakers to convey subtleties of meaning and emotion. The difference in their articulatory execution and acoustic properties adds depth and richness to spoken language, underscoring the intricate mechanisms that underpin our capacity to converse, share stories, and connect on a deeply human level.

3.2 Fricatives

Fricatives are a distinctive class of consonant sounds that play a crucial role in shaping the auditory landscape of human speech. These sounds are characterized by the controlled manipulation of airflow within the vocal tract, resulting in a continuous, turbulent, and often hissing or hushing auditory quality. By understanding the mechanics and nuances of fricatives, we can delve deeper into the intricate mechanisms that underpin our capacity to communicate effectively.

In the realm of phonetics, fricatives are produced by deliberately creating a narrow constriction or obstruction within the vocal tract. This constriction forces the incoming airstream to encounter resistance, generating a turbulent airflow. This turbulence, in turn, leads to the production of a distinct auditory quality characterized by a continuous and audible friction-like sound. Unlike other consonant sounds, such as stops or nasals, which involve a complete closure of the vocal tract, fricatives maintain a partial constriction. This allows for a sustained and controlled passage of air, resulting in the characteristic hissing, hushing, or buzzing sounds that define fricatives.

A notable feature of fricatives is that they generally do not involve the vibration of the vocal cords. This means that during the production of fricative sounds, the vocal cords are

held apart, allowing the airstream to pass through the narrow constriction and generate the friction-induced auditory quality. This separation of the vocal cords contributes to the relatively unvoiced nature of fricative sounds. Instead of relying on the vibration of the vocal cords, fricatives derive their acoustic characteristics primarily from the manipulation of the airstream as it navigates the constriction within the vocal tract.

Examples of fricative sounds abound in various languages, each contributing to the distinctiveness of their respective phonetic systems. Let's explore some of these examples:

1. The fricative /f/ is produced by pressing the lower lip against the upper teeth, creating a narrow passage for the airstream. This results in the sound you hear in words like "fun" and "fine."
2. The voiced fricative /v/ is similar to /f/, but with the added vibration of the vocal cords. It is heard in words like "voice" and "ever."
3. The voiceless dental fricative /θ/ is formed by placing the tongue against the upper front teeth. It is the sound you hear in words like "think" and "both."
4. The voiced dental fricative /ð/ also involves placing the tongue against the upper front teeth, but with vocal cord vibration. It's heard in words like "this" and "brother."
5. The voiceless alveolar fricative /s/ is created by maintaining a gap between the tongue and the alveolar ridge. You'll recognize this sound in words like "see" and "sun."
6. The voiced alveolar fricative /z/ is similar to /s/ but is voiced. It's found in words like "zebra" and "amaze."

This intricate interplay between the mechanics of speech production and the resulting auditory output

underscores the remarkable precision and adaptability of the human vocal apparatus. Fricatives are not just arbitrary sounds; they are the result of coordinated articulatory gestures that speakers unconsciously perform with astounding accuracy.

The diversity of fricative sounds across languages offers a fascinating glimpse into the intricate phonetic landscape that humanity has cultivated. While the English language features familiar fricatives like /s/, /z/, /ʃ/, and /ʒ/, other languages may exhibit additional fricatives or variations in their articulation. For instance, languages like Spanish and German include distinctive fricatives that might be absent in English.

Moreover, fricatives can vary in their prominence and frequency of occurrence within different languages. Some languages may rely more heavily on fricative sounds for phonemic distinctions, while others may use them more sparingly. This variation underscores the intricate balance between universal speech production mechanisms and the specific phonetic characteristics that distinguish individual languages.

The perceptual aspect of fricatives is equally captivating. The human auditory system is finely tuned to detect and differentiate between fricative sounds, even amidst other acoustic complexities. This sensitivity is a testament to the crucial role fricatives play in conveying linguistic meaning. It allows us to distinguish between words like "ship" and "sip," where the only difference lies in the presence of the voiceless fricative /ʃ/ versus the voiceless alveolar fricative /s/.

Beyond linguistic nuances, fricatives also have practical implications for speech disorders and language acquisition. Children acquiring language must learn to master the intricate articulatory gestures required for producing accurate fricatives. Speech therapists often focus on helping individuals refine their fricative production, as correct articulation can

significantly impact speech intelligibility and communication effectiveness.

Additionally, fricatives can pose challenges for individuals with certain speech disorders, such as lisps, where the proper formation of fricative sounds may be compromised. The detailed study of fricatives within the context of speech disorders sheds light on the complexities of articulatory control and the mechanisms underlying speech rehabilitation.

In linguistics and phonetics, the study of fricatives transcends the realm of individual sounds. It delves into the intersection of physiology, acoustics, psychology, and culture. Fricatives reflect the evolutionary development of our vocal apparatus, showcasing how humans have adapted and refined their capacity for intricate communication. As we explore fricatives' intricate mechanics, we gain insight into the broader landscape of linguistic diversity and the shared human experience of connecting through speech.

In essence, fricatives are a testament to the incredible capabilities of the human voice and its role in shaping the symphony of language. From the ethereal whisper of /ʃ/ to the resonating hum of /v/, fricatives serve as linguistic gems, each polished by the delicate balance of vocal tract dynamics. By unraveling the mysteries of fricative production and perception, we unlock a deeper understanding of the art and science of communication that binds humanity together.

1. The voiceless postalveolar fricative /ʃ/ involves shaping the tongue to create a groove just behind the alveolar ridge. It produces the sound you hear in words like "shoe" and "shine."
2. The voiced postalveolar fricative /ʒ/ is the voiced counterpart of /ʃ/. It's heard in words like "measure" and "treasure."

The distinction between these fricative sounds not only contributes to the richness of language but also serves as a crucial element for conveying meaning and emotions. The placement of the tongue, the degree of constriction, and the presence or absence of vocal cord vibration all play a role in producing the distinctive fricative sounds that are integral to our communication.

In conclusion, fricatives are a fascinating subset of consonant sounds that exemplify the intricate interplay between the articulatory and acoustic dimensions of speech production. Through the deliberate manipulation of airflow and constriction within the vocal tract, speakers create the diverse array of fricative sounds that characterize spoken language. From the gentle hiss of /s/ to the buzzing resonance of /z/, fricatives contribute to the auditory palette that allows us to share our thoughts, feelings, and experiences with one another. Understanding the mechanics and nuances of fricatives opens a window into the remarkable complexity of human speech and the artistry of communication.

3.3 Affricates

Affricates, a fascinating class of consonant sounds, embody the intricate dance of phonetic articulation in human speech. With their unique blend of characteristics, they add a layer of complexity and richness to linguistic communication. Affricates stand as a testament to the remarkable versatility of the human vocal apparatus and the nuanced mechanics that underlie the sounds we use to convey meaning.

Affricates represent a phonetic phenomenon where speech sounds begin with a complete stoppage of the airflow in the vocal tract, only to transition seamlessly into a fricative sound. This distinctive combination creates a sound that is both dynamic and perceptually intriguing. The journey from

complete silence to the subtle hiss of friction involves a finely orchestrated series of articulatory movements.

The **articulation** of an affricate is a delicate coordination of both stop and fricative components. The sound starts with a momentary closure of the vocal tract, resulting in a complete obstruction of the airflow. This initial stop phase is similar to the sensation of momentarily holding one's breath. This closure is then slowly released, allowing the airstream to flow again. However, instead of a sudden release, the transition is deliberate and gradual. As the closure is relaxed, the airflow creates a friction-like sound, giving rise to the fricative quality that follows the initial stop. This gradual release marks the heart of the affricate's unique auditory profile.

Two primary affricate sounds are often encountered in linguistic landscapes:

1. **/ʧ/ (as in "chew"):** This voiceless affricate is a distinct phoneme that starts with a voiceless alveolar stop. During the stop phase, the tongue presses against the alveolar ridge, blocking the airflow. This is followed by a gradual release, where the tongue is moved away from the alveolar ridge, and the airflow is channeled through a narrowed groove. The resulting sound is characterized by the release of the stop transitioning into the hissing quality of the fricative.
2. **/ʤ/ (as in "judge"):** This voiced affricate starts with a voiced alveolar stop. During the stop phase, the vocal cords are held together, creating an obstruction in the vocal tract. As in the voiceless counterpart, the stop is gradually released, allowing the airflow to pass through a restricted channel created by the tongue and the alveolar ridge. The result is a smooth transition from the stop to the fricative, giving the sound its distinctive auditory texture.

Understanding the production of affricates provides valuable insights into how humans manipulate their vocal apparatus to create nuanced sounds. The coordination required for a smooth transition from a complete obstruction to a friction-like sound showcases the intricate motor control that speakers possess.

The perceptual aspect of affricates is equally captivating. The gradual transition from the complete silence of the stop to the gradual emergence of the fricative element creates an auditory curiosity that captures our attention. This perceptual distinctiveness allows us to differentiate between words like "chew" and "shoe," where the only difference is the initial affricate sound.

The linguistic significance of affricates extends beyond their perceptual distinctiveness. Affricates often serve as crucial markers of meaning in various languages. In some languages, a single affricate can distinguish between different words, highlighting their role as phonemes with linguistic significance. For instance, in English, the differentiation between "cheap" and "jeep" relies solely on the voiceless affricate /ʧ/ versus the voiced affricate /ʤ/.

Furthermore, the study of affricates has implications for language acquisition and speech disorders. Children learning a language must navigate the complex articulatory sequence required for producing affricates. Mastering this sequence is a crucial step in developing clear and accurate speech. For individuals with speech disorders, the correct production of affricates can pose challenges, requiring targeted speech therapy to refine their articulatory skills.

In conclusion, affricates offer a captivating exploration into the multifaceted world of phonetics. As a hybrid of stops and fricatives, they exemplify the intricate art of speech production. From the controlled stoppage of airflow to the

gradual emergence of friction, affricates encapsulate the dynamic nature of spoken language. Their perceptual distinctiveness and linguistic significance underscore their role in shaping how we communicate, convey meaning, and connect with others. The study of affricates not only deepens our understanding of the mechanics of speech but also highlights the remarkable human capacity for articulatory precision and linguistic expression.

Here's a breakdown of the differences between the two:

Articulation: Fricatives involve continuous friction caused by a narrow passage in the vocal tract. Affricates start with a stop closure and then transition into a fricative sound.

Vocal Cord Involvement: Fricatives typically do not involve the vocal cords. Affricates involve the vocal cords in the stop phase, but not in the fricative phase.

Release: Fricatives have a consistent friction throughout the sound. Affricates have a noticeable release from the stop closure to the fricative portion.

Both fricatives and affricates play a significant role in language, as they are essential components of speech sounds in many languages around the world. The distinction between these two types of consonant sounds can impact the intelligibility and characteristics of spoken language.

Diving Deeper into Fricatives and Affricates: An Exploration of Articulation, Vocal Cord Involvement, and Release

In the intricate tapestry of phonetics, fricatives and affricates emerge as two distinct threads, each weaving a unique auditory texture that contributes to the rich mosaic of spoken language. These consonant sounds, while sharing some similarities, bear distinctive hallmarks in their articulation, vocal cord involvement, and release patterns. Delving deeper

into these nuances allows us to appreciate the intricacies of human speech production and its profound impact on communication.

Articulation: The Dance of Airflow and Constriction

The first point of distinction lies in how fricatives and affricates are articulated within the vocal tract. **Fricatives** involve the creation of a continuous friction caused by a narrow constriction within the vocal tract. This constriction serves as a point of resistance against the airstream, generating a distinct and audible turbulence. For example, consider the voiceless alveolar fricative /s/ in words like "see" or "sun." The airflow is directed through a narrow gap between the tongue and the alveolar ridge, creating the hissing sound that characterizes this fricative.

Affricates, on the other hand, embark on a more intricate journey. They initiate with a **stop closure**, where the vocal tract is completely obstructed, halting the airflow momentarily. This stop phase is akin to a brief pause in the symphony of sound. However, the silence is quickly transformed into a **fricative sound** as the stop closure is gradually released. This sequential process forms the foundation of affricates' unique auditory profile. Take the voiceless affricate /ʧ/ as in "chew." The sound begins with a stop closure involving the tongue and the alveolar ridge, and then smoothly transitions into a fricative quality as the closure is eased.

Vocal Cord Involvement: The Role of Voicing

The second distinction between fricatives and affricates lies in the involvement of the **vocal cords**. Fricatives generally do not engage the vocal cords. The friction-induced sound is generated solely through the manipulation of the

airflow and the constriction within the vocal tract. As an illustration, consider the voiceless labiodental fricative /f/ in words like "fun" or "fine." The vocal cords remain open during the production of this sound.

Affricates, however, present a dualistic interaction with the vocal cords. While the **stop phase** of an affricate involves a complete closure of the vocal tract, it also engages the vocal cords. This results in either a voiced or voiceless stop closure, depending on the specific affricate. For example, the voiced affricate /ʤ/ in "judge" begins with a voiced stop closure that engages the vocal cords. This phase is followed by the gradual release into the fricative sound, where the vocal cords remain apart, contributing to the distinct auditory texture of the affricate.

Release: Unveiling the Auditory Transition

The final distinction lies in the manner of **release** within fricatives and affricates. **Fricatives** maintain a consistent and continuous friction throughout the sound. There is no discernible break or pause; the airflow encounters resistance from the constriction, creating the characteristic sound associated with fricatives. This sustained friction is exemplified by the voiceless glottal fricative /h/ in words like "house" or "hat."

Affricates, in contrast, unveil a perceptible transition. The journey from the complete stop closure to the subsequent fricative phase is gradual and audible. This transition is marked by a controlled release, wherein the vocal tract opens progressively, allowing the airflow to emerge and generate the fricative sound. This feature gives affricates their distinctive auditory quality. As an example, consider the voiceless affricate /ʧ/ in "chew." The transition from the stop

closure to the fricative sound creates a characteristic auditory texture that sets affricates apart from other consonant sounds.

The Linguistic Symphony: Fricatives and Affricates in Language

Fricatives and affricates are not mere curiosities of phonetics; they are integral components of the linguistic symphony that unfolds in every language. The distinction between these two types of consonant sounds holds immense significance, shaping the phonemic inventory of languages and influencing their phonological systems.

In English, the contrast between the voiceless fricative /s/ in "sea" and the voiceless affricate /ʧ/ in "cheese" is essential for distinguishing words and conveying meaning accurately. Similar distinctions abound in other languages. In Mandarin Chinese, for instance, the voiceless alveolar fricative /s/ contrasts with the voiceless alveolar affricate /ts/ in words like "si" (thought) and "ci" (porcelain). These examples underscore the pivotal role of fricatives and affricates in creating meaningful phonemic distinctions.

Conclusion: The Elegance of Phonetic Diversity

In unraveling the distinctions between fricatives and affricates, we unearth the elegance of phonetic diversity that permeates human language. The delicate choreography of airflow, constriction, vocal cord engagement, and release creates a symphony of sounds that facilitate communication, emotion, and thought. Fricatives and affricates stand as testaments to the human capacity for intricate articulatory control and auditory perception.

As we embrace the richness of fricatives and affricates, we acknowledge the profound beauty inherent in the variations that underpin linguistic expression. From the whisper of /s/ to

the release of /ʧ/, each sound is a testament to the artistry of speech, reflecting the harmonious interplay of human anatomy, cognition, and cultural evolution. The exploration of fricatives and affricates is an invitation to celebrate the subtleties that define our capacity to converse, connect, and create within the vast realm of spoken language.

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BAB 4
NASAL AND OTHER CONSONANT

Oleh Ika Purnama Sari

4.1 Introduction

In this chapter we focus about the nasal and other consonant. Consonant is the sound that produced with the articulators more or less close. We understand that there are so many consonant than vowel. English There are many more consonants than vowels, (Odden, 2005). Before that, this we must understand about the English consonant. Consonant has symbols. These are the chart of English consonant. Every consonant has the different symbol and voice. We can se in figure 4.1.

Manner of Articulation	Place of Articulation							
	Bilabial	Labiodental	Dental	Alveolar	Post – alveolar	Palatal	Velar	glottal
Plosive	p b			t d			k g	
Fricative		f v	θ ð	s z	ʃ ʒ			h
Affricative					tʃ dʒ			
Nasal	m			n			ŋ	
Lateral Approximant				l				
Approximant	w				r	j		

Figure 4.1. English consonant
Source :(Roach, 2009)

When we study about the consonant we must understand about the consonantal sounds. Consonantal sounds are classified become three dimension, they are a voicing, a place of articulation and a manner of arcticulation.

1. Voicing

International Phonetic Alphabet (IPA) transcribed the consonant. Twenty consonants are b, p, t, d, k, g, f, v, θ, ð, s, z, ʃ, ʒ, h, ʧ, ʤ, m, n, ʧ , ʤ, l, w, r, and j. We show the pronounciation, we use phonetic symbols (Sinurat and Napitupulu, 2013)

Voicing refers to the activity of vocal fold. Vocal fold is also known as vocal cords. The size of vocal cords affects the pitch of voice. The figure of vocal cords can be seen in figure 4.2.

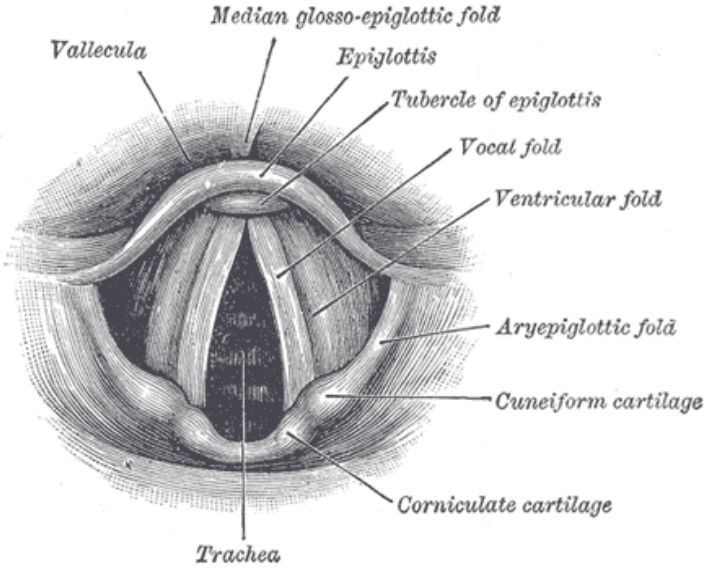

Figure 4.2. Vocal Cords
Source : wikipedia

The vocal cords are at the top of the trachea. The vocal cords held wide and closed apart. When the vocal cord are wide apart, the consonants are called *voiceless.* When the vocal cord are closely together and vibrating, the consonants are called *voiced*. As long we produce the

consonant, maybe there more or less vibration. When the vocal cord makes stronger vibration, the sound production is classified as voiced consonant. When the vocal makes less vibration, the sound production is classified as voiceless consonants.

2. The Place of articulation

The place of articulation is the area of vocal track takes. We must state which the lower articulators articulates with the upper articulators. There are eight place of articulation:

a. Bilabial

Bilabial is the place of articulation that articuled by two lips the lower lips and upper lips (Nurhayati, 2018). In bilabial, there are three sounds in english. They are /b/, /p/,/m/. For /b/ and /p/, they are produced at the oral cavity .The soft palate is raised for /b/,/p/, so they are produced at the oral cavity only. They are defined as being oral. But /m/is nasal. It is produced with the soft palate. This is the position of palate in our mouth. You can see in figure 6.3.

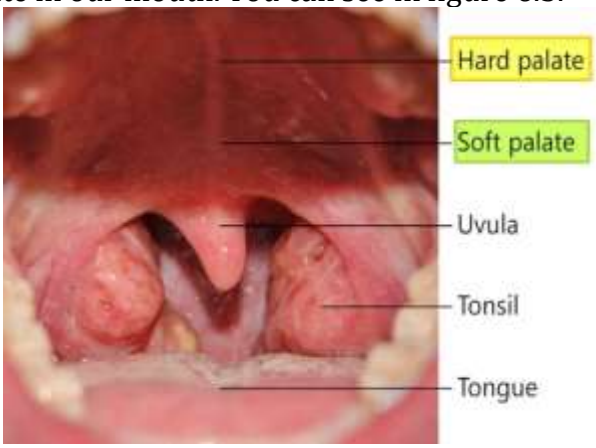

Figure 4.3. hard ansd soft palate

The examples of bilabial :

1) Bilabial /b/
   In a word initial as in *a boat, a boy, and burn*. In a word medial as in a *lobby, a labor, and a cabbage*. In the a word final as in *the cab, a sob and a cub*. But in silent /b/ like as thumb and *comb*.
2) Bilabial /p/
   In a word initial as in *pole, person, and people*. In a word medial as in *capable, spin, spain, and spill.* In a word final as in *pump, slip and cheap*. But in silent /b/ like as psychologist.
3) Bilabial /m/
   In a word initial as in "*middle and milk"*. In word medial as in *lemon and simple*. In a word final as in *rhythm, and lamp*.
4) Labial – velar /w/
   In a word initial as in *weather and watch*. In a word medial as in *twelve*. This sound doesn't appear in word final.

b. Labiodental

Labiodental is the place of articulation that articuled by the lower lips against the upper teeth. In labiodental there are two sounds in english. They are /f/ and /v/. The example of labiodental are :

1) Labiodental /f/
   In a word initial as *first and final*. In a word medial as in *selfish and affair*. In a word final as in *roof*.
2) Labiodental /v/
   In a word initial as in *voice*. In a word medial as in *ever* and *silver*. In a word final as *groove.*

c. Dental

Dental is the place of articulation that articuled by tip of tongue against the upper teeth. In dental there are two sounds in english. They are / θ / and /ð/. The example of dental are :

1) Dental / θ /
   In a word initial as *think, thin, and thirsty*. In a word medial as in *author*. In a word final as in *cloth*
2) Dental /ð/
   In a word initial as in *they, there*. In a word medial as in *father and leather*. In a word final as *with.*

d. Alveolar

Alveolar is the place of articulation that articuled by tip or bladed of the tongue against the teeth-ridge. In alveolar there are six sounds in english. They are / t /, /d/, /s/, /z/, /n/ and /l/. The example of alveolar are :

1) Alveolar / t /
   In a word initial as *take and talk*. In a medial as in *steak*. In a word final as in *boat*
2) Alveolar /d/
   In a word initial as *dog and dear*. In a word medial as in *admit and badly*. In a word final as in *old.*
3) Alveolar / s /
   In a word initial as *sing and sit*. In a word medial as in *essay*. In a word final as in *famous.*
4) Alveolar /z/
   In a word initial as *zoo*. In a word medial as in *admit and lazy*.
5) Alveolar /n/

In a word nice and nose. In a word medial as in *admit and inside and dinner*. In a word final as in *pen.*

6) Alveolar / l /
In a word initial as *low and leaf*. /l/ is usually voiced, but sometime is devoiced if comes after a voiceless plosive.

e. Post – Alveolar / Palato Alveolar

Post Alveolar is the place of articulation that articuled by tip of the tongue agaof inst back part the teeth-ridge. In post alveolar there are five sounds in english. They are /ʃ/, /ʒ/, / ʧ /, / ʤ /and /r/. The example of Post – Alveolar are :

1) Post – Alveolar / ʃ /
In a word initial as *shop and shirt.* In a word medial as in *mission*. In a word final as in *cash.*
2) Post – Alveolar / ʒ /
In a word initial as in *genre.* In a word medial as in *measure*. In a word final as *beige.*
3) Post – Alveolar / ʧ /
In a word initial as *cheese.* In a word medial as in *nature.* In a word final as in *catch and inch.*
4) Post – Alveolar / ʤ /
In a word initial as in *jar.* In a word medial as in *urgent.* In a word final as *age.*
5) Post – Alveolar / r /
/r/ is one retroflex sound. /r/ is also a very tricky consonant. In a word initial as in *rob, real, and roal.* In word medial as in *mirror and very.* In a word final as *far and poor.*

f. Palatal

Palatal is the place of articulation that articuled by the front of the tonge angainst the hard palate. In palatal there is one sound in english. It is /j/. The example of palatal are :

1) Palatal / j /
   In a word initial as *yes, yesterday*, *young and you.*
   In a word medial as in *lawyer.*

g. Velar

Velar is the place of articulation that articuled by the back of the tonge against the central and forward part of the soft palate.. They are /k/, /g/, and / ŋ /. The example of velar are :

1) Velar / k /
   In word initial as in *king, close, and key.* In a word medial as in *secret.* In a word final as *duck.*
2) Velar / g /
   In a word initial as in *king, close.* In a word medial as in *secret.* In a word final as *duck.*
3) Velar / ŋ /
   This sound does not appear in In word initial. In word medial as in *singer and hanger.* In the word final as *wrong.*

h. Glottal

Glottal is the place of articulation that articuled by glottis. In glottal there is one sound in english. It is /h/. The example of glottal are :

1) Glottal / h /
   In word initial as *hearth*, *hen, he, how and hate.* In word medial as in *ahead.* Glottal /h/ does not appear in word final

3. The Manner of articulation

The manner of articulation refers the way the articulators are set. The manner of articulation is the process how the speed organ are moved in consonant production.

a. Plosive

A completed closure of the air passage formed a plosive. Plosive are defined as consonant sounds which involve a stricture of the mouth, the compression and release of the air. English has six plosive consonant /p/,/t/, /k/, /b/, /d/, / g /. They consist of voiced and voiceless. /p/,/t/, /k/ are voiceless and b/, /d/, / g / are voiced. It can see in table 4.1.

Table 4.1. The Plosive

Place of articulation			
	Bilabial	Alveolar	velar
Voiceless	p	t	k
voiced	b	d	g

b. Fricatives

Fricatives are produced by the air escaping through a small passage in the mouth. Fricative in voiced and voiceless can be seen table 6.2 below.

Table 4.2. The Fricatives

Place of articulation					
	Labiodental	Dental	Alveolar	Post alveolar	Glottal
Voiceless	f	θ	s	ʃ	h
voiced	v	ð	z	ʒ	

c. Affricatives

Affricative Fricatives are produced as plosive consoant but with slower separation of artciculating organs. Affricative begins as plosive and end as fricatives. Africative in voiced and voiceless can be seen table 4.3.

Table 4.3. The Affricative

Place of articulation	
	Post alveolar
Voiceless	ʧ
voiced	ʤ

d. Nasal

Nasal formed by complete closure in the mouth. The basic future of a nasal is that the air escape through the nose. Three types of nasal can se on table 4.4

Table 4.4. Nasal

Nasal	
Bilabial	m
alveolar	n
Velar	ŋ

e. Lateral

A lateral produced from the mouth along the sides of the tongue. A lateral formed by placing an obstacle in the centre of the air channel.

f. Approximant

The approximan produced by the tip of the tongue approaching the alveolar area (Phonetics and Trujillo, no date).

4.2 The Consonant of English

The basic characteristic of nasal consonants that air escape through the nose. Nasal consonant prevented by a complete closure in the mouth at some point however air doesn not pass through the mouth.

There are two majors group of consonants. The first, the plosive, fricatives, affricatives. They are consist of seventeen cosonants, /p/,/b/,/t/,/d/,/k/,/g/,/f/,/v/, /θ/, /ð/, /s/, /z/, /ʃ/, /ʒ/, / ʧ /, / ʤ /, /h/. These consonant has voiced and voiceless. The second, the nasal consonants, like /m/, /n/, and /ŋ/. And the other /l/, /r/, /w/, /j/. these four consonants are not easy to fit into groups. All the seven consonant usually have no friction noise and they are continuants.

4.2.1 Nasal Consonant

There three phonemes in English which are representated by nasal consonan /m/, /n/ and /ŋ/. In nasal consonant, the soft palate is lowered and at the same time the mouth passage is blocked at some point so that all the air is pushed out the nose.

1. The English consonant /m/

   The /m/defined as a voiced bilabial nasal. The /m/ is produced by blocking the air stream compressed from the lungs by means of the upper lip and lower lip. It is mean the mouth is blocked by closing the two lips. The English consonant /m/ can see in figure 4.4.

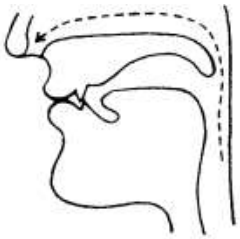

Figure 4.4. /m/

The /m/occurs in an initial, medial and final position, example can see in table 4.5.

Table 4.5. Example of the /m/

Initial		Medial		Final	
make	/'meɪk/	hamble	/'hʌmbl	aim	/'eɪm/
mail	/'meɪl/	among	/ə'mʌŋ/	calm	/'kɑ:m/
meat	/'mɪ:t /	camera	/kæmərə/	arm	/'ɑ:m/
march	/'mɑ:ʧ/	famous	/'feɪməs/	farm	/'fɑm/
milk	/'mɪlk/	immediate	/ɪ'mi:dɪət/	name	/neɪm/

2. The English consonant /n/

The /n/defined as a voiced alveolar nasal. The English consonant /n/ is produced the tounge tip and teeth ridge. The English consonant /n/ can see in figure 4.5.

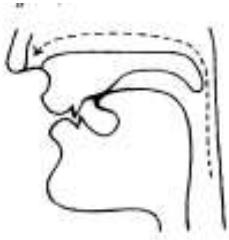

Figure 4.5. /n/

For both /m/ and /n, the soft palate is lowered (O'Connor, 1980). The /n/ occurs in an initial, medial and final position, example can see in table 4.6.

Table 4.6. Example of the /n/

Initial		Medial		Final	
nail	/'neɪl/	animal	/'æniml/	clean	/'klin/
nest	/' nest /	Banner	/'bænə /	nine	/'naɪn/
nice	/'naɪs /	blend	/'blend/	run	/'rʌn/
night	/'naɪt/	Candy	/'kændɪ /	sun	/'sʌn/
need	/'ni:d/	announs	/'ə'nauns/	rain	/'reɪn/

3. The English consonant /ŋ/

The /ŋ/defined as a voiced velar nasal consonant. The / ŋ / is produced by the tongue and the soft palate. The English consonant /ŋ/ can see in figure 4.6.

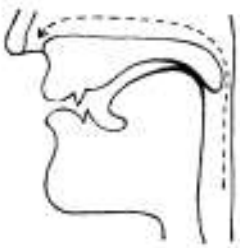

Figure 4.6. / ŋ /

The /ŋ/occurs in an medial and final position, example can see in table 4.7.

Table 4.7. Example of the / ŋ /

Medial		Final	
Anger	/'æŋgə/	Ring	/'rıŋ/
Angry	/'æŋgrı /	Sing	/'sıŋ/
Thank	/'Θæŋk /	Darling	/'dɑliŋ/
Pink	/'pıŋk/	Hang	/'hæŋ/
drank	/'dræŋk/	king	/'kıŋ/

4.2.2 Lateral Consonant.

The English consonant /l/ is formed lateral, that is instead of the breath passing down the centre the mouth.

1. The English consonant /l/

   The /l/defined as a voiced alveolar lateral consonant. The /l/ is produced by putting the tongue tips against the teeh ridge. The English consonant /n/ can see in figure 4.7.

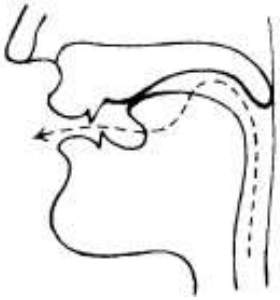

Figure 4.7. /l/

It is clear when this sounds occurs before vowel but it is dark when the sound occurs before consonant or finally. The /l/occurs in initial, medial and final position, example can see in table 4.8.

Table 4.8. Example of the / l /

Initial position		Medial position		Final position	
Large	/'lɑ:ʤ/	Blood	/'blʌd/	Fill	/'fil/
Leader	/'lı:də /	Blank	/'bləŋk /	Bell	/'bel /
Later	/'ləıtə/	Clever	/'klevə/	Call	/'kɔl/
Light	/'lɑıt/	Clean	/'klı:n/	Fall	/'fɔ:l /
Lamp	/'læmp/	plate	/'pleıt/	Feel	/'fıl/

4.2.3 Approximant Consonant /Gliding consonant

Approximant consist of a quick, smooth, non-friction glide toward as follwing the vowel sound, the consosnant /j/, /w/,/r/.

1. The English consonant /j/

   The /j/defined as a voiced palatal approximant consonant /semi vowel. This consonant occurs in initial and medial. This consonant is not occurs inthe final position, example can see in table 4.9.

Table 4.9. Example of consonant / j /

Initial position		Medial position	
yes	/'jes/	Huge	/'hju:ʤ/
Year	/'jıə/	Suitable	/'sju:təbl /
yet	/'jet/	Mute	/'mju:t/
Useful	/'ju:sfl/	Pure	/'pjuə/
Usual	/'ju:ʒuəl/	music	/'mju:zik/

2. The English consonant /w/

   The /w/defined as a voiced bilabial approximant consonant / semi vowel. This consonant occurs in initial and medial. This consonant is not occurs in the final position, example can see in table 4.10.

Table 4.10. Example of consonant / w/

Initial position		Medial position	
Wait	/'weɪt/	Quality	/'kwɒlətɪ/
Website	/'websaɪt/	Quick	/'kwɪk/
Want	/'wɒnt/	Quiz	/'kwɪz/
Watch	/'wɒʧ/	Equal	/'i:kwəl/
Weak	/'wɪ:k/	Quake	/'kweɪk /

3. The English consonant /r/

The /r/defined as a voiced post alveolar fricative consonant. This consonant is articulated by raising the tip of the tongue closely to the back part of the teeth ridge. This consonant occurs in an initial and medial and final position, example can see in table 4.11.

Table 4.11. Example of consonant / r/

Initial position		Medial position		Final position	
Rat	/'ræt/	Arrange	/ə'reɪnʤ/	Bar	/'bɒ:(r)/
Race	/'reɪs/	Break	/'breɪk/	Car	/'kɒ:(r)/
Realize	/'rɪəlaɪz/	Arrow	/'ærəu/	Clear	/'klɪə(r)/
Read	/'ri:d/	Borrow	/'bɒrəu/	Far	/'fɒ:(r)/
Real	/'riəl/	cry	/'kraɪ/	here	/'hɪə(r)/

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BAB 5
SYLLABLE

By Fitri Rizki

5.1 Introduction

This chapter is intended, at higher learning institution, for the first semester students who are introduced to phonetics and phonology. They begin to learn the whole English phonetics consonants and the vowels and also about how to place the the articulators in order to produce the required sounds. As beginners, they will find it strange and therefore difficult because their tongues are not accustomed to produce the sounds of the target language. Due to the case, they need practical easily understood method of how to produce the sound. So, the teachers are to find as simple way as possible to show the students wht they have to do with their tongues and and other points of articulator. The syllable introduced in this chapter will be of great help not only to the students but also to the students. The discussion of syllables in this chapter is restricted to creating an assistance to the English teachers that by making the learners identify the syllalbes of words, they can be guided by the teachers to improve the quality of "English Pronuncitaions" of the learners. Initially, the learners are going to be introduced with a new word, then the teachers may lead them to the capability of deviding the words into syllables. In this case, the teachers may have the opportunity to guide the learners about what they have to do in order to separate one syllable from another , and then when this has been carried out, the teachers just show the learners what they have to do next.

It will be possible that by identifying the syllables, the learners will have greater opportunity to improve the pronunciation.

People are social beings who can never live alone. They have to live with other people. One may be very rich with quite a lot of money of his own but he needs some other requirements like food, clothes , water and some other equipment he needs to live his life, for which he needs other people to have those things ready for him.

In order to have what he wants, he has to communicate with those people who posses the stuff, for which he has to open a communication with them. But no communication can occur without a language, it is eiher sign language or a vocal language.

People in general communicate with each other by using a vocal language. (Braun & Castree, 2001), says that some people talk about social construction. They use langages to talk , the languages that meet with the mutual understanding of the speakers and the listeners. They have to talk in order to advance much broader and more philosophical claims about the existence and nature of nature. . With the use of the language agreed, the information is comprehensively delivered and each side can successfully achieve the goal of the communication and the talk will eventually end satisfactorily. The target of the talk is reached and the decision mutually taken will satisfy both parties.

When the language chosen by both is English, the language skill of each should be worth speaking. Each has to make sure that the English he speaks meets with the English capacity of the other.

When one speaks, he will produce a succession of sounds that are arranged in groups. These groups are called words. These words deliver definite meanings exactly like those containing in the mind of the speakers who are using the

language. On the other hand, if the listeners are not familiar with the language, they will find it strange and what happens next is that the words expressed to the listeners convey no meaning. It means that no communication is taking place.

Every language spoken on earth has its specific set of words and most of which are quite diffferent from those of other languages. Due o the fact, if one has decided to learn a different language, this learner has to devote his time to learn the words with which he will have the capability of constructing the target language he learns. At the moment, the learner must never think that he can freely mix his mother language with the target language. Once he does it, the language he speaks will bear no meaning and it will mean he will lose his listeners as nobody has the comprehension of what he says.

For the purpose of mutual full understanding, the writer would like to stress the importance of correct pronunciation. When two persons are involved in a conversation, each has to listen attentively to the other's speech. With the use of as perfect pronunciations as possible, the information staying in one's mind can be easily understood by the other. But the question is that "how can a speaker owns correct pronunciations?" Is it enough for one to copy down the pronunciation of one word from a passer-by or from a member of his family, or from those people speaking with him ? Is it received that what he hears are true and can be transferred to others or to his generation ? One may listen to the artists on a movie but how perfect the pronunciations of the words he can imitate in this way ?

Is he sure what he has is the one he particularly requires ?

Then, he might need to deliver his skill to his younger generation, but how can he do it.

5.2 Linguistics

We have to be very thankful to the linguistics researchers who have carried out their great amount of best researches on linguistics which scietifically studies a language and certainly refers to educated language. These researches carried out produce a lot of theories with the teachers are assisted to deliver the information to their students. The more theories are present the more effective the learning process will be. At least we realize that linguistics has its specific role of describing language objectively and specifically

The impact of the development of linguistics studies bring assistance not only to language itself but also to all aspects of language like cognitive aspect (a process a learner carries out to acquire some knowledge and to understand the knowledge by using his power of thinking). This development also entails social, cultural, psycological, environmental, biological, literary and also structural aspects. (Wikipedia, 2023)

5.3 Phonetics

As it has been already scientifically stated that phonetics is dealing with pronunciation. For clearer information for the learners, this branch of science deals with speech sounds and the sound system (Skandera & Burleigh, 2005). It , therefore, provides opportunity to the learners to study the speech sounds and the sound system of the language he is learning in details. The phonetics science provides the learners with things like the feature of speech organs, the classification of sounds, pure vowals and diphthongs, with the sounds in connectted speech,with the phonetics transcription and the range of any others. These all bridge the learners to the acquisition of the target language.

Due to the presence of phonetics, Some dictionaries completed with phonetics transcriptions of the language needed have already been written. Learners of foreign languages are forced to find quite a lot of new words whose pronunciations are beyond their knowledge. The phoneticians have created the symbols of sounds; either vowals or consonants . These symbols are quite helpful to the learners as they give guidance to how words should be correctly pronounced. Representative dictionaries either printed or electronic are completed with these THESE SYMBOLS OF SOUNDS, so the learners have no difficulty in finding out the required pronunciations. Just by lerning the phonetics transcription provided after the words , he will confidently know the true pronunciation. Electronic dictionaries provide even more facility; the learner just clicks the"speaker symbol" and the required sound is heard. To make sure of the required sound, the learner can repeat the action as many times as needed.

5.4 Phonology

(Roach, 2009) said that the study of phonetics and phonology is the only way to bridge the learners to the full understanding of the use of sounds in English pronunciation. Witth the power of both phonetics and phonology, the learners can achieve as pefect pronunciations as required for required communicaion. Then, what is phonology ?

Phonology as well as phonetics is the branch of linguistics that deals with systems of sounds (Wikipedia, 2023). This part of linguistics descibes systems of sounds (including or excluding phonetics) in a language or even between two languages of different kinds. It brings a lot of benefit to the learners who study the laguage. But in what way does it help them ? Phonology provides the question with so

clear answer that it does its job by systematically organizing its phones and for a sign language, it organizes its constituent parts of signs. So, a learner will find it very much helpful by which he will surely have so clear a guidance , even in details, about how he will correctly produce an expected sound

Fortunately, we have electronic portable and pocket-size dictionaries provided in our Cell-phones or mobile phones popularly known in Indonesia as hand-phones. So if one learner is in doubt about the difference in the sounds for the words "sheep" and "Ship", he may pick up his cell-phone, open his dictionary in the phone and learn both the stated "words". In each will be presented /ʃ:ip/ for the word "sheep" and /ʃip/ for the word "ship". By clicking the "loudspeaker symbol" one may listen for the sounds of /;i/ in "sheep" and /i in "ship" (CAMBRIDGE Advanced Learner's Dictionary, third Edition). Through the explanation, it is discovered that the difference lies in the places of articulators, in which for the sound of /:i/ which is short vowel, fairly high, fairly front and unrounded, the air flow is focused on the back part of the mouth cavity and for the sound of/i/ which is longer, more front and higher, the air flow is focused on the front part of the mouth cavity. In this way, the learner will find out how the two "vowal sounds" differ from each other. This fact will stick up self confidence in the learner's effort of having the full knowledge of the language.

5.5 Morphology

Morphology deals with structure of words (Katamba & Stonham, 2018). Morphology which is often combined with syntax, known Morphosyntax, has been traditionally referred to as grammar (Skandera and Burleigh, 2005).. This science leads the learner into learning the structure of words. When a learner goes into action, it is when he goes into using the anguage he is learning, he is surely involved with the use of

language words. The requirement of the functions of the words come in variety of forms. They are either in the forms of nouns, adjectives, verbs or adverbs wholy depend on the context. In a sentence like "It systematically organizes the phone.", the morphology helps the lerner to find out the "structure" of the word "systematically". To discover the required form "systematically", if the learners is blind about how to have the required form, he can trust a representative dictionary, for which monolingual dictionary is suggested, because this dictionary usually provides the readers with not only the definition of what the word means but also with correct pronunciations, with the phonetics transcriptions, the parts of speech (the morphems required) and even the syllables (Albus et al., 2005). As previously stated, it also deals with syntax, it provides the learner with an answer why he has to form the word into an "adverb".

5.6 Syllable

Syllable is a single unit of speech, either a whole word or one of the parts into which a word can be separated, usually containing a vowel (Cambridge, Advanced Learner;s Dictionary)

While Google Dctionary (2021) says that syllable is a unit of pronunciation having one vowel sound, with or without surrounding consonants, forming the whole or a part of a word;. Both the sources say the same thing about "syllable'; the difference is only in the use of the word "speech" by Cambridge and Google Dictionary uses the word "pronunciation"; both means "expression".From the two definition about a syllable the writer can make a conclusion, how many syllables an English word has depends on the phonetics transcription informing how the word is pronounced. Although in order to have the correct pronunciation of an Englsh word, still we have

to depend on representative dictionaries. For examples: “There are two syllabes in “water” whose pronunciation is [‘wɔ: tə] and three syllables in “inferno”whose pronunciation is [in fɜ:nəu] while the word “a” [ə] belongs to a single syllable..

5.7 Syllable Structure

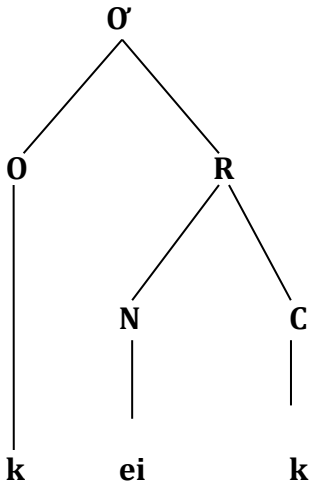
About finding out how many syllables a word owns has gone into the area of controversy. Some people say that they have known what a syllalbe is, while most people have no-clear sense of what it is. Some others have such a confidence that they can detect the syllables by counting how many syllables a word has. Just by paying atention to a single physical word one can easily say how many syllables it has. But the case is not so simple. Since they are not capable of having the correct pronunciation of the word, they will surely be blocked by a barricade of stating the right number of syllables. The number depends on the phonological factors.

According to studies, English speakers seem to know how to find out the number of syllalbes available in a statement but, when he is factually asked to count, the number that he suggests has met with disagreement. It is therefore we can say that the thought a lot of people think abaut the syllable is elusive(Skandera & Burleigh, 2005).

A syllable can be divided into two constituents: the onset and the rhyme. The one called the onset are any or the whole consonants that are existed before the wowel and the rhyme are the segments coming after the onset. This rhyme can be subdivided into nucleus (a term that is used for the vowel coming after the onset) and the coda (a name for the consonants that come at the end of a syllable. So, if we take the word “cake” whose phonetics transcription is /keik/ , for a example, the segment /k/ belongs to the onset of the syllable ,

while /eik/ belong to the rhyme. Then the rhyme itself can be subdivided into /ei/ as the nucleus and /k/ as the coda. For clearer explanation, we can learn the following figure:

1. Cake ***/****keik****/***

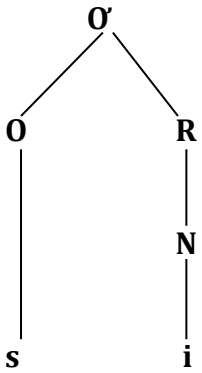


The syllable as illustrated above shows that /k/ is the "onset" and /eik/ is the "Rhyme". As previously stated above that "Rhyme" can be subdivided into two constituents : "Nucleus" and "Coda". So for the Rhyme /eik/ can be separated again into /ei/, which is in the form of "diphthong, as the nucleus and /k/ as the coda. One more thing we have to know is that a coda may consist of one or more consonants. This kind of syllable is called a "closed syllable". The above syllable ends with a consonant in coda position.

Not all English syllables end in one or more consonants. Words like buy, sue, due, blue and many others end in vowels , which in this case of ours is called "nuclous". These kinds of words which have only a single

syllable and ended by nuclous are said to have "open syllable". For this purpose, let us take the word "see" whose phonetics transcription is /si:/ for an example for us to describe as shown in the following figure:

2. See */s:/*



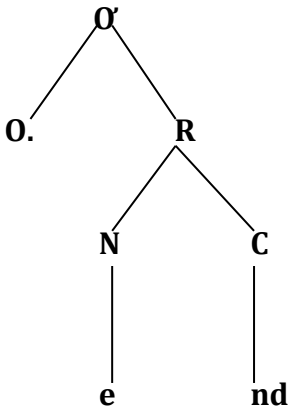
The above figure shows that /s/ is the onset and /i/ is the Rhyme. This Rhyme has only a nucleus "i", it does not have a consonant as the coda. Since it ends only by a nucleus /i/, not by a consonant, it is called an "open syllable", not a closed syllable.

Skandera & Burleigh (2005) say in their book that most English syllables have "onsets". It means that some of them have no onsets. That a lot of other English words are not preceded by consonants. As an evidence, if a reader is forced to prove whether or not this statement is a reality, he can take out his dictionary, printed or electronic, and what ? He will certainly find out that it is a fact, that their statement is truely research based. That most of English syllables have onsets.

So, what about the one without an onset? This kind of syllable without an onset is called a "zero onset syllable".

For an example, let us see the syllable description of the word "end" in the following figure:

3. ***end :*** */end/*



The syllable of the word "end" that is pronounced /end/ has no consonant before the vowel symbol /e/. While onset is defined as having one or more consonants before the vowel. The syllable above has no onset, with /e/ as nuclous and /nd/ as the coda. This syllable is called "zero onset syllable".

It is expected that with the above explanation and enriched with the figures to clearly show what a syllable is made up of, the students especially the teachers can confidently understand how a syllable is constructed.

It will be very helpful for the teachers in their mission of teaching how to correctly read a phonetics ranscription which later leads to correct pronuncitations

For example,since stress is important, with the knowledge owned, apart from the figure of the phonetics transcription demonstrated on the digital screen, the teacher may just use the word “syllable” to inform the learners in which syllable a stress should be placed.

In the word dessert which is pronounced /di’zɜ:t/ consisting two syllables: /di/ and /zɜt/, the teacher will just inform the learners that the stress is placed in the second syllable, not in the first. While for the word “desert” . If this word is pronounced /’dez.ət/ with the stress placed in the first syllable, it functions as a noun and when it is pronounced /di’zɜt/, with the stress placed in the second syllable, it serves as a verb. In this case, it helps the teachers so much in their process of providing the learners with required explanation.

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BAB 6
STRONG AND WEAK SYLLABLES

Oleh Rizky Khairunnisa Sormin

6.1 Introduction

VAn essential aspect of acquiring the English language is pronunciation. It might be difficult to determine how the sounds of a language pronunciation-wise solely by listening to them. It mean often challenginig to know how sounds of language are articulated just by listening to then. It just so happens that the Places and Styles of articulation provide a lot of details in the articulated of a sound that a listener may otherwise miss. Well, you're in for a treat, because we're going to gives an up-to-date and comprehensive list of all the manners of articulation.

6.2 What is a Syllables?

A syllables is a rhythmic unit of speech. Syllables make it easier for the human mind to process the speech stream. A syllable is made up of one of more segments; segments are the building blocks for syllables. furthermore, evidence that the means of this organization exists in whatever part of the central nervous system it is that carries out phonological processing. Specifically, there is evidence that prosodic structure is re adjusted in response to processes which alter other aspects of a representation in the course of phonological processing. (Patricia J. Donegan and David Stampe)

In General a syllable is a unit of organization for speech that typically consist of a vowel sound (known as the nucleus) and may also included consonant sounds before (onset) and

after (coda) the vowels. For example, the word *water* is composed of two syllables : *wa* and *ter.* Syllables and other prosodic structures are characteristically predictable from segmental phonological representation and grammatical boundaries. They are, therefore, nondistinctive(Donegan and Stampe 1978)

6.3 Auditory Syllabic Phonetics

This is how we perceive and hear sounds and how the ear, brain and auditory nerve perceives the sounds. This branch deals with the physiological. A still more efficient classification would be in terms of syllables: Stored representations would be in syllabic form, the recognizer would construct a prelexical representation of the signal as a sequence of specific syllables, and lexical access could be attempted starting at every syllable. This procedure would result in a comparatively small proportion of wasted access attempts.

The sounds of language are commonly described in articulatory and acoustic terms, and fall into two major types: syllabic sounds (vowels and syllabic liquids and nasals) and non-syllabic sounds (consonant and glides). Sounds may be voiced or voiceless and oral or nasal. Consonants are produced at various places of articulation: labial, dental, alveolar, alveopalatal, palatal, velar, uvular, glottal, and pharyngeal. At the places of articulation, the airstream is modified by different manners of articulation and the resulting sound are stops, fricatives, or affricatives. Vowels are produced with less drastic closure and are decsribed with reference to tongue position (high, low, back, and front). At last, language also shows suprasegmental phenoma such as tone, intonation, and stress.

Another example of the inadequacy of linear systems of generative phonology comes from the need to recognize a distinction between "weak" and "strong" clusters in the Stress

Assignment Rule of SP£. Without the internal structure of a syllable, it is totally ad hoc, and arbitrary to distinguish strong clusters and weak clusters.(Passino, Brandão de Carvalho, and Scheer 2021)

According to the Phonetics, or an organization of IPA that strong and weak syllables refer to the relative emphasis or prominence placed on syllables in a word or utterance. The terms “strong” and “weak” are used to describe the degree of stress or accent given to syllables. with the rhythm and stress pattern of a language. (Passino, Brandão de Carvalho, and Scheer 2021). The concepts of strong and weak syllables are also related to the emphasis place on different parts of a syllable in spoken language. We can see that on the figure 1.1 types of syllables.

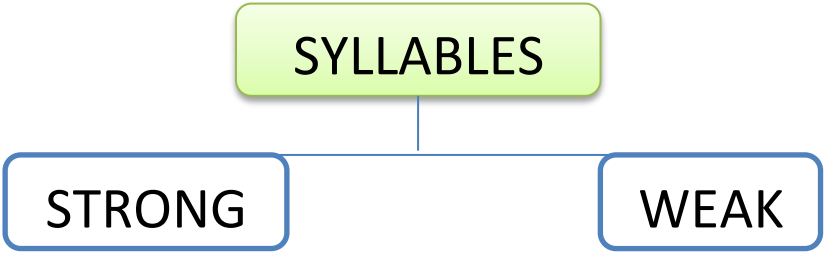

Figure 6.1. Types of Syllables

A strong syllables is one thet receives primary stress or accent in aword. It is pronounced with greater force, higher pitch, and longer duration cpmpared to other syllables in the word. We could describe them partly in terms of stress (that strong syllables are stressed and weak ones are unstressed). The strong syllable usually has one of vowel diphthongs as its peak. The sentence ‘I like that’ is pronounced aɪ laɪk ðæt (strong form); the sentence “I hope that she will” is pronounced aɪ

həʊpʃi wɪl (weak form). There are roughly forty such words in English. It is possible to use only strong forms in speaking, and some foreigners do this.(Senowarsito, Sukma, and Semarang, n.d.). In English, strong syllables typically contain a vowel sound followed by one or more consonants. From the table 6.1 below:

Teble 6.1. strong stllables

STRONG SYLLABLES	NUCLEUS	Strong Vowel
		Some Weak Vowel
		Diphthongs
		Triphtonghs

For example :

In the word " table" the first syllable is *"ta-"* is the strong syllablein the word "water" the stressed syllable is *"wa"* and it is pronounced with more emphasis than the other syllable *"ter".*

On the other hand, a weak syllables is one that does not receive primary stress or accent. According to Peter Roach, English Phonetics and Phonology,2009) in English phonology it is possible to identify a type of syllable that is called weak. Such syllables are never stressed, and in rapid speech are sometimes reduced so much that they no longer count as syllables.

Tabel 6.2. Weak Syllables

WEAK SYLLABLES	NUCLEUS	the vowel schwa***/ə/***
		a close front unrounded vowel in the general area of ***i:, I, symbolised i;***
		a close back rounded vowel in the general area of ***u:, ʊ, symbolised u.***

The majority of weak syllables contain the ***schwa (ə)*** vowel, but the vowels ***i, u, i*** also appear in such syllables. Instead of a vowel, weak syllables may contain syllabic consonants such as l -(as in 'bottle') or n-(as in 'button'). It pronounced with less force, lower pitch, and shorter duration compared to strong syllables. The weak syllables are in the following vowels such as ***ə, i, u*** with no coda **(zero coda),** They tend to be shorter in duration and pronounced with less force. Weak syllables often occur in unstressed positions in a word or phrase.

For example: In the word "table" the second syllable /bəl/ is considered weak. As it carries no stress. In the word "water"

REDUCTION **= strong and weak syllables**

1. Reduction is basically a sort of vowel weakening in unstressed syllables, eg. bigger /bIgə/, perhaps /pəˈhæps/.
2. This change is in quality, or sometimes – but not necessarilly - connected with the change in quantity.
   Quality = a distinction between strong and weak vowels
   Quantity = a change in length (ie short and long vowels)

Everyone does not know this process of reduction of strong vowels in unstressed syllables, however it is one of the key features of the sounds of English.

As you know that the syllables are carried by vowels or syllabic consonants. The vowels in tho se syllables can be strong or weak, depending on stress.

Which are the weak vowels?

The most important thing to not at present is that any strong syllable will have;

1. ə *('schwa')*
2. i (ie a close front unrounded vowel in the general area of /i:/ and /I/)
3. ***u*** (ie a close back rounded vowel in the general area of /u:/ and /ʊ/) Strong vowels are any other vowels except /ə/, /i/ and /u/.
4. the sylabic consonants

When we compare weak syllables containing vowels with strong syllables, we find the vowel in a weak syllable tend to be shorter, of lower intensity and different in quality.

6.4 The Rule on STRONG AND WEAK SYLLABLES

1. Rule 1: stressed syllables MUST always be strong UNDER ANY CIRCUMSTANCES (containing strong vowels), eg. attend /ə'tend/ , particular /pə'tIkjələ/
2. Rule 2: unstressed syllables are MOSTLY weak but occasionally also strong,
   eg. furniture /'f3:nItʃə/ , access /'ækses/- not */'æksəs/, superstar - /'su:pəstɑ:/ not */'su:pəstə/
3. The most widespread weak vowel in English is schwa /ə/.
4. However in longer words, there is often a kind of oscillation between /ə / and /i/, or /ə / and /u/.

Example 1: modality /məʊˈdæləti/ or /məʊˈdæliti/
Example 2: particular /pəˈtɪkjələ/ or /pəˈtɪkjulə/

Another example of the type of strong and weak syllables in English Phoneticas, here are some example:

1. Strong syllables (Stressed Syllables):
   a. Initial stress: In some words, the stress falls on the firs syllable. Examples: "present" (/ˈprɛz.ənt/), "record" (/ˈrɛk.ɔrd/), "happy" (/ˈhæp.i/).
   b. Secondary Stress: In longer words, there may be secondary stress on syllables other than the first. Examples:"information"(/ˌɪn.fərˈmeɪ.ʃən/), "university"(/ˌjuː.nɪˈvɜr.sɪ.ti/), "photography"(/fəˈtɑː.grə.fi/).

2. Weak Syllables (Unstressed Syllables):
   a. Schwa Sound: Unstressed Syllables often contain the schwa sound /ə/. Examples:"banana"(/bəˈnæ.nə/),"elephant"(/ˈɛ.lɪ.fənt/),"tomorrow" (/təˈmɒr.oʊ/).
   b. Reduced Vowels: Unstreessed syllables can have reduced vowels, such as /ɪ/ or /ə/, or even be completely reduced to a schwa. Examples:"family"(/ˈfæ.mɪ.li/),"computer"(/kəmˈpjuː.t ər/), "memory" (/ˈmɛm.ər.i/).
   c. Function Words: Certain function words like prepositions, pronouns, and conjunctions tend to be weakly stressed. Examples: "of" (/ʌv/), "to" (/tuː/), "and" (/ænd/).

Its important to note that the distribution of strong and weak syllables can vary depending on the specific word, accent, and contex also. There are other ways of characterising strong

and weak syllables. They artly in terms of stress (eg:by saying , for exmple,that strong syllable are stressed and weak syllabes unstressed) but , until we describe what is “strees”mean such a description would not be very useful. The most important thing to note a present is that any strong syllable will have as its peak one of the vowel phonemes. If the vowel is one of ᵉ, ᴵ, ᵆ,ʌ,ɒ,ᵾ . then the strong syllables will always have a coda as well.

The weak syllables in word-final position with a coda if the vowel is ᵊ. For example:

1. ‘open’ ᵊᵾpᵊŋ
2. ‘sharpen’ ʃɑ:pᵊn

Inside a word, we can find the above vowels acting as peaks without codas in weak syllables: for example , look at the second syllabe of these words;

1. ‘photoghraph’ fᵊᵾtᵊgra:f
2. ‘radio’ reidiᵊᵾ
3. ‘influence’ influᵊns

In addition, the vowel i can act as a peak without a coda if the following syllable begins with a consonant;

1. ‘architect’ᵅⁱkᴵtekt

The term strong and weak denotes what kind of consonants follow the vowel. The onset part should be separable from the rime in order to make proper definition of strong and weak clusters. (Passino, Brandão de Carvalho, and Scheer 2021). The position of stress on particular words accurately and clearly using tree diagrams. In these diagrams, which form part of a theory called Metrical Phonology, each syllable is labelled either S or W: and because stress, as we saw above, is not an absolute but a relative property of syllables, these labels do not mean ‘Strong’ and ‘Weak’, but ‘Stronger than

an adjacent W' and 'Weaker than an adjacent S.(Rice, Curt , McMahon 2003)

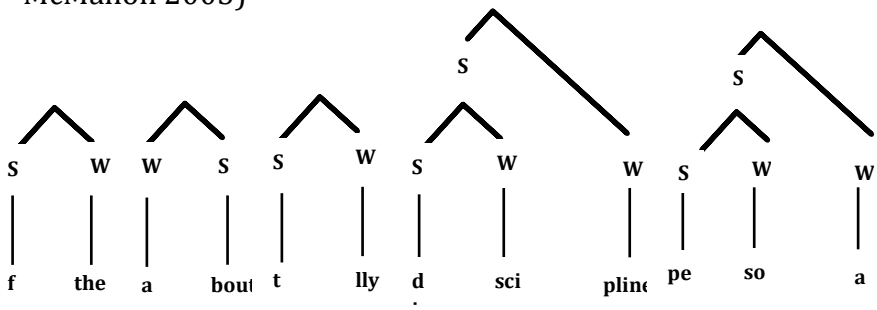

Figure 1.2. Matricsl Phonology

6.4.1 The *∂* vowel ("schwa")

The *∂* vowel ("schwa") denoted by the symbol/e/ in the International Phonetic Alphabet, is a unique and neutral sound that is found in many languages. It is often described as a "mid-central" vowel because its tongue position is in the middle of the mouth and it is pronounced in a relaively central part of the oral cavity.

The schwa sound is the most common vowel sound in english, and it occurs in many many unstressed syllables, especially in function words like articles, prepositions,auxiliary verbs. It is often reduced and has a shorter duration compared to other vowels. Some example of the schwa sound in english is,

1. The First Syllable Of "About" Sounds Like /Ə/ (Uh-Bout).
2. The Second Syllable Of "Banana" Sounds Like /Ə/ (Buh-Nah-Nuh).
3. He First Syllable Of "Sofa" Sounds Like /Ə/ (Suh-Fa).

The schwa soound is sometimes described as an “uh” sound,and its pronunciation depending on the surrounding sounds of the speaker’s accent.

6.4.2 Close front and close back vowels

Two other vowels are commonly found in weak syllable, one *close front* that is in the general are of /i;/ and /I/ vowels, and the other one *is close back rounded* vowel that is in the general. . In strong syllables it is comparatively easy to distinguish i: from 1 or u: from u, but in weak syllables the difference is not so clear. For example, although it is easy enough to decide which vowel one hears in ‘beat’ or ‘bit’, it is much less easy to decide which vowel one hears in the second syllable of words such as ‘easy’ or ‘busy’. (Roach 2000)

Therefore, in the general area of close front and close back rounded vowels in weak syllables of BBC pronunciation, the two distinctions /i:/ and /I/, which clearly exist in strong syllables, are referred to as neutralized vowel sounds.

Long /i:/ ⟶ /i/ ⟵ Short /I/
Long /u:/ ⟶ /u/ ⟵ Short /ʊ/

Few speakers with a BBC accent seem to feel satisfied with any of these transcriptions. There is a possible solution to this problem, but it goes against standard phoneme theory.(Roach 2000)

1. *Possible possition of close front unrounded vowel /I/*
   a. In word-final position in words spelt with final ‘y’ or ‘ey’ after one or more consonant letters (e.g. ‘happy’ haepi, ‘valley’ vaeli) and in morpheme-final position when such words have suffixes beginning with vowels.
   b. In a prefix such as those spelt ‘re’, ‘pre’, ‘de’ if it precedes a vowel and is unstressed.

c. In the suffixes spelt ‘iate’, ‘ious’ when they have two syllables.
d. In the following words when unstressed: ‘he’, ‘she’, ‘we’, me’, ‘be’ and the word ‘the’ when it precedes a vowel.
e. In most other cases of syllables containing a short close front unrounded vowel we can assign the vowel to the i phoneme, as in the first syllable.

2. *Possible possition of close back rounded vowel /u/;*
   a. Weak syllables with close back rounded vowels are not so commonly found.
   b. They are unstressed and are not immediately preceding a consonant, and ‘through’, ‘who’ in all positions when they are unstressed
      Example; ‘you’, ‘to’, ‘into’, ‘do’

6.4.3 Syllabic consonants

In the above sections we have looked at vowels in weak syllables. We must also consider syllables in which no vowel is found. In this case, a consonant, either l, r or a nasal, stands as the centre of the syllable instead of the vowel. (Roach 2000). Syllabic l is perhaps the most noticeable example of the English syllabic consonant, though it would be wrong to expect to find it in all accents. It occurs after anotherconsonant, and the way it is produced.(Senowarsito, Sukma, and Semarang, n.d.)

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BAB 7
STRESS IN SIMPLE WORDS

Oleh Suzanna Widjajanti

7.1 Introduction

The previous chapters have discussed materials relate to phonetics, the study of spoken language—the consonants and vowels, and the melodies and rhythm of speech. They mostly focus on aspects of language by measuring sound waves, mouth movements, or hearing capabilities that be performed in impressionistic phonetic transcription, or it is called by **segments** (i.e., individual sounds) of speech: place and manner of articulation and voicing for consonants; tongue height and advancement, lip rounding, and tenseness for vowels. Meanwhile, another feature of a speech sound is called **supra segmental**, it refers to the length, intonation, tone, and stress. Therefore, when a speaker produces an utterance, **'banana',** it can be distinguished into two features:

1. Segmental features, or segmental, which refer to sound units arranged in sequential order: the example above has six segmental features or phonemes /bə'nɑːnə/
2. Supra-segmental features refer to stress, pitch, length, and intonation. The example above can be read: ba*NA*na (bə'nɑːnə) in which capital letters show the stress or rising intonation if uttered.

When they are compared, it can be said that segmental features can be studied in isolation, whereas, supra-segmental features can not be, however, another example phrase 'good morning' is written into transcription/gʊd mɔːnɪŋ/to put stress

onto the phrase is rather different, the stress can attach in the first word or the second word, or both of them. It is dependent on its language function in the text. Relating to phonetics and phonology, the discussion tends to explore stress in simple words as a prominent issue in this chapter.

7.2 Word and Sentence Stress

During oral communication, there is one or more of the syllables word pronounced more prominent than the other. The prominence of a greater sound syllable is called **stress**. Stress is a property word (Kreidler in Huwari and Al-khasawneh, 2019)

7.2.1 Stress vs unstress

Stress is not included individual segments that can be illustrated as the degree of force with which a sound or syllable is uttered. Syllables that are pronounced with a greater degree of stress than neighboring syllables in a word or sentence are said to be stressed or more accurately pronounced with strong stress. Syllables pronounced with a relatively small degree of stress are said to be **unstressed** or weak stress. Three degrees of stress can be observed in English.

1. Strong or primary stress
2. Medium or secondary stress
3. Weak stress or unstress

As consequently, there are three identified syllables in words, and each of their existence will be spoken louder than others as the primary stress occurs on the syllable seen in the word *OP*tic, the secondary one is seen in the word „ba*NA*na“ (The syllables indicated in uppercase are the stress syllables, and in lowercase are the unstress syllables.

Furthermore, the three degrees of stress also can be seen in phrases and sentences. A word consisting of three or

more syllables, as well as, a phrase and sentence that have the same pattern such as wit*HOUT* me (the primary stress), *with PLEAsure* (the secondary stress)

Meanwhile, the pattern of stress words in English can be stated by marking the above syllables as follows:

Ooo	**oOo**	**ooO**
*TECH*nical	ba*NA*na	under*STAND*
*OP*tic	pho*NE*tic	prepa*RATION*
*SUB*stitute	en*GAGE*ment	kanga*ROO*

The words in the first group **(Ooo)** are all stressed on the first syllable, the words in the second group(**oOo**) are stressed on the second syllable, and those in the third group (**ooO**)are stressed on the third syllable.

However, unstressed words can be noticed regarding the phoneme known as ‚schwa' (the phoneme transcription is /ə/). this sound can be heard in the first syllable of *about*, in the second syllable of *paper*, and in the third syllable of *intricate*. The table below shows the existence of /ə/) with the written vowel underlined).

Ooo	oOo	ooO
*TECH*nic**a**l	b**a***NA*n**a**	und**e**r*STAND*
*OP*tic	ph**o***NE*tic	prep**a***RATION*
*SUB*stitute	en*GAGE*m**en**t	kang**a***ROO*

Schwa is often happening vowel sound in English, however, Its existence never appears in the first syllable, the second, or the third one. It is a common feature of English that interference with pronunciation, and lack of awareness of its role pursues people, especially student's difficulties in understanding native speaker speech.

Moreover, schwa /ə/) is also represented through spelling in a variety of ways. Here are some spellings:

a, as in **a**bove /ə'bʌv/
e, as in list**e**n /'lɪsən/
I, as in optic**i**an /ɒp'tɪʃən/
o, as in t**o**day /tə'deɪ/
u, as in s**u**ggest /sə'ʤɛst/

The most common vowel sound schwa /ə/appears in English spelling pronunciation, however, all unstressed can be presented such as /ə/ in a word *SUB*stitute /'sʌbstɪtjuːt/

7.2.2 Rules of word stress

The distribution of stress in a word cannot be estimated across languages. The rules pattern of word stress is rather than information to help discover applicable patterns relevant to this language in getting communication, however, it can not occur in Arabic, English has its stress pattern. Hereby are examples of stress on the words in some categories:

Firstly, monosyllabic words in isolation bear primary stress such as *man, pen, call cut, dog, cat,* etc.

Secondly, two syllabic words may have the primary stress on the first syllable and weak stress on the second such as *BA*by, *TA*ble, *O*pen *Ba*sic, etc, on the first syllable bears the weak stress, and the second syllable get primary stress such as aGO, hoTEL, de*CLARE*

Thirdly, three syllabic words may have the primary stress on the first: *AR*ticle, *CA*pital*, FA*mily, on the second stress: no*VEMBER*, to*MORROW*, fa*MILIAR, and on the third syllable:* engi*NEER,* guaran*TEE,* after*NOON*

Next, core vocabulary refers to nouns and adjectives of two-syllable length that are stressed on the first syllable such as *MO*ther. *Wa*ter, *Lo*vely

After that, prefixes and suffixes commonly are not usually stressed in English, however, it is enabled in suffixes such as QUI*etly*, oRIGI*nally,* and prefix*: Bi*cycle. *DISagreement*

Then, some compounding words refer to the combination of two words that tend to be stressed on the first element, such as *NEWS*paper; *POST*office, however, there are also compound words with primary stress occurring in both elements such as *HALF-WAY, OLD-WORLD, TEAR GAS.*

At the last, words have a dual role referring to the functioned word as either a noun or a verb. The noun function tends to stress on the first syllable (in line with the „core vocabulary" rule) and the verb on the last syllable (in line with the „prefix rule", such as *IM*port (N) and im*PORT* (V).

7.2.3 Levels of stress

Regarding stressed and unstressed, however, stressing within words with longer syllables can have different degrees of stress. Refers to Daniel Jones's opinion *in an Outline of English Phonetics, it enables word „pronunciation"* can be classified into five levels of stress as shown below: „1"addresses the greatest level of stress, and „5" the least

4 2 3 1 5
/prəˌnʌnsɪˈeɪʃən/

The primary stressed syllable is pointed out as number 1 for „a“ /ei/ and the secondary stressed syllable is addressed as number 2 for „nun“ / nʌn/

In line with Daniel Jones‘ viewpoint, however, other experts settle on a three-level distinction: the first stress, the second stress, and the unstress (Starkey-Perret, 2008) as the following:

oOo

/prəˌnʌnsɪˈeɪʃən/

O (the first stress); o (the second);. (unstress)

7.2.4 Sentences: Stress timing and syllable timing

In English primary stresses tend to occur more or less at regular intervals in a sentence, or are called **stress–timed**, or **isochronous**, regardless of the number of unstressed syllables that may be found in between those primary stresses**. A stress-timed language** regards the time between one stressed syllable and the next as roughly at the same. Therefore, syllables do not last the same amount of time. Stressed syllables tend to be spoken more slowly whereas, unstressed syllables are rapidly spoken or made shorter to fit the rhythm, consequently, there is a vowel reduction because some words are pronounced faster.

Meanwhile, several languages such as French, Italian, Spanish, Icelandic, Cantonese Chinese, and Mandarin are **syllable-timed languages**, they have syllables last more or less the same amount of time regardless of whether the syllable is stressed or unstressed. They don’t have to reduce vowels. Consequently, more words added in the sentence are longer to say it. The distance between the stressed syllables is more or less the same. The stressed syllable, or is called syllable timing refers to the words that are pronounced with the same duration (Conlen, 2016).

An example of a stress-timed language can be seen as follows:
Boy buys bicycle .....(3 syllables)
The **boy buys bicycle.....(4 syllables)**
The **boy buys** *the* **bicycle..... (5 syllables)**
The **boy** *will* **buy** *the* **bicycle..... (6 syllables)**
The **boy** *will be* **buy***ing the* **bicycle ..... (7 syllables)**
The explanation of stress timing :
Boy buys bicycle .....(3 syllables)
The **boy** *will be* **buy***ing the* **bicycle ..... (7 syllables**)

The first sentence consists of 3 syllables and the second consists of 7 syllables. Both sentences will last approximately the same amount of time, even though the second sentences have 4 more syllables

The bold words are to show the primary stress that occurred in the sentence, however, if it is spread out or added syllable longer (by marking *the italic words*) the additional words are unstressed syllables to be said quicker. The stressed syllable commonly includes the content words: main verbs, nouns, adjectives, adverbs, and negative auxiliaries, whereas, the unstressed one includes structure words: pronouns, prepositions, articles, conjunctions, and auxiliary verbs.

Meanwhile, the example of syllable-timed can be found in the Spanish word ‚America", phonetic transcription/ əˈmɛrɪkə/, all four syllables have the same duration and the vowel of quality is unreduced, so all vowel is pronounced in the same interval/əˈmɛrɪkə/.

7.2.5 Sentence stress and tonic syllables

When words are arranged in a sentence, they usually maintain their stress, which is the most important in the mind of the speaker. Moreover, there is no hard and fast stress sentence rule, however, any general principles that enable one

to use stress properly when speaking in English, that is by being stressed based on the parts of speech and where the words fall in a sentence as the following:

1. Content words (nouns, adjectives, adverbs, and main verbs) are usually stressed.
2. Function words (determiners, prepositions, and conjunctions) are usually unstressed unless you want to emphasize their role(s) in a sentence.
3. Question words (who, what, when, where, why, and how) are usually unstressed unless you want to emphasize their role(s) in a sentence.
4. Subject pronouns (I, You, He, She, We, They) are usually unstressed, while object pronouns (me, you, him, her, us, them) are usually stressed.
5. Furthermore, the use of stress in speech supports delivering and understanding the meaning of the speaker's utterance which is called tonic syllables. A tonic syllable is very important to enable the hearer's perception of the speaker's statements.

The principles above can be used in the following sentences:

Expressions	Meaning
This is my *HOUSE*	this is the normal way
This is *MY* house	it is not your house, but mine
This *IS* my house	this is not a lie, this house does belong to me
This is my house	it is this house that belongs to me, not that house

Capitals (uppercase) are used to differentiate between stressed and unstressed, and also as tonic syllables of the speaker's statement.

7.2.6 Sentence stress and weak forms

One of the most striking features of English pronunciation is the phenomenon known as full form and weak form. Weak forms occur only in unstressed positions, full forms are used often when the word is stressed. Furthermore, to differentiate between full forms with weak ones by noticing a difference in a vowel sound, by the absence of sound (vowel or consonant), or by the difference in the length of a vowel.

The example of some words in full form and weak one are as follow:

Words	Full Form	Weak Form	Example
a	eɪ	ə	a book
an	æn	ən	an ordeal
the	ðiː	ðə	the oil

To clarify the different using of full form and weak one, it can be seen the use of the word *can* and *form* sentences as follows:

1. She can **/kən/** speak more languages than I can **/kæn/.** (the first can is the weak form, and the second can is the full form
2. I am from **/frəm/**Indonesia. Where are you from/**frɒm/**?, (the first form is the weak form, and the second form is the full form.
3. These words (can and form) mostly indicate function words, filling in the between content words (noun and verb) and making sentence „work“grammatically.

7.3 Conclusion

Considerate pronunciation of stressed and unstressed syllables are very crucial elements to understand in taking good communication. Relate teaching – learning in the classroom, teachers must teach their student's pronunciation early.

There are some ways in enhancing comprehension of word and sentence stress for the students such as drilling words, making code stress using the motion of hand or finger, wooden knock on the table, or speaking or singing the stress pattern (DA da da).(Starkey-Perret, 2008)

Furthermore, to indicate stress words or sentences in writing the teacher can use marking such as

O o o technical	' sunshine	ba***NA***na	declare	America /əˈmɛrɪkə/
Above the word	Before the stressed syllable	Written in the capital letters	Marked Underline	Written in the phonetic transcription

Therefore, both in oral and written communications, stress words or sentences are very important elements of all English skills that influence both the hearer's and receiver's perception.

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BAB 8
COMPLEX WORD STRESS

Oleh Yusmalinda

8.1 Complex Words

Complex words are words that have more than a grammatical unit such as cookery. *Cookery* is a complex word that comes from a basic word (stem) *cook* and a suffix –*ery*. According to Roach (2009), there are two major types of complex words. First, complex words are created from a basic word and an affix, which can be a prefix and a suffix. For example, the word *pretest* is a comple word which contains two grammatical units namely the root word *test* and prefix *pre*. In addition, the word *enjoyable* is a complex word which is made from a basic word enjoy and suffix –*able*. Second, complex words are made of two independent words called compund words such as airport. The word *airport* is made of the word *air* and the word *port*.

8.2 Affixes

According to Roach (2009), affixes can have different effects on word stress, and there are three main possibilities:

1. In some cases, the affix itself takes on the primary stress. For example, when the prefix 'semi-' is added to the word 'circle', the primary stress shifts from the 'kl' sound in 'circle' to the affix itself, resulting in the pronunciation of 'semicircle' as ‘semisɜ:kl. Similarly, when the suffix '-ality' is added to the word 'person', the primary stress moves from the 'pɜlsn' sound in 'person' to the affix, resulting in the pronunciation of 'personality' as pɜ:sn’ælәti.

3. In other cases, the word is stressed as if the affix were not there. This means that the stress pattern remains unchanged regardless of the presence of the affix. For instance, the word 'pleasant' is pronounced with the primary stress on the first syllable, 'pleznt. When the prefix 'un-' is added to 'pleasant', resulting in ‘unpleasant', the stress pattern remains the same, with the primary stress still on the first syllable, ʌn 'pleznt. Similarly, the word 'market' is pronounced with primary stress on the 'kit' sound, 'mɑ:kit. When the suffix '-ing' is added to 'market', creating 'marketing', the stress pattern remains the same, 'mɑkitinŋ.
4. In some cases, the stress remains on the stem (the main part of the word) rather than the affix. However, there is a shift in the stressed syllable. For example, the word 'magnet' is pronounced with the primary stress on the second syllable, mægnət. When the suffix '-ic' is added to 'magnet', forming 'magnetic', the primary stress remains on the second syllable, but there is a shift in the syllable that receives the stress, resulting in the pronunciation mæ'netik.

Understanding the effects of affixes on word stress is crucial for proper pronunciation and comprehension in English. It allows speakers to correctly emphasize certain syllables and convey meaning effectively.

In conclusion, affixes can impact word stress in different ways. They may receive the primary stress themselves, leave the stress unchanged, or cause a shift in the stressed syllable. By understanding these patterns and adapting pronunciation accordingly, one can improve their English speaking skills and communicate more clearly.

8.2.1 Suffixes

There are numerous suffix words that deserve attention, although not all of them can be thoroughly examined. In this article, we will focus on the most common and productive suffixes that can be applied to a significant number of word stems, and even used to create new English words. As for the remaining suffixes, it may be more beneficial for foreign learners to learn them as part of an individual word stem combined with the respective affix.

The incorporation of suffix words plays a crucial role in expanding vocabulary and understanding word formation in English. These suffixes, when correctly applied, can alter the meaning, part of speech, or even stress pattern of a word. By understanding and utilizing suffixes effectively, learners can enhance their language proficiency and communication skills.

One notable example of a common suffix is "-ing." This suffix is used to form present participles or gerunds, expressing actions or states. For instance, the word "read" can be transformed into "reading," indicating the ongoing action of reading or acting as a noun in contexts such as "I enjoy reading."

Another productive suffix is "-ful," which is used to denote a state or quality. When added to a word stem, it creates a new word that conveys the presence or possession of a particular characteristic. For instance, the word "joy" can be transformed into "joyful," representing the feeling of happiness or fullness of joy.

Additionally, the suffix "-less" is commonly used to convey the absence or lack of something. By adding this suffix to a word stem, the resulting word implies the absence or non-existence of the characteristic associated with the base word. For example, "care" becomes "careless," indicating a lack of concern or attention.

Stress of complex words which have suffixes can be diveided into the following. First, **some suffixes may carry the stress themselves. The suffixes are '-ee', '-eer', '-ese', '-ette, and'-esque'.**

Table 8.1. The Stress on Suffixes

Suffixes	**Complex words**
'-ee'	Examinee /ɪgˌzæmb.əˈniː/ Employee /ɪmˈplɔɪ.iː/ trainee/ˌtreɪˈniː/
'-ese'	Japanese /ˌdʒæp.ənˈiːz/ Chinese /tʃaɪˈniːz/ Vietnamese /ˌvjet.nəˈmiːz/
'-ette	etiquette /ˈeț.ɪ.kɪt/ cigarette /ˈsɪg.ə.ret/ towelette /ˌtaʊəˈlet/
-esque'	grotesque /groʊˈtesk/ picturesque /ˌpɪk.tʃərˈesk/ burlesque /bɜ˞ːˈlesk/

Second, the suffixes do not influence the stress of the stem of the complex words. The suffixes are -able,-age, ,-al,,-en, ,-ful, -ing, -like, -less, -ly, ,-ment', -ness, -ous, -fy, -wise, -y, and -ish (in adjectives). In other words, all complex words with those suffixes have the same stress as those stems.

Tabel 8.2. Not Affecting the Stress

Suffixes	**Complex Words**
-able	Believable /bɪˈliː.və.bəl/ Advisable /ədˈvaɪ.zə.bəl/ Agreeable /əˈgriː.ə.bəl/ Changeable /ˈtʃeɪn.dʒə.bəl/ Desirable /dɪˈzaɪr.ə.bəl/ Excitable /ɪkˈsaɪ.t̬ə.bəl/ Irritable /ˈɪr.ə.t̬ə.bəl/
-age	Anchorage /ˈæŋ.kɚ.ɪdʒ/ Wreckage /ˈrek.ɪdʒ/ Package /ˈpæk.ɪdʒ/ Linkage /ˈlɪŋ.kɪdʒ/ Storage /ˈstɔːr.ɪdʒ/
-al	Refusal /rɪˈfjuː.zəl/ Betrayal /bɪˈtreɪ.əl/
-en	awaken /əˈweɪ.kən/ batten /ˈbæt̬.ən/ blacken /ˈblæk.ən/ Brighten /ˈbraɪ.t̬ən/ Deepen /ˈdiː.pən/ Widen /ˈwaɪ.dən/ Lighten /ˈlaɪ.t̬ən/ Shorten /ˈʃɔːr.tən/
-ful	Beautiful /ˈbjuː.t̬ə.fəl/ Wonderful /ˈwʌn.dɚ.fəl/ Stressful /ˈstres.fəl/

Suffixes	Complex Words
	Plentiful /ˈplen.ʈɪ.fəl/ flavorful /ˈfleɪ.və˞.fəl/ resentful /rɪˈzent.fəl/ masterful /ˈmæs.tə˞.fəl/ helpful /ˈhelp.fəl/
-ing	Ceiling /ˈsiː.lɪŋ/ Building /ˈbɪl.dɪŋ/ Dressing /ˈdres.ɪŋ/ Dwelling /ˈdwel.ɪŋ/ Feeling /ˈfiː.lɪŋ/ Filling /ˈfɪl.ɪŋ/ Longing /ˈlɑː.ŋ.ɪŋ/
-like	Adultlike /ˈæd.ʌlt laɪk / Arrowlike /ˈer.oʊ laɪk / Basketlike /ˈbæs.kət laɪk / Blanketlike /ˈblæŋ.kɪt laɪk / Brotherlike /ˈbrʌð.ə˞ laɪk / Birdlike /ˈbɜːd.laɪk/
-less	nonetheless /ˌnʌn.ðəˈles/ meaningless /ˈmiː.nɪŋ.ləs/ thoughtless /ˈθɑːt.ləs/ featureless /ˈfiː.ʧə˞.ləs/ remorseless /rɪˈmɔːrs.ləs/ purposeless /ˈpɜː.pəs.ləs/ emotionless /ɪˈmoʊ.ʃən.ləs/ passionless /ˈpæʃ.ən.ləs

Suffixes	Complex Words
-ly	Accidentally /ˌæk.səˈden.ʈəl.i/ Foolishly /ˈfuː.lɪʃ.li/ Gladly /ˈglæd.li/ Greatly /ˈgreɪt.li/ Happily /ˈhæp.əl.i/
-ment	Treatment /ˈtriːt.mənt/ Apartment /əˈpɑːrt.mənt/ Department /dɪˈpɑːrt.mənt/ Appointment /əˈpɔɪnt.mənt/ Adjustment /əˈdʒʌst.mənt/ commitment /kəˈmɪt.mənt/ enlistment /ɪnˈlɪst.mənt/ investment /ɪnˈvest.mənt/
-ness	Blindness /ˈblaɪnd.nəs/ Brightness /ˈbraɪt.nəs/ Coldness /ˈkoʊld.nəs/ Darkness /ˈdɑːrk.nəs/ Toughness /ˈtʌf.nəs/ Harshness /ˈhɑːrʃ.nəs/ Stiffness /ˈstɪf.nəs/ Highness /ˈhaɪ.nəs/ Illness /ˈɪl.nəs/
-ous	**adventurous** /ədˈven.tʃɚ.əs/ **Dangerous** /ˈdeɪn.dʒɚ.əs/ Envious /ˈen.vi.əs/ **Poisonous** /ˈpɔɪ.zən.əs/ **Nervous** /ˈnɝː.vəs/
-fy	Beautify /ˈbjuː.ʈə.faɪ/

Suffixes	Complex Words
	Clarify /ˈkler.ə.faɪ/ Glorify /ˈglɔːr.ə.faɪ/ Modify /ˈmɑː.də.faɪ/
-wise	Likewise /ˈlaɪk.waɪz/ Stepwise /ˈstep.waɪz/ Edgewise /ˈedʒ.waɪz/ Crabwise /ˈkræb.waɪz/
-y	Funny /ˈfʌn.i/ Sunny /ˈsʌn.i/ Runny /ˈrʌn.i/ Cloudy /ˈklaʊ.di/ Icy /ˈaɪ.si/
-ish	Bluish /ˈbluː.ɪʃ/ Childish /ˈtʃaɪl.dɪʃ/ Foolish /ˈfuː.lɪʃ/ Reddish /ˈred.ɪʃ/ Selfish /ˈsel.fɪʃ/ stylish /ˈstaɪ.lɪʃ/

Third, suffixes can change the stress in the stem of the complex words. Those suffixes in this category are –eous, -graphy, -ial, -ic, -ion, -ious, -ity and –ive.

Tabel 8.3. Affecting the Stress in the Stem

Suffixes	**Complex Words**
–eous	homogeneous /ˌhoʊ.moʊˈdʒiː.ni.əs/ simultaneous /ˌsaɪ.məlˈteɪ.ni.əs/ spontaneous /spɑːnˈteɪ.ni.əs/
-graphy	Biography /baɪˈɑː.grə.fi/ Geography /dʒiˈɑː.grə.fi/ Photography /fəˈtɑː.grə.fi/ Pornography /pɔːrˈnɑː.grə.fi/ Stenography /stəˈnɑː.grə.fi/
-ial	Substantial /səbˈstæn.ʃəl/ Residential /ˌrez.əˈden.ʃəl/ Influential /ˌɪn.fluˈen.ʃəl/ Territorial /ˌter.əˈtɔːr.i.əl/ Superficial /ˌsuː.pɚˈfɪʃ.əl/ Proverbial /prəˈvɝː.bi.əl/
-ic	Democratic /ˌdem.əˈkræţ.ɪk/ Enthusiastic /ɪnˌθuː.ziˈæs.tɪk/ Climatic /klaɪˈmæţ.ɪk/
-ion	Beautiful /ˈbjuː.ţə.fəl/ Wonderful /ˈwʌn.dɚ.fəl/ Stressful /ˈzzstres.fəl/ Plentiful /ˈplen.ţɪ.fəl/ flavorful /ˈfleɪ.vɚ.fəl/

Suffixes	Complex Words
	resentful /rɪˈzent.fəl/ masterful /ˈmæs.tɚ.fəl/ helpful /ˈhelp.fəl/
-ious	Ceiling /ˈsiː.lɪŋ/ Building /ˈbɪl.dɪŋ/ Dressing /ˈdres.ɪŋ/ Dwelling /ˈdwel.ɪŋ/ Feeling /ˈfiː.lɪŋ/ Filling /ˈfɪl.ɪŋ/ Longing /ˈlɑːŋ.ɪŋ/
-ity	Adultlike /ˈæd.ʌlt laɪk / Arrowlike /ˈer.oʊ laɪk / Basketlike /ˈbæs.kət laɪk / Blanketlike /ˈblæŋ.kɪt laɪk / Brotherlike /ˈbrʌð.ɚ laɪk / Birdlike /ˈbɝːd.laɪk/
–ive	comprehensive /ˈkɑmprəˌhɛnsɪv/ authoritative /ɑˈθɔrɪteɪrɪv/ retrospective /ˈrɛtrəˌspɛktɪv/ **investigative /ɪnˌvɛstəˈgeɪdɪv/** **commemorative /kəˈmɛmrətɪv/** **communicative /kəˈmjunɪkərɪv/** **attractive /əˈtræktɪv/** **introspective /ɪntrəˈspɛktɪv/**

8.2.2 Prefixes

No prefix always conveys principal stress on one or two syllables (no specific prefix can always convey principal stress). The best remedy seems to be to insist that the stress of prefixed words follows the same rules as for unprefixed polysyllabic words.

8.2.3 Compound Words

A compound word is two or more words combined to form a new word with a different and distinct meaning. Compound words are written in three different ways. First, they can be written as one word (closed compound words) such as notebook, moonlight and baseball. Second, they can be written as two words and separated by a hypen (**hyphenated compound words)** such as well-known, check-in and clean-cut. Third, they can be written as two words and separated by a space (open compound words) for example dining room.

Moreover, according to Roach (2009), for the stress of the compound words the rules can be as followings. First, if the compound words consist of two nouns, the stress is normally on the first stress such as bedroom /ˈbɛdrum/, water tank/ˈwɑɾər tæŋk/, motorcycle /ˌmoʊdərˈsaɪkəl/, sunrise **/ˌsənˈraɪz/, and teacup /ˌtiˈkəp/.** Similarly, Roach (2013) suggests that compound items, like an earthquake, a lifeboat, a waiting room, and a fire extinguisher, typically have a necessary stretch on the main component but an auxiliary push on the immediate constituent.

Compound nouns, such as "EARTHquake," "LIFE boat," "WAITing room," and "FIRE extinguisher," typically place primary stress on the first element while placing secondary stress on the second constituent.

We create these pairs of sentences by contrasting the compounds with the relevant noun phrases: "That sounds like a

BLACK bird. [compound]," and "A carrion crow is a completely BLACK BIRD. [n. phrase]." The following examples also use contrasts between compounds and phrases: "BLACK board [C] vs. "black board [NP]," "GREEN fly [C] vs. "green fly [NP]," and "HOT house [C] vs. "hot house [NP"" (ibid).

Second, the stress of the compound words can be in the second element especially for compound verbs and adjectives. For example, compound verbs are outsmart /ˈaʊtˌsmɑrt/ and overdue /ˈoʊvərˌdu/. Compound adjectives, for instance, are **cold-blooded** /ˌkoʊldˈblʌd.ɪd/, **well-behaved** /ˌwel bɪˈheɪvd/, **open-minded** /ˌoʊ.pənˈmaɪn.dɪd/ and short-tempered /ʃɔːrtˈtem.pɚd/. However, depending on the dialect, the speaker, or how frequently the compound adjective occurs, the stress may occasionally move to the first syllable when the adjective follows a noun. For instance, the middle-aged man was being chased by a vicious.

Finally, compound adverbs usually have final stress. For example, head-first /ˌhedˈfɝːst/, and northwest /ˌnɔːrθˈwest/ have the final stress.

Similarly, according to Yurtbaşı (2017) the compound and phrase stress rules can be summed up in five fundamental ways:

1. The initial element in compounds that combine two nouns is stressed.such as "typewriter," "sunrise," "tea cup," and "suit case."
2. The second word is stressed in compounds containing an adjectival first part and the suffix -ed.such as "bad-TEMpered," "heavy-HANDed," etc.
3. Compounds with a terminal stress are more likely to have a number as the initial element. such as "three-wheeler," "second-class," and "five-finger."
4. Adverbial compounds are typically final-stressed.for instance, "head-First," "north-East," or "downstream"

5. Compounds with an adverbial first element that serve as verbs receive final stress such as "down-GRADE," "back-PEDAL," and "ill-TREAT"

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BAB 9
PROBLEM IN PHONEMIC ANALYSIS

By Sri Suci Suryawati

9.1 Introduction

Human beings utilize language as a structured means of communication within a social community. This involves written language for sender-receiver interactions, spoken language for speaker-listener interactions, and gestures like hand movements and facial expressions for wordless communication. These systems are essential for sharing ideas and thoughts. While written language uses written forms, spoken language conveys messages through sound production. To prevent misunderstandings between speakers and listeners, it's crucial for participants to pronounce utterances clearly and accurately. Effective pronunciation is achieved by individuals proficient in articulating the sounds of a language.

Linguistics, the study of language, is divided into two main classifications: macro linguistics and micro linguistics. Macro linguistics, encompassing sociolinguistics and psycholinguistics, examines language from external elements. In contrast, micro linguistics delves into internal aspects like Phonetics, morphology, and syntax. Phonetics, as explained by expert Roach (2000:44), focuses on how sounds function in a language and their relationships with other sounds. Utterances produced by a speaker are interconnected, forming context and meaning through pronunciation. Different speakers can alter the meaning due to variations in sound representation, highlighting the significance of sound study.

According to Subandowo (2017), pronunciation involves producing language sounds using speech organs and phonemic units. The Oxford Learner's Pocket Dictionary defines pronunciation as the delivery of language, words, or sounds. It encompasses segmental features, such as vowels and consonants, as well as suprasegmental features like pitch, loudness, and rhythm.

Ladefoged & Johnson (2011:243) elaborate that suprasegmental features extend beyond individual consonant and vowel sounds. These features are measured at syllable, word, phrase, and sentence levels.

Several researchers have analyzed learners' segmental features of pronunciation. For example, Fakhrunnisa (2015) examined English monophthongs among Indonesian-Javanese students, while Widagsa (2017) revealed closing diphthongs among Javanese learners of English. These studies investigated differences in monophthong and diphthong pronunciation among Javanese learners. However, there's a need to explore other aspects, such as suprasegmental features of English pronunciation, to further enhance English learning.

At its core, linguistics is an autonomous science, relying on linguistic criteria rather than findings from other disciplines. Disagreement arises with van Wijk's assertion that linguistics concerns the collective mental possession of language within a community. While this can be metaphorically interpreted, it's not the most suitable basis for linguistics. Van Wijk's approach involves invoking the linguistic intuition of native speakers to establish linguistic facts.

In this study, linguistic methods are based on empirical observations of speaker and listener behavior toward linguistic forms, without delving into psychological interpretation.

9.2 Cohen, The Phonemes Of English

L. Bloomfield, a prominent advocate of the anti-mentalistic approach within linguistics, contended that discussions about the core principles of our field (linguistics) often comprise a combination of self-evident truths and abstract philosophical concepts. This tendency is characteristic of subjects that are not integral to the main domain and should ideally be addressed by simply associating specific ideas with other scientific disciplines. When applied to van Wijk's statement, this perspective implies that any allusion to the internal mental processes of speakers or listeners should be attributed to psychology and is not within the purview of linguists.

9.3 Phonetics And Phonemics

As a secondary point of concurrence, we acknowledge the necessity to not merely examine the physical manifestations of language, whether they be spoken sounds or written texts, but rather to explore them in terms of their role as components within a system facilitating human communication.

During their early stages, linguistic studies revolved around deciphering written characters, with linguists primarily focusing on the analysis of written texts. However, in the latter part of the nineteenth century, there emerged a heightened interest in the sounds of spoken language. Concurrent with a broader movement evident in various scientific domains towards synthesizing and integrating the fragments of knowledge amassed through predominantly analytical methods characteristic of an atomistic era, contemporary linguists have responded to the prevailing trend of scrutinizing isolated facts. In their pursuit, linguists have introduced the concept of 'pattern' into linguistic research, aiming to view linguistic facts

not as isolated entities, but rather as the connections between these facts and other linguistic elements.

This development has led to a clear distinction between the approaches used in studying the actual sounds of spoken language, known as phonetics, and their incorporation into a system of interdependent functions termed phonemics. By asserting that there is general consensus on this second point, we are simply observing the widely shared recognition that phonemics constitutes a discipline distinct from phonetic investigations. However, the precise differentiation between phonemics and phonetics has yet to be definitively established. Currently, two main schools of thought are discernible:

1. The approach followed by the Prague school, which emphasizes considering the significant function, namely 'meaning,' as a fundamental premise in phonemic studies.
2. An alternative approach, favored by numerous American linguists, which has been highlighted in reviews such as those by Rulon S. Wells and Charles F. Hockett. These linguists advocate for a different perspective and approach to phonemic analysis.

It is important to note that the debates and discussions within the field continue to shape the understanding and application of phonemic analysis. As a secondary point of concurrence, we acknowledge the necessity to not merely examine the physical manifestations of language, whether they be spoken sounds or written texts, but rather to explore them in terms of their role as components within a system facilitating human communication.

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9.4 Problems In Phonemic Analysis

There are two primary challenges associated with comprehending the phonology of English. The first is termed the "problem of analysis." Diverse scholars offer varying analyses of the phonemic structure of English, indicating that phonemic analysis is more intricate than studying the components of the alphabet. The second challenge pertains to "problem of assignment." Instances exist where assigning specific speech sounds to particular phonemes proves difficult.

1. The Problem of Analysis
   The affricates tʃ and dʒ are phonetically constructed with a plosive sound followed by a fricative sound. These pairs, tʃ and dʒ, can be regarded as single consonant phonemes, or they can be perceived as combinations of two phonemes, each of which may already be established as independent phonemes in English. This dichotomy, referred to as the two-phoneme analysis of tʃ and dʒ, is supported by several arguments, though none is decisively conclusive. Some of these arguments include:
   a) The "phonetic" or "allophonic" argument suggests that evidence of glottalization supports the two-phoneme analysis. In Received Pronunciation (RP), glottalization occurs as follows:
      1) If a single consonant phoneme appears medially, glottalization is absent.

2) If two consonant phonemes appear medially, glottalization is common.
3) Glottalization occurs normally after a stressed syllable when tʃ appears medially.

b) Another argument considers the distribution patterns of the proposed phonemes tʃ and dʒ compared to other consonants. However, this argument is not entirely conclusive, as certain consonants accepted as phonemes in RP do not freely occur in all positions.
c) The ability of tʃ and dʒ to combine with other consonants to form clusters is a significant argument. If tʃ and dʒ can readily combine with other consonants, this supports the one-phoneme analysis. Initial tʃ and dʒ might then be interpreted as initial t or d combined with post-initial ʃ or ʒ. This would expand the post-initial consonant set to include l, r, w, j, ʃ, and ʒ, which might pose challenges due to the differing nature of these consonants.
d) Some propose that untrained or native English speakers perceive tʃ and dʒ as single sounds. However, gauging the feelings of untrained speakers about their language is complex, as it could be influenced by the use of two consonant letters in spelling.

The analysis of English vowels involves a multitude of phonemes. It's not surprising that phonologists have suggested various analyses, including those with fewer than ten vowel phonemes, treating long vowels and diphthongs as combinations of two phonemes each. One approach is to consider long vowels and diphthongs as pairs of vowel phonemes. Using a set of basic vowel phonemes (ɪ, e, æ, ʌ, ɒ, ʊ, ə), long vowels can be constructed

by repeating vowels. This is often represented as: ɪɪ (iː), æ æ (ɑː), ɒɒ (ɔː), ʊʊ (uː), əə (ɜː).

Another method involves treating long vowels and diphthongs as a vowel followed by a consonant (j, w, or h), which may seem less intuitive but has been widely used. For example: ej (eɪ), əw (əʊ), ɪh (ɪə), æ (aɪ), æw (aʊ), eh (e ə), ɒj (ɔɪ), ʊh (ʊə), ɪj (iː), æh (ɑː), ɒh (əː), əh (ɜː), ʊw (uː). This approach aligns diphthongs and long vowels phonologically, but it's important to note that j, w, and h do not typically appear as final consonants in syllables.

Syllabic consonants pose a unique challenge and differ phonologically from their non-syllabic counterparts. One option is to introduce new consonant phonemes to the list. Another approach involves establishing a "syllabicity" phoneme marked with a symbol. Some phonologists suggest that a syllabic consonant is a fusion of a vowel and a consonant, with the vowel (e.g., ə) causing the following consonant to become syllabic.

In conclusion, various analyses exist for the complex vowel system of English, each with its advantages and disadvantages. These approaches highlight the intricate nature of phonological analysis and its abstract relationship to phonetics, showcasing the separation between the phonemic and phonetic levels.

2. Problems of Assignment

We observed that while ɪ and iː are distinct in most situations, there are contexts where a sound cannot definitively be assigned to either of these two phonemes. To address this issue, the proposed solution involved using the symbol i, which does not represent a single phoneme. When instances arise in which the contrast between phonemes found elsewhere in the language disappears

within particular contexts, we refer to this phenomenon as neutralization. For instance, words like 'spill,' 'still,' and 'skill' are typically transcribed with the phonemes p, t, k following the s. However, some writers have pointed out that an equally valid transcription could use b, d, g instead. For instance, b, d, and g are unaspirated, while p, t, and k in initial syllable positions are usually aspirated. In the context of sp, st,and sk, an unaspirated plosive is found. While we often avoid transcribing them as sb, sd, and sg, it's essential to recognize that the contrast between p and b, t and d, and k and g is neutralized in this context.

Other cases present less clarity. Some phonologists propose that there might not truly be a contrast between ə and ʌ, arguing that ə only occurs in weak syllables. Minimal pairs can be found to indicate that a clear distinction between ə and ʌ is present only in unstressed syllables. Alternatively, certain phonologists suggest that ə serves as an allophone of several other vowel phonemes. For example, consider the middle two syllables in the words 'economy' (ɪ'kɒnəmi) and 'economic' (iːkə'nɒmɪk). When the stress shifts away from the syllable containing ɒ, the vowel becomes ə. This argument implies that ə is not an independent phoneme of English but rather an allophone of different vowel phonemes. While this perspective is intriguing, its adoption for this course is hindered by the resulting complex and abstract phonemic analysis.

A practical objective of teaching or learning English pronunciation is to avoid excessively abstract analyses. One criterion for assessing the value of an analysis lies in its suitability for practical instruction. Unless one's purpose is purely aesthetic, the most significant criterion involves whether the analysis accurately corresponds to how sounds are represented in the human brain. While our

understanding of this aspect is limited, the complexity and power of the human brain suggest that the analyses proposed thus far likely do not closely mirror this reality. These analyses tend to be influenced by theoretical concerns such as economy, elegance, and simplicity.

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BAB 10
PHONOLOGY

By Ramli

10.1 Background

In the human voice pronunciation, there are organ / body part that has the important function of each. Among the important organs of articulation is the tongue, the tongue is the active articulator (articulator that can be moved or be driven). Can be raised, lowered, and can be bent as needed voice to be used. In articulatory phonetics, the place of articulation (also point of articulation) of a consonant is the point of contact where an obstruction occurs in the vocal tract between an articulatory gesture, an active articulator (typically some part of the tongue), and a passive location (typically some part of the roof of the mouth). Along with the manner of articulation and the phonation, it gives the consonant its distinctive sound.

In articulatory phonetics, the manner of articulation is the configuration and interaction of the articulators (speech organs such as the tongue, lips, and palate) when making a speech sound. One parameter of manner is stricture, that is, how closely the speech organs approach one another. Others include those involved in the r-like sounds (taps and trills), and the sibilancy of fricatives.

10.2 Problem Identification

1. What is the Definition of Places of Articulation?
2. What kinds of Place of Articulation?
3. What are the Examples of Places of the Articulation?
4. What is the Defenition of manner of Articulation?

5. What kinds of manner of articulation?
6. What are the examples of manner of Articulation?

10.3 Purpose

1. To know the defenition of Places of Articulation.
2. To know kinds of Place of Articulation
3. To know the Example of Places of the Articulation
4. To know the Defenition of manner of articulation
5. To know kinds of manner of articulation
6. To know the example of manner of articulation

10.4 Discussion

1. Definition

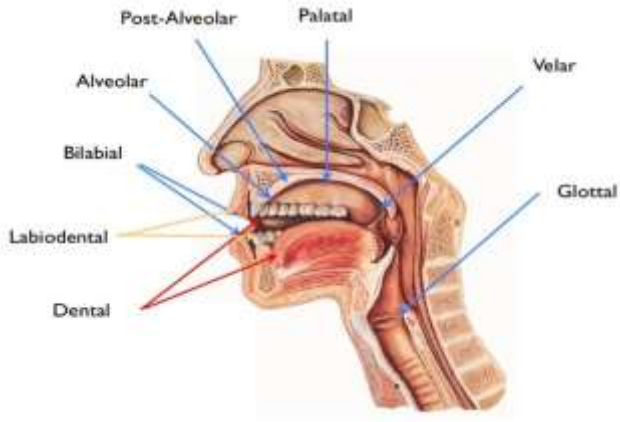
Place of Articulation In articulatory phonetics, the place of articulation (also point of articulation) of a consonant is the point of contact where an obstruction occurs in the vocal tract between an articulatory gesture, an active articulator (typically some part of the tongue), and a passive location (typically some part of the roof of the mouth). Along with the manner of articulation and the phonation, it gives the consonant its distinctive sound.

The terminology in this article has been developed for precisely describing all the consonants in all the world's spoken languages. No known language distinguishes all of the places described here so less precision is needed to distinguish the sounds of a particular language.

The diagram to your right gives a profile view of the human speech organ with arrows pointing to the *places of articulation* used in English.

In other words, these are the places where the constrictions/obstructions bof air occur. As you follow along, be sure to say the sounds and example English

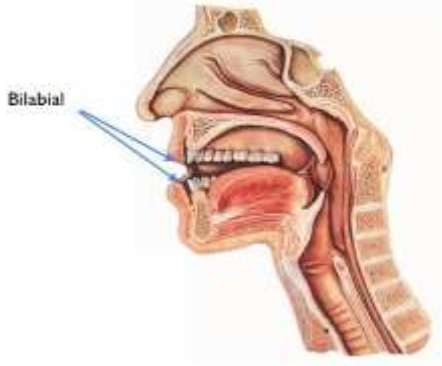
words *out loud* so that you can *feel* the places of articulation in your own mouth.



2. Kinds Of Place Of Articulation

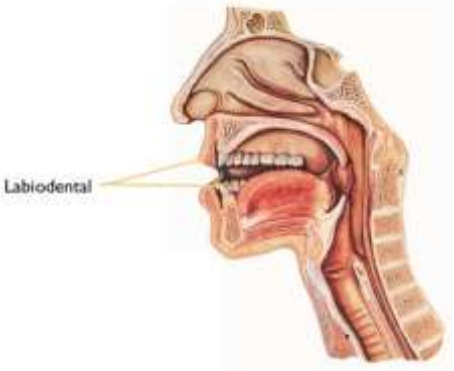
a. Bilabial

Bilabial consonants occur when you block/constrict airflow out of the mouth by bringing your chapped and/or drylips together.

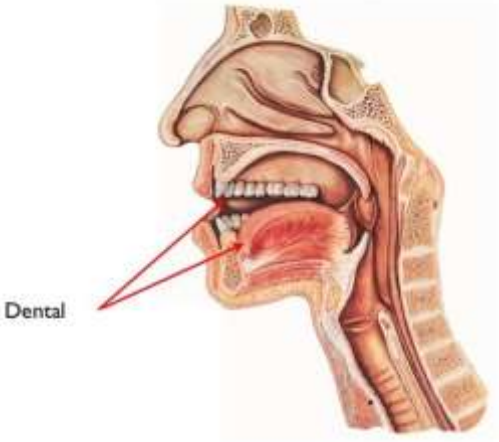


b. Labio-Dental

Labiodental consonants occur when you block/constrict airflow by curling your lower lip back and raising it to touch your upper row of jagged teeth*.



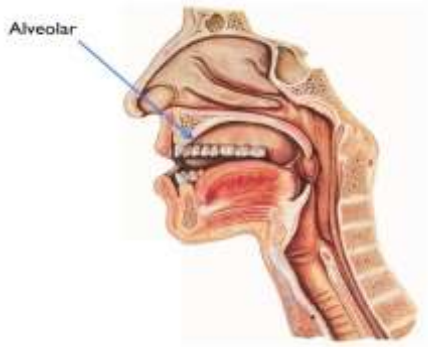
c. Dental



Dental consonants occur when you block/constrict airflow by placing your slimy tongue against your upper teeth.

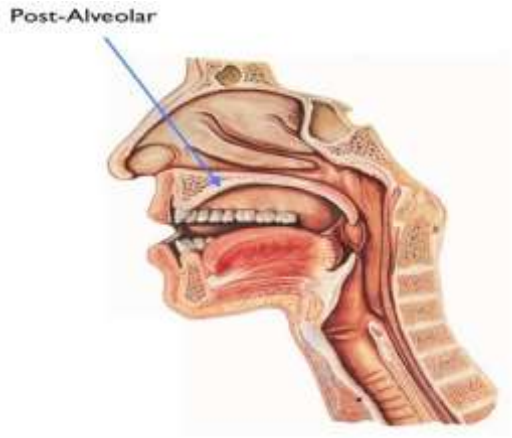
d. Alveolar

The alveolar ridge is where your jagged teeth meet your bloody gums*. *Alveolar consonants are created when you raise your tongue to the alveolar ridge so as to block/constrict airflow*.



e. Post-Alveolar

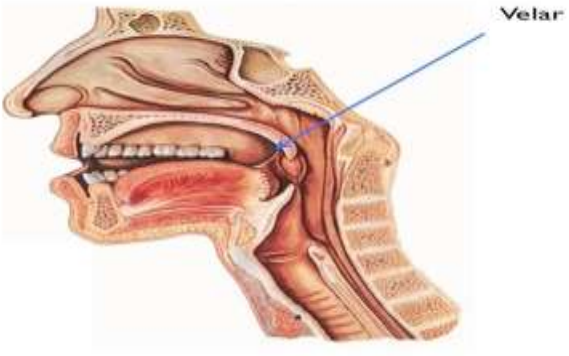
When you retract your tongue back just a bit from the alveolar ridge, the sounds change enough to be recognized as distinct consonants.



f. Velar

Behind your hard palate you have the *velum* or *soft palate.* Unlike the bony hard palate in front of it, the velum/soft palate consists of soft, mucousy tissue.

Velar Consonants are created when you raise the back of your tongue to the velum so as to block or restrict airflow.



3. Example of places of articulation

a. **Bilabial**

English contains the following three bilabial consonants:

1) /p/ as in "**p**urse" and "ra**p**"
2) /b/ as in "back" and "cab"
3) /m/ as in "mad" and "clam

b. **Labio-dental**

English contains the following two labio-dental sounds:

1) /f/ as in "fro" and "calf"
2) /v/ as in "vine" and "have"

c. **Dental**

English contains the following two labio-dental sounds:

1) /θ/ as is "thick" and "bath"
2) /ð/ as in "the" and "rather"

d. **Alveola**r

The English alveolar consonants are as follows:

1) /n/ as in “no” and “man“ /t/ as in “tab” and “rat“
2) /d/ as in “dip” and “bad“
3) /s/ as in “suit” and “bus“
4) /z/ as in “zit” and “jazz“ /l/ as in “luck” and “fully”

e. **Post-alveolar**

So *post-alveolar consonants are those that occur when the tongue blocks/constricts airflow at the point just beyond the alveolar ridge*. The post-alveolar english consonants are as follows:

1) / / as in “ʃ shoot” or “brash”
2) / / as in “viʒ sion” or “measure”
3) /t / as in “ʃ chick” or “match”
4) /d / as in “ʒ jam” or “badge”

f. **Velar**

English has the following velar consonants:

1) /ŋ/ as in “going” and “uncle” (note that the ‘n sound’ in these words is NOT made at the alveolar ridge, which is why it is distinct from /n/).
2) /k/ as in “kite” and “back“
3) /g/ as in “good” and “bug“
4) /w/ as in “wet” and “howard”

	Bilabial	Labiodental	Dental	Alveolar	Post-Alveolar	Palato-alveolar	Palatal	Velar	Glottal
Stops	p b			t d			k g		
Fricatives		f v	θ ð	s z		ʃ ʒ			h
Affricates						tʃ dʒ			
Nasals	m			n				ŋ	
Laterals				l					
Approximants	w				r		j		

4. Definition of manner of articulation

You notice how I consistently use the double-term "constriction/obstruction"? I'm doing this because it's important for you to understand that *there are many ways to mess up the airflow through your oral passage*. For example, you can squeeze the back of your tongue against your *velum* so as to completely block the airflow, or you can lightly touch it so that some air may pass through.

What's important to note is that, **even though bothof these constrictions/obstructions occur at the velum, they will have different sounds due to the fact that their *manners of articulation* are different.**

This is part of the reason why it's possible to have so many distinct consonant sounds at the same *place of articulation*. In English, there are six different *manners of articulation* that will distinguish one consonant sound from the next:

Nasal

Stop Fricative Affricate Approximant Lateral

Just as we did on the last page, we will review each of these manners of articulation in the context of the English consonant sounds. Examining these sounds from a different angle will allow you to further develop your physical awareness, so make sure you keep French-kissin' yourself while you construct that mental image of your speech organ.

5. Kinds of manner of articulation

a. Nasal
   Nasal consonants are created when you completely block air flow through your mouth and let the air pass through your nose.

b. Stop
   Similar to nasal consonants, stop consonants occur when the vocal tract is closed completely, but for stops the airflow is NOT redirected through the nose. Instead, the air quickly builds up pressure behind the articulators and then releases in a burst.

c. Fricative
   Whereas nasal and stop consonants involve a complete blockage of the vocal tract, fricative sounds involve only a partial blockage of the vocal tract so that air has to be forced through a narrow channel.

d. Affricative
   Stop consonants make sweet love to fricative consonants, the bastard offspring is known as an affricate consonant. The Affricate consonants start as stops with air building up behind an articulator which then releases through a narrow channel as a fricative (instead of a clean burst as stops do).

e. Approximant

Similar to how no one quite knows whether to classify a tomato as a fruit or a vegetable, no one quite knows whether to classify approximant sounds as vowels or consonants. Approximants are created when two articulators come close together but not quite close enough to create air turbulence.

The resulting sound is more like a fast vowel than anything else. For example, the /w/ approximant is essentially a fast /u/ sound (say /u/ + /a / really fast and you get the word ɪ "why"). So these guys really are going through an identity crisis

f. Lateral

Lateral consonants are created when the tongue blocks the the middle of your mouth so that air has to pass around the sides. There is one lateral consonant in English – /l/ – ("luck") which is created when you place the tongue at the alveolar ridge

6. Example Of Manner Of Articulation

a. Nasal

There are three nasal consonants in English.

1) */m/ – "**m**ad" and "cla**m**" – oral passage is blocked by closing the lips (bilabial).*
2) */n/ – "no" and "man' – oral passage is blocked by pressing tongue tip against the alveolar ridge (alveolar).*
3) */ŋ/ – "going" and "funk" – Oral passage is blocked by pressing the the back of your tongue against the soft palate (velar).*

b. Stop

English contains the following stop consonants.

1) /p/ – **p**urse and ra**p** – oral passage is blocked by closing the lips (*bilabial*).
2) /b/ – "back" and "cab" – oral passage is blocked by closing the lips (bilabial).
3) /t/ – "tab" and "rat" – oral passage is blocked by pressing the tongue tip against the alveolar ridge (alveolar)
4) /d/ – "dip" and "bad" – oral passage is blocked by pressing the tongue tip against the alveolar ridge (alveolar)
5) /k/ – "kite" and "back" – block airflow with the back of the tongue against the soft palate (velar).
6) /g/ – "good" and "bug" – block airflow with the back of the tongue against the soft palate (velar).

c. Fricative

The English fricative sounds are as follows:

1) /f/ – "**f**ro" and "cal**f**"- air is forced through the upper teeth and lower lip (*labiodental*)
2) /v/ – "vine" and "have" – air is forced through the upper teeth and lower lip (labiodental)
3) /θ/ – "thick" and "bath" – air is forced through upper teeth and tongue (dental)
4) /ð/ – "the" and "rather" – air is forced through upper teeth and tongue (dental)
5) /s/ – "suit" and "bus" – air is forced through tongue and alveolar ridge (alveolar)
6) /z/ – "zit" and "jazz" – air is forced through tongue and alveolar ridge (alveolar)
7) / / – "ʃ **sh**ot" and "bra**sh**" – air is forced through the tongue and point just beyond alveolar ridge (*post-alveolar*)

d. Affricative

The English affricate sounds are:

1) /t / – "ʃ **ch**ick" and "ma**tch**" – air is blocked with tongue just beyond the alveolar ridge (*post-alveolar*), then released as a fricative.
2) /d / – "ʒ **j**am" and "ba**dg**e" – air is blocked with tongue just beyond the alveolar ridge (*post-alveolar*), then released as a fricative

e. Approximant

There are two English approximants:

1) /w/ – "**w**et" and "ho**w**ard" – back of tongue raises to velum (but not too close!) and lips are rounded (*velar*)
2) /j/ – "**y**es" and "ba**y**ou" – tongue raises to hard palate (but not too close!) (*palatal*).

CONSONANTS (PULMONIC)

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k g	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.

10.5 CONCLUSION

Conclusion

In the place of articulation, there are several aspects that we need to focus on such as bilabial, labio-dental, dental, alveolar, post-alveolar, palatal, and velar. While there are five pricipal types of manner of consonant sounds.nasal, fricative, affiracive, plosives/stop, lateral, and approxximent. We need understand speech organs and articulation better.

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