4.3. Manner of Articulation

For a more refined description of consonants, phonetics uses yet a third classificatory framework, manner of articulation or as some prefer to call it '**manner ofobstruction'**. In the production of consonants, the upward movement of lung air is restrained at some level in the vocal tract depending on the sound being produced. However, the obstruction is not only of one type. It could be full, that is when the flow of air is momentarily blocked, partial where a portion of lung air is blocked whilst the remainder is left to travel freely in its upward journey towards the endings of the speech chain and entirely out of the body. Now that these introductory notes have been touched on, I hope that some little understanding about the meaning of 'manner of articulation' has started to take shape.

Without further ado, manner of articulation refers to the type and degree of obstruction that is made to the lung air. To recapitulate, for the production of consonants there has to be some obstruction made to the air stream. Different labels, then, are used to designate the various types and degrees of obstruction. They are elucidated in what follows.

4.3.1. Plosives (Stops): it refers to a class of sounds in the production of which there is a complete closure made by two or more organs behind which the air coming up from the lungs is stopped for a little while. Afterwards the organs making the closure separate quickly from one another letting all the amount of air that has built up behind them to pass freely through the wide gap their separation generates. There are six plosive consonant phonemes in English: /p/, /t/, /k/, /b/, /d/, /g/.

4.3.1.1. Aspiration: very important is the feature common to the three plosives in this set; aspiration. In some environments most particularly at the beginning of words and of stressed syllables, /p/, /t/ and /k/ undergo a process called aspiration. It very simply means that at the end of their production, the release stage, an h-like sound is produced.

It is hugely important for learners to familiarise themselves with an accurate production of this feature. Phoneticians maintain that if native speakers of English will hear the /p/ sound in words such as **palm**, **park**, **apart** as **balm, bark** and **abart** respectively if aspiration is left out.

4.3.2. Fricatives: this term designates a category of sounds in the production of which the organs in charge of sound generation approximate one another in such a way that a narrow passive

through which air escapes is formed. Due to the narrowness of the resultant gap, when the air makes its way through it, it produces a friction, hence the name 'fricatives'. The number of fricative consonants in the English consonantal inventory is relatively big. The letters standing for our targeted sounds (fricatives) is bolded for the sake of both brevity and clarity; **f**ive, **v**ase; **th**ink, **th**is; sei**z**e, **z**ip.

4.3.3. Affricates: it refers to a set of sounds that, surprisingly enough, holds the manner of articulation of two independent classes of consonants, namely plosives and fricatives. That is the reason why I prefer to call them compound sounds in terms of their manner of articulation. **An affricate** is a speech sound in the production of which there is a complete closure at some point in the vocal tract behind which the entirety of lung air is blocked. So far, affricates are identical to plosives. However, unlike plosives, the separation of the organs is slow and gradual; the compressed air is not released all at once. Rather, it goes through the narrow passage the slow separation of the organs in charge produces. Hence, it is quite legitimate to say that affricates start like plosives and end like fricatives. English employs only two such sounds, the first one opening and closing **church**; the second **judge**.

4.3.4. Laterals: it designates a group of sounds in the production of which lung air escapes over the edges of the place of articulation. That is, in the production of laterals, only the central parts of the organs in charge come into close contact; the edges thereof are left loose. It is, in fact, over the edges that the air escapes, hence the label **lateral**. English uses solely one such sounds: it figures in words such as **l**ap, **l**ousy, etc. To elucidate further, in the production of the /l/ sound, the air escapes over the rims of the tongue, because the centre of the tongue is in a tight contact with the tooth-ridge.

4.3.5. Approximants: refers to a set of sounds in the production of which the sound-producing organs, as their generic might imply, come sufficiently close to one another without genuinely getting into contact with one another. The upward movement of lung-air, hence, is not halted nor does it undergo slowing down whatsoever: it goes out relatively freely. Approximants deployed by English figure bolded in the following words, **w**ither, **u**niversity, **r**ed.

4.4. Voicing or Phonation

A fourth criterion of classification phoneticians utilise is phonation. It refers simply to the vibration of the vocal folds, an older name thereof is vocal cords which is still used in quite a number of recently published books.

The vocal foldsis the anatomical name given to the elastic cords in the throat. They are made to move thanks to other muscles in the throat. To make matters plainer, in the production of consonants, vocal folds can take one of the following positions:

Wide apart: this position results when the vocal folds are held apart from one another. When they take this position, the sub-glottal air is left to travel through them freely. This is the position they assume in normal breathing, when no sound is being uttered; and in the production of voiceless consonants. Hence, **a voiceless consonant** refers to a category of consonants in the generation of which the vocal folds do not vibrate, or rather they are not made to vibrate because they are not approaching one another in the process of sound-production for air to draw them apart, and induce them to vibrate.

Lightly touching the edges of one another: this is the second position typical of the vocal folds in the production of consonants, more specifically voiced consonants. **A voiced consonant**is, then, produced with the vocal folds vibrating because in the production of such a category of consonants the vocal folds are touching the edges of one another and consequently when the air reaches them, it forces them apart to continue its journey towards the upper chambers. The forcing apart of the folds causes them to vibrate. Hardly surprisingly, in the production of such a category there are over a hundred vibrations that take place during the production of one single consonant. How is it feasible for this to happen? When the air reaches them, it draws them apart, immediately afterwards, they resume their earlier position, they go back to touching the edges of one another anew. In the space of a second or so, the opening and closing happens over a hundred times in adult male speakers; in adult females it happens far more than that.

4.5. The Position of the Velum

Thisis the last classificatory criterion deployed to set consonantal phonemes apart. It refers to the status of the soft palate during sound production. In fact, there are two positions the soft palate can take: *raised* and *lowered*. If it is raised, the air goes through its usual route, the mouth (the oral cavity), because the nasal cavity is shut down. On the other hand, if it is lowered, the air goes through the nasal cavity owing to the closure of the oral cavity. By virtue of this

criterion, consonants are split into two clear-cut classes: **oral** and **nasal**. As the names proper might mean, during the production of an oral sound (most sounds in English are oral) the air goes through the mouth; in the production of a nasal sound it goes through the nose.

The foregoing are, we would argue, the four mandatory criteria any comprehensive description of consonants has to incorporate. However, some phoneticians surmise that it is not entirely invariably true. This group of scholars put forth another criterion, **force of articulation**, for reasons that will be outlined as this discussion unfolds.

4.6. Force of Articulation

It refers to how much muscular tension is exerted during the production of consonants. On no account are consonants produced by virtue of the same muscular energy and breath efforts, some consonants call for far more articulatory agility, so to speak, than do others. Those consonants in whose production the vocal organs tend to be much more under articulatory strain or tension are labelled **fortis consonants**. On the other hand, consonants which do not necessitate the same amount of tension are called **lenis consonants**. All English voiced consonants fall into the latter category, all voiceless ones into the former.Now we come to accounting for the reason behind some phoneticians' use of this last criterion. It is argued that the consonants which are said to be voiced are not invariably voiced in all the phonological environments where they occur. In some environments, they are only partially voiced, in some other environments they lose this feature altogether. In initial and final positions, voiced consonants, such as the /b/ in **beak** and /d/ in **dud** are only partly voiced. They behave virtually identically in final positions. It is argued that they retain this feature in its entirety solely when they are enclosed by voiced consonants or vowels, as in **about**, **abide**, **adding**.

Now that we have attained a full coverage of the four criteria used for the classification, description and distinction of consonants, it seems convenient that we blend all the criteria together so that a full portrayal of all the articulatory features of each single consonant phoneme could be gleaned. I have opted for displaying this in a tabular form for ease of comprehension.

BBC Accent's Consonants

Consonant	Description	Example Words
p	**voiceless, bilabial, plosive**	**pear, appoint, up**

t	voiceless, alveolar, plosive	teacher, attain, at
k	voiceless, velar plosive	kingdom, okay, seek
b	voiced, bilabial, plosive	bank, abound, ebb
d	voiced, alveolar, plosive	darling, adduce, add
g	voiced, velar, plosive	gear, agitation, sage
f	voiceless, labio-dental, fricative	father, after, safe
s	voiceless, alveolar, fricative	sister, assist, sage
T	voiceless, dental, fricative	thy, bathroom, wrath
h	voiceless, glottal, fricative	hay, behind
v	voiced, labio-dental, fricative	van, avoid, love
z	voiced, alveolar, fricative	zip, buzz
D	voiced, dental, fricative	that, worthy
Z	voiced, palato-alveolar, fricative	measure, treasure
S	voiceless, palato-alveolar, fricative	show, ashes
dZ	voiceless, palato-alveolar, affricate	judge, arrange, ajar
Í	voiced, palato-alveolar, affricate	church, batch, researcher
m	voiced, bilabial, nasal	mice, amend, swam
n	voiced, alveolar, nasal	nice, announce, one
N	voiced, velar, nasal	language, finger, hang

l	**voiced, alveolar, lateral**	**lap, allow, pull**
r	**voiced, palatal, approximant**	**ring, arrive**
j	**voiced, velar, approximant**	**year, tune**
w	**voiced, bilabial, approximant**	**water, inward**

4.7. Phonemic Transcription

Enclosed by the two forward slashes (//) are peculiar letters which together are used for rendering feasible as well as manageable what has come to be labelled **phonemictranscription**. As you might have gleaned out of the context where the word occurred, phonemic transcription refers to a type of graphological representations phonologists use to encode the speech sounds used in languages. While a portion of the symbols making up the system of transcription are akin to the normal alphabet letters, some are totally non-existent therein. The reason why there is this divergence between the phonological symbols and the letters of the alphabet is that there are far many sounds then letters. As the discussions in this booklet unfold, you will start to realise that English sounds significantly outnumber the letters. The vocalic system of English is a better spot for truly appreciating the inherently important role of the phonological symbols. Whilst there are five vowel letters, the English sound inventory incorporates a whole set of twenty vowel sounds.

4.7.1. The International Phonetic Alphabet and Association

We have been using the word phonological symbols so far though it is not really the word that you are bound to encounter in books of phonology and phonetics. The phonological symbols are generically called the **International Phonetic Alphabet**. This alphabet incorporates a large number of symbols standing for individual sounds and other symbols deployed to add extra information about how a given sound is articulated in given phonological environment. These are called **diacritics**.

It is called international because its symbols have been tailored in such a way that they could be used to represent sounds produced in all the languages of the world. The first attempt at constructing the alphabet was launched in 1886 by a committee called the **International**

Phonetic Association made up of a number of scholars coming from an array of first language backgrounds.

4.8. Exercise: the foregoing discussion has dwelt on the parameters according to which the consonants of the English sound inventory are described, classified and distinguished. Would you be able in light of this to wade through the following statements and provide afterwards a fine-grained account on how accurate or otherwise they are:

To arrive at an exhaustive classificatory framework of consonantal segments it suffices to draw on two parameters, place of obstruction and manner of obstruction.

Place of articulation refers to the degree and type of obstruction airflow undergoes during sound production.

We can safely dispense with place of articulation for the description of quite a number of consonant phonemes in English.

Manner of obstruction is solely used to describe two out of the twenty four consonants in English, namely /l/ and /h/.

Regarding manner of articulation, /s/, /p/ and /n/ all come under the umbrella heading, plosives or stops, as some phoneticians would rather label them.

In the production of stops, the air flows over the rims, hence their name.

In terms of phonation or voicing, all English consonants without the faintest exception, are voiceless. In other words, English does not have in its sound inventory sounds with the vocal folds vibrating.

In the production of voiced consonants, the vocal folds are lightly articulating with each other in such a way that when air reaches them it draws them apart to continue its upward journey. This action on the part of lung air induces them to vibrate because it happens, intriguingly enough, a hundred times in the production of one single consonant.