ASPIRATION AND UNASPIRATION PHONEMES IN OBAMA'S SPEECH AT STATE OF THE UNION 2016

A PAPER

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MOTTO AND DEDICATION

MOTTO

Treat others people like you want to be treated

DEDICATION

This paper is dedicated to my beloved parents, my beloved friends, all of people who love me and who inspired me.

ASPIRATION DAN UNASPIRATION PHONEMES DI PIDATO OBAMA PADA STATE OF THE UNION 2016

ANNISA SUKMANINGTYAS SUTJIPTADI

ABSTRAK

Tujuan dari penelitian ini untuk mengetahui sejauhmana kemunculan fonem plosif baik itu dengan diaspirasikan atau tidak diaspirasikan di dalam sebuah pidato Obama, yaitu State of The Union 2016. Metode penelitian yang digunakan untuk penelitian ini adalah metode penelitian kualitatif yang bersifat deskriptif dan cenderung menggunakan analisis. Landasan teori dimanfaatkan sebagai pemandu agar fokus pada judul penelitian ini sesuai dengan fakta yang diambil dari beberapa ilmuan. Penulis menggunakan teori Roach and Gussmann sebagai teori utama. Proses analisis data diantaranya mengumpulkan data yang telah didapat, kemudian dianalisis berdasarkan teori yang telah dikumpulkan, dan disimpulkan hasil akhirnya. Data analisis yang berhasil diperoleh dari pidato State of The Union sebanyak 30. Hasil analisa data memperlihatkan bahwa aspiration and unaspiration pada bilabial initial (23%), bilabial medial (11%), alveolar initial (19%), alveolar medial (2%), alveolar final (19%), velar initial (7%), velar medial (13%) dan velar final (6%).

Kata kunci : aspiration and unaspiration dalam sebuah pidato Obama.

ASPIRATION AND UNASPIRATION PHONEMES IN OBAMA'S SPEECH AT STATES OF THE UNION 2016

ANNISA SUKMANINGTYAS SUTJIPTADI

ABSTRACT

The purpose of this study was to find out how far the appearance of the plausible phoneme was aspirated or not aspirated in an Obama speech, namely State of the Union 2016. The research method used for this study was a qualitative research method that was descriptive and tended to use analysis. The theoretical basis is used as a guide so that the focus on the title of this research is in accordance with the facts taken from several scientists. The author uses Roach and Gussmann's theory as the main theory. The process of data analysis includes collecting data that has been obtained, then analyzed based on the theory that has been collected, and concluded the final results. The analysis data obtained from the State of the Union speech was 30. Results of data analysis showed that aspiration and unaspiration were bilabial initial (23%), medial bilabial (11%), initial alveolar (19%), medial alveolar (2%) , alveolar final (19%), initial velar (7%), velar medial (13%) and final velar (6%).

Keywords: aspiration and unaspiration in Obama's speech

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This paper writing as the last assignment to fulfill one of the requirements for taking undergraduate program (S1) of English Depasrtment of School of Foreign Languages - JIA. In this paper, the writer explains and analysis about Aspiration and Unaspiration Phonemes in Obama's Speech at State of the Union 2016.

During the process of making this paper, the writer encountered a lot of hardship and diffuculties both in finding the data and arranging it into an accepted scientific paper. Many good people helped this paper along the way and they deserved far more than an expression of gratitude. The writer would like to take this opportunity to express her thankfulness to all the following people who have advised and supported data and information to finish this paper, especially to:

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Finally, the writer hopes this paper will be useful especially for her and generally for everyone who reads it.

Bekasi, 11th August, 2018

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CHAPTER I

INTRODUCTION

A. The Background of the Research

Language has very important role in human life. Language cannot be separated from humans, because without language human will get difficult to adapt, communicate and interact with each other. Language also unites a country with another country. Language has many benefits, not just listening, speaking or writing. One of the functions of language as a tool of human communication with other human beings. The languages that can be explained through one's movements is also one way a person communicates**.**

Communication is the way of humans interact with each other of human beings. Communication is done orally that can be understood by both. If the language orally cannot be understood by both, communication can still be done by using body gestures or showing certain attitudes. Useful to inform anything to connect with the environment and others. One of the intermediaries to convey something of what you want to convey.

Language can be interpreted as a means to convey something that is meant for the heart or can convey thoughts, ideas, concepts or feelings. Although the language has the same rules or patterns, but because the language is used by heterogeneous speakers who have different backgrounds and social habits, the language becomes diverse. Expressing attitudes toward what is felt, expressing emotions through language, but also showing emotion when conveying. The listener can also guess what feelings are being felt, sad, angry or happy.

Language works to build relationships, maintain, and show social feelings or solidarity.

Language has a function to build relationships, maintain a relationship, shown a friendly feeling or socializing. Because humans are not smart to read the minds of each human being. Specially to guess from one thought to another. Most human languages use emotions that can be heard or perceived. And make people live socialize and relate to one another. Language will be more clearly learned through the science of linguistics as a means of assessment.

Linguistics is the science that makes the language as the object of study more clearly. And to investigate the language from written or non-written. Linguistics learns more about how the language can be produced. Linguistics can be grouped according to the object of study, the language in general or a particular language, the language of a particular time or the language of all time, the language's internal structure or language in relation to factors outside the language. And the purpose of the assessment whether for the purposes of theory or for applied in daily life, or the flow used to analyze the object of his study.

The object of language study can be at a certain time, or in an infinite period, from the beginning of the birth of the language to the present. The purpose of studying languages is to know the structural history of the language with all its changes and developments. Based on the object of the study linguistics has several branches such as phonology, morphology, syntax, semantics and pragmatics.

Linguistics is a field of science that leads to language studies. Linguistics can be said as a rule that is used in language that examines all forms and rules in language, where linguistics or linguistics is not based on only one language, but various kinds of art in the world. Language can be referred to as a communication tool between members of the community in the form of a sound symbol produced by the human utterance and communication system that uses vocal symbols (speech sounds). Besides that, language is also a clear sign to determine one's personality both good and bad, a clear sign to distinguish between race, ethnicity, family clan and nation.

Linguistics can be caused through the organs of the human body, especially in the body. As for how we can understand it lies in the process of talking so that we can know the purpose of what people have talked about clearly, we can clearly understand the events and facts that exist with the truth explained. Linguistics knowledge is knowledge in learning language which includes knowledge of grammar, symbols of language and all that relates to grammar. Linguistics knowledge is also a combination of the quantity of a grammar science with information that is known by someone whose language aspects do not need to be recounted in grammar.

Linguistics performance is the language that learns about how to speak well, politely and correctly when interacting with others in order to get a good impression. Language related to brain, this term says that language and brain are mutually sustainable. These two parts are very closely related where the brain plays an important role in language development. The way the language entered

the brain includes a variety of processes, namely language entered the brain beginning through the hearing process and then recorded and stored into the brain in which the process of organ called neuro is to be conveyed. Because many languages can be produced by the brain, in which the brain thinks of a language and language is issued in the form of sound by the mouth, the sound produced by the mouth is what is called language. If damage occurs in the brain, language will be limited because the brain does not produce or does not produce much language.

Phonetic is the science that discusses a voice can be formed using some part of the body are lips, teeth, tongue, pharynx and lungs. Science that only discusses the relationship between body parts that produce sound. For the formation of a language, production to sound perception. In studying the science of phonetics, will recognize the 3 types of phonetic articulatory phonetic among which is the study of the way the sound is formed, auditory phonetic that is the study of a language accepted by the listener and acoustic phonetic. In this science, will learn about the manner of articulation and place of articulation. Place of articulation is divided into six bilabials, labiodentals, dental, pabial, velar, glottal. Voiced and voiceless pronunciation is also discussed in this science.

Phonetics and phonology are the same sciences that study sound. In phonetics objective ways are provided to describe and analyze the range of human voices used in their language. Phonetics is divided into 3, namely articulatory phonetics that identify which organs and muscles are involved in producing different sounds. The voices are then sent from the speaker to the

listener. While acoustic and auditory phonetics focus on how the sound travels through the air in the form of sound waves and the impact of these waves occurs on the ears and brain of the listener.

The relationship between phonetics and phonology is complex. like when a baby is in the babbling phase, producing a sound, including some that they never heard from their parents. In this case, phonetics provides a great deal of diversity in language, including more information from the speakers appearing to be used or needed, all speakers, and every different speech.

Phonology is the science of a system in a language. This science is one of the branches of linguistics that deals with the way of pronouncing a language. How the language can appear and disappear. In examining a language will certainly be dealing with this science because the science of phonology examines the mechanism of a language clearly. Our phonological knowledge is not something we can necessarily access and talk about in detail, we often have intuitions about language without knowing where they come from, or exactly how to express them. But the knowledge is certainly there. However, English speakers are not consciously aware of those rules, and are highly unlikely to tell a linguist asking.

Phonetic is the science that discusses how a sound can be formed using several parts of the body, namely the lips, teeth, tongue, pharynx and lungs. This science only discusses the relationship between parts of the body that produce sound. For the formation of a language, production to perception of sound will be studied in this one science. In learning phonetic science, you will recognize 3

types of phonetics including articulatory phonetic, namely the study of the way the sound is formed, auditory phonetic, namely the study of a language accepted by listeners and acoustic phonetic. In this one science, you will learn about manner of articulation and place of articulation. Place of articulation is divided into six namely bilabial, labiodentals, dental, pabial, velar, glottal. Voiced and voiceless pronunciation is also discussed in this science.

Phonology is the study of the patterns of sounds in a language and across languages. Put more formally, phonology is the study of the categorical organisation of speech sounds in languages; how speech sounds are organised in the mind and used to convey meaning. In this section of the website, we will describe the most common phonological processes and introduce the concepts of underlying representations for sounds versus what is actually produced, the surface form. Phonology can be related to many linguistic disciplines, including psycholinguistics, cognitive science, sociolinguistics and language acquisition. Principles of phonology can also be applied to treatments of speech pathologies and innovations in technology. In terms of speech recognition, systems can be designed to translate spoken data into text. In this way, computers process the language like our brains do. The same processes that occur in the mind of a human when producing and receiving language occur in machines. One example of machines decoding language is the popular intelligence system

Phonetics, the science that investigates how sounds are produced by the mouth, nasal (nasal sound), throat, and so on. So it's more to study the audible sounds, and nothing to do with the meaning of the sounds produced (the meaning

of the sound produced). Well, if Phonology is the science that studies both sound and meaning. So this Phonology 'explores' the difference when a sound is produced and what if the sound is produced is slightly different, it will change the meaning of the sound. For example, the word "sin" and "seen", both are pronounced differently, and of course the meaning is different.

Phonetics and phonology are the same sciences that study sound. In phonetics objective ways are provided to describe and analyze the range of human voices used in their language. Phonetics is divided into 3, namely articulatory phonetics that identify which organs and muscles are involved in producing different sounds. The voices are then sent from the speaker to the listener. While acoustic and auditory phonetics focus on how the sound travels through the air in the form of sound waves and the impact of these waves occurs on the ears and brain of the listener.

Phonetic or phonetic is a science that talks about how sounds produced by humans are correctly called. While phonology is a phonetic based science and studies of phonetic systems. Modern phonetics begins by Alexander Melville Bell through his book Visible Speech (1867) which introduces a system of writing language sounds carefully and regularly. Phonetic science then developed rapidly in the late 19th century due to the discovery of phonographs, which helped record the sounds of language.

To speak English, it's a good idea to learn a little about phonetic science in English. The shortest way is to read the phonetic symbol instructions in the dictionary. Actually each standard dictionary has sufficient information or

explanation about how the words in it are spoken. Usually in chapters that discuss pronunciation, the author or author of the dictionary has provided a list of symbols to help English learners produce the sounds of English words contained in the dictionary. These symbols are called the International Phonetic Alphabet (IPA). Or simply called Phonetic Symbols.

Phonology refer more to sound patterns in several languages, to what the speaker and listener must know, what children need to learn, and this science is close to psychology. We often have intuitions about language without knowing where they came from or how to express it, but there is a knowledge about this. The relationship between phonetics and phonology is complex. Like when a baby is in the babbling phase, producing a sound, including some that they never heard from their parents. In this case, phonetics provides a great deal of diversity in language, including more information from the speakers appearing to be used or needed, all speakers, and every different speech.

Phonology is studied by English students in formal college. Simply, this is known as a study of human sound system in oral speaking of particular language. Not too different from the other linguistically branches such as syntax or semantics, phonology, contributes essential knowledge for those who are learning language. Any knowledge learnt by people which has been approved by experts will be surely possible to give beneficial things in life and to enrich the field of knowledge. This is not only restricted to certain subject but also for any kind of science. In general, the benefit of arranging phonetically or phonology writing is supported by expects. What the writer choose as a major discussion is

about six plosives phonemes only. Phonology has broad science such as the understanding of phonemes, allophone, articulator organ, place of articulation, manner of articulate, classification of phonemes as vowels and consonant.

Consonant as contrasted with vowel sounds on the basis of the process of the production. In the production of contrast sounds, the air stream that moves through the speech organs meets an obstacle. In the production of vowel sounds, no such obstacle is present. Difference between vowels and consonants above is different in the way they are produced. Phoneme /h/, for instance, may be a consonant and vowel. What sounds can come after this /h/. In the words house and hour show the status of phoneme /h/. what we are doing here is looking at the different context and positions in which particular sounds can occur.

Voice discussing about inevitable from vocal cords because voicing is determined by the states of vocal cords, the vocal cords are made to vibrate in consonantal productions, the consonants are voiced and when the vocal cords are not made to vibrate, the consonants are said to be voiceless. Of the English consonant phonemes, there are 9 categorized to be voiceless. They are /p, t, k, f, s, h, ʧ, ʃ, ɵ/ and the others are voiced consonant covering /b, d, g, m, n, ɲ, z, l, r, j, w, ɚ, ʤ, ʒ/.

The place of articulation is generally determined by an upper and lower articulator which are combined to form the obstacles to the air steam. Bilabials /p/ and /b/ are the mouth is closed by pressing the lips. The air steam comes up against the obstacle of the closed lips. The sounds then are produced by releasing the air suddenly. Alveolar /t/ and /d/ are the tip of the tongue being against the

alveolar ridge, forming a firm closure. The sounds are produced when air coming out against the obstacle is allowed to escape by sudden release. Velar /k/ and /g/ are the back of the tongue touches the soft palate to make a closure. The air steam then is pushed out against the obstacle that is formed by the tongue and velum. Then, at the time the obstacle is open in a sudden, the sound is produced.

Manner of articulation is the specifications of consonant are based on the ways and what it results when the consonant is produced. When articulators completely close the oral tract, sound are produced resulting explosion. The explosion occurs due to sudden release of the air from blocking. The passages from which the air comes out may be either oral or nasal. Consonant can able be oral or plosive consonant and nasal consonant. The articulatory closure in the mouth, the soft palate is raised so that the nasal tract is blocked off, then air steam will be completely obstructed. Pressure in the mouth will be built up, oral stop will be formed. When the articulators come apart, the air steam will release in a small burst or puff of the air. Such a way of sound production result /p/ and /b/ are bilabial stop, /t/ and /p/ are alveolar stop, /k/ and /g/ are velar stop. how the tongue, lips, jaw, and other speech organs are involved in making a sound make contact.

Plosive or Oral Stops a Plosive is a consonant which stops air from escaping. A closure is made at some point in the vocal tract, and air is compressed behind this. There is a brief period of complete, or almost complete, silence, and then the compressed air is released. When this air is released, there is very short explosive noise, called Plosion.

Plosive consonant is characterized, when once articulator is moved against another or two articulators are moved against each other so as to form a stricture that allows no air to escape from the vocal tract. The stricture is total, after this has been formed and air has been compressed, the air is released. As the stricture is still under pressure and the black or closure is open, it is probable that the release air will produce explosion. There may be voicing during part or all of the plosive articulation. Imply four phases of production, closure phase when the articulator moves to form the stricture for the plosive. Hold phase when the compressed air is stopped or blocked from escaping. Release phase when the articulators used to form the stricture are moved so as to allow air to escape. Post release phase what happens immediately after release phase.

Based on Obama speech, he is said “permanent” it is having phonemes stop on /p/ at initial phonemes position and the writer agree if the “/pəːm(ə)nənt/” is it phonemes stop on /p/ initial phonemes position. The first data is found when Obama said “permanent” One phoneme in the word permanent is /p/ the voice. The phonetic transcription is /ˈpəːm(ə)nənt/ while the allophone is marked as /pʰəːm(ə)nəntʰ/. The writer said that indeed there is phoneme /p/ is aspiration, this appears in the beginning. The phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released. Phoneme /t/ is aspiration it is the final position. The consonant is alveolar where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

It means that the explosion should happen after the closing lips is released. It is the job of the phonology to express general of this sort in precise terms. After all, just because knowledge is not conscious, this does not mean it is unreal, unimportant or not worth understanding. Aspiration refers to the release of air at the end of a consonant sound. Plosives are naturally aspirated (because air is released following the stop portion of the sound. Linguists often use the term aspiration only to refer to strong puffs of voiceless air after a plosive. Sometimes the term "aspirated stop" is employed, but this is a misnomer as stops cannot be aspirated (aspirated stops thus being plosives). Regardless of aspiration though, the procedures for producing sounds are the same, thus 'aspirated /p/, /t/, /k/ & /b/, /d/, /g/ is not annotated differently from unaspiration /p/, /t/, /k/ & /b/, /d/, /g/.

Aspirated stop [p^h] of pit, there is a period of voiceless aspiration which appears as a noise segment; in spit, the vowel is voiced immediately after the stop with no aspiration. We have already said that aspiration is realized as the delay in the onset of voicing. If you hear a voiceless unaspirated plosive they will also hear that as one of b, d, g, because it is aspiration, not voicing which distinguishes initial p, t, k from b, d, g. Only when they hear a voiceless aspirated plosive will they hear it as one of p, t, k; experiments have shown that we perceive aspiration when there is a delay between the sound of plosion and the beginning (or onset) of voicing.

B. The Questions and Scope of the Research

1. Scope of The Research

In this study, the analysis focuses only on the back sound of phonemes stopped in aspiration in the Obama Speech at State of the Union 2016. The analysis takes only aspects of the phase and how to analyze phonemes stopped in aspiration in the Obama's speech at State of the Union 2016.

2. Questions of The Research

Based on the background about, the writer form the question are:

a) What position stop phonemes is aspiration or unaspiration on Obama's Speech?

b) How the environment of stop phonemes is aspiration or unaspiration on Obama's Speech?

c) What is the most stop phonemes is aspiration or unaspiration on Obama's Speech?

C. Objectives and Significances of the Research

1. Objectives of The Research

a) To find position stop phonemes is aspiration or unaspiration on Obama's Speech.

b) To know the environment of stop phoneme is aspiration or unaspiration on Obama's Speech.

c) To explain the most stop phonemes is aspiration or unaspiration on Obama's Speech.

2. Significances of The Research

Theoretically**,** the writing and the research can be useful not only for the writer but also the reader who learn at least who has the relation with English in their activity. Practically, for the writer, during writing this research the writer gets more lesson and knowledge regarding phoneme, especially distinguish sound between aspiration and unaspiration. The writer more learning and understand what should to writing in this analyzing. For the reader, the material is not conveyed too much and the case in the search is not much. But the authors strongly hope that this analysis can be useful. For the lecturer, for guiding and helping the writer to complete this analysis said thank you, without the help of the lecturer the author cannot get more knowledge and lecturer what will be written. And the authors hope that what is conveyed in accordance with what is taught.

D. Operational Definitions

The Significances of the research are:

1. Language

Language can be called as a means of communication between members of the community in the form of symbols sound produced by human speech and communication systems that use the symbols vocals (speech sound). In addition, language is also a clear sign to determine the personality of a good or bad person, a clear sign to distinguish the race, tribe, family and nation.

2. **Linguistics**

Linguistics is a field of science that leads to language study. Linguistics can be said as a rule in use in languages that examine all forms and rules in language, in which linguistics or language science is not dependent on a single language, but a wide variety of art of language in this world.

3. **Phonetics**

Phonetic is the science that discusses a voice can be formed using some parts of the body are lips, teeth, tongue, pharynx and lungs. Science that only discusses the relationship between body parts that produce sound.

4. **Phonology**

Phonology is part of the science of language that studies sounds and sounds and produces. Phonology is an important part of sound or sound in language pronunciation.x`

5. **Aspiration phonemes**

Aspiration refers to the release of air at the end of a consonant sound. Plosives are naturally aspirated (because air is released following the stop portion of the sound.

E. Systematization of The Research

Systematization of the research mean to present the research in well edited composition. This research is divided into five chapters as follow.

Chapter 1 is Introduction. This chapter consist of background of the research, the scope of the research, the objective of the research, the significant of the research, the operational definitions, the systematization of the research.

Chapter II is Theoretical Description. This chapter describes the explanation of the definition of phonetic, definition of phonology, history of phonetic and phonology, phonetics and phonology in linguistics, the sound of language, segment suprasegmental, consonant, voiceless, place of articulator, manner of articulator, vowels, definition of speech, relevant.

Chapter III is Methodology of the Research. This chapter explain regarding setting of the research. Subject of the research, procedure of the research, technique of data analysis collection, technique of data analysis and sources of the primary and secondary data.

Chapter IV is Research Finding and Discussion. This chapter describes regarding the explanation of data description, analysis of the data, interpretation of the data and discussion.

Chapter V is Conclusion and Suggestion. This chapter the writer concludes all discussions based on the analysis and suggestions.

CHAPTER II

THEORITICAL DESCRIPTION

In this chapter, some theories related to the research and will be able to answer question that were previously mentioned in chapter I. that is why this paper needs some theories to support the research. In this chapter the theory are taken as a basic of the research. Thus theories are about definitions of phonetics and phonology.

A. Definition of Phonetics

Phonetics is the study of pronunciation. Other designations for this field of inquiry include speech science or the phonetic sciences. According to Forel and Puskás (2005), "Phonetics is concerned with how sounds are produced, transmitted and perceived, in other words phonetics is about sounds of language". (p. 3). The more psychological aspects of the underpinnings of speech and apply phonetics only to the physical, including physiological, aspects of speech. In fact, the boundaries are blurred and some would insist that the assignment of labels to different domains of study is less important than seeking answers to questions.

Phonetics attempts to provide answers to such questions as: what is the physical nature and structure of speech, how is speech produced and perceived how can one best learn to pronounce the sounds of another language, how do children first learn the sounds of their mother tongue, how can one find the cause and the therapy for defects of speech and hearing, how and why do speech

sounds vary— in different styles of speaking, in different phonetic contexts, over time, over geographical regions, how can one design optimal mechanical systems to code, transmit, synthesize, and recognize speech, what is the character and the explanation for the universal constraints on the structure of speech sound inventories and speech sound sequences, answers to these and related questions may be sought anywhere in the 'speech chain,' i.e., the path between the phonological encoding of the linguistic message by the speaker and its decoding by the listener Phonetics learns how language sounds can be generated. The sound that comes out of everyone's mouth has a different sound or sound.

Phonetics discusses sound that should come out of someone's mouth. Collins and Mees (2013) said, “Phonetics is the term used for the study of sound in human language” (p. 9). Phonetics deals with the production of speech sounds by humans, often without prior knowledge of the language being spoken. The physical aspects of sounds, how sounds really are since in essence, sound exist only because there occur disturbances of air particles. Phonetics is a branch of linguistics and studies the sounds of human speech. The term is also used for sign languages, where it studies the gestural and visual composition of signs. Phonetics is concerned with the physical production, transmission, and perception of sounds. Phonology, on the other hand, deals with the patterning of sounds within a language. Here, the phoneme is of crucial importance. Phonemes are perceptual units that are the building blocks of the (spoken or signed) words of a language.

B. Definition of Phonology

The linguists explained that phonology is the system of sound in particular language. Yule (2010) explained, “Phonology is essentially the description of the systems and patterns of speech sounds in a language” (p. 42). This field of knowledge discusses every single thing to human sound in communication. Based on Gussenhoven and Jacobs (2011), “Phonology is concerned with a particular aspect of linguistics structure” (p. 7). The linguists explained that phonology is very powerful in the structure of a linguistics.

One of the linguistics that develops Sound or sounds of language that are published in a structured manner through a simple or high or low vocal sound of an intonation. Supporting this opinion, Gussenhoven and Jacobs (2011) said, “Phonology is the branch of linguistics that aims to describe the way in which this medium of human vocal sound is structured, in languages generally as well as in individual languages” (p. 9).

The linguistic, phonology has the most important sequence of linguistic branches. Because the sound that is released on the human body is scientifically more detailed by phonology. Supporting this opinion, Odden (2005) said, “Phonology is one of the core fields that composes the discipline of linguistics, which is defined as the scientific study of language structure” (p. 2). Forel and Pusk ás (2005) “Phonology is concerned with how sounds function in relation to each other in a language, in other words phonology about sound systems of language” (p. 3).

According to Collins and Mees (2013) “The study of the selection and patterns of sounds in a single languages is called phonology” (p. 9). The sound produced by the human body has a system, many theories that explain the process by which the sound is performed. Phonology reinforces one theory that describes the system. Moreover Gussmann (2002) said that, “The theory of phonology reflects our current understanding of the organization and the working of the sound system of languages” (p. 19). The conclusion of phonology that the writer can infer according to some quotations of linguistics above is, phonology is branch of linguistics where its description emphasizes deeply to the system of human sound in particular language.

C. History of Phonetic and Phonology

The term phonetics is generally defined as a scientific study of the sounds of a language. Thus this study is a branch of linguistic studies as well as morphology, syntax, and semantics. In particular, phonetics examines the components of the phonique of a language more specifically the study of the physical aspects (expression, speech delivery, and sound reception) and from the functional aspect of the role played by speech sounds in a given language (phonology).

The phonetic study itself can be reviewed without involving semantic studies. Or in other words, phonetic study is a free study of meaning. Therefore, we can study the phonetic characteristics of a language even though we do not understand its meaning. Phonetics is a scientific study of the sounds of human speech. Only speech sounds are used in communicative acts studied in phonetics.

Jensen (1993) explained in his book Amsterdam Studies in “Theory and History Linguistic Science” (p. 7). About history of phonology before SPE and after SPE. The publication of Chomsky and Halle’s The Sound Pattern of English (1968, here after SPE). General of phonology to refer to the theory of phonology and the analysis of the sound patterns of the languages of the world. A discussion of the phonology of a particular language, such as English, is the application of theory to the sound pattern of that particular language. was a major landmark of both phonological theory and the phonological description of English.

This volume has formed the basis of discussion of phonological issues ever since its appearance, both for those who accept its premises and for those who reject them. The study of phonology has occupied the attention of scholars ever since there has been interest in language from a scientific (as opposed to literary) point of view. The oldest known phonological study is Pānini's (third century B.C.) grammar of Sanskrit, which includes a full description of morphology and syntax as well as phonology.

SPE was the culmination of a number of works on phonological theory, drawing inspiration from several sources. One is the development of distinctive feature theory, which holds that the primitive units of language are not phonemes but smaller units, features that combine to define phonemes. Another is the development of generative grammar as an explicit system for generating the utterances of a language. Generative grammar recognized the implications of syntactic and morphological representations for phonology. Recognized this

also, but most structuralists insisted that the phonemes should be discovered before proceeding to morphological analysis. Finally, generative grammar made extensive use of rule ordering, observing that rules can be made more general if they are stipulated to apply in a particular order.

This too has a structuralist precedent in Bloomfield (1939) and ultimately goes back to Pānini. Above all, the goal of a generative grammar is to provide the simplest possible grammar for a language, where simplicity (in phonology) is measured in terms of the number of symbols required to represent its underlying representations and the rules that relate these to phonetic representations. SPE is now referred to as a linear theory of phonology, in that its representations are a linear sequence of segments and boundaries. Furthermore, SPE tied phonology to syntax, claiming that the job of phonology is to interpret the surface syntactic structure phonetically.

This surface syntactic structure in turn is derived by inserting lexical items into constituent structure trees, which may have to undergo various sorts of transformations before deriving the surface syntactic structure on which phonological rules can operate.

D. Phonetics and Phonology in Linguistics

A very brief explanation is that phonology is the study of sound structure in language, which is different from the study of sentence structure (syntax) or word structure (morphology), or how languages change over time (historical linguistics). According to Odden (2005) Phonology is one of the core fields that composes the discipline of linguistics, which is defined as the scientific study of

language structure. One way to understand what the subject matter of phonology is, is to contrast it with other fields within linguistics (p. 2).

This definition is very simple, and also inadequate. An important feature of the structure of a sentence is how it is pronounced – its sound structure. The pronunciation of a given word is also a fundamental part of the structure of the word. And certainly the principles of pronunciation in a language are subject to change over time. So the study of phonology eventually touches on other domains of linguistics.

In other opinion Fasold and Linton (2006) the branch of linguistics that is concerned with the relation between meaning and form, within words between words, is known as morphology. Morphology literally means 'the study of form in particular, the forms of words. Although "form" in this context usually refers to the spoken sound or phonological form that is associated with a particular meaning, it doesn't necessarily have to signed languages also have word forms. Instead of the articulators of the vocal tract, signed languages make use the shape and movement of the hands (p. 59).

E. The sounds of Language

Main interest will be in articulatory phonetics, which is the study of how speech sounds are made, or articulated. According Yule (2010) the general study of the characteristics of speech sounds is called phonetics. (p. 26). Other areas of study are acoustic phonetics, which deals with the physical properties of speech as sound waves in the air, and auditory phonetics or perceptual phonetics which deals with the perception, via the ear, of speech sounds.

F. Segments and Suprasegmentals

This distinction is generally recognized in phonology as it reveals an important property of language, it is not a closed system but has the potential to expand and develop. According Meyer (2009) The study of suprasegmentals extends the focus of inquiry to units that are larger than individual segments – syllables, words, phrases, and clauses – and to the features of sound that describe these units, specifically stress and intonation. Of key importance to both stress and intonation is the notion of the syllable. (p. 208). Speakers' intuitions, phonetic transcription and the replacement test all tell the same story: speech is segmental, words consist of sequences of units following each other. As we will see below, this very simple statement will need to be seriously revised and modified.

Segmental phonology is based on the segmentation of language into individual speech sounds provided by phonetics. Unlike phonetics, however, segmental phonology is not interested in the production, the physical properties, or the perception of these sounds, but in the function and possible combinations of sounds within the sound system. Suprasegmental phonology, also called prosody, is concerned with those features of pronunciation that cannot be segmented because they extend over more than one segment, or sound.

The popular conviction that speech is segment able and each word can be broken up into a limited number of sounds leads to the conclusion that each language has at its disposal a definite number of such sounds which it uses in different combinations. Observation of the spoken language shows that this

conclusion is very much oversimplified. Phonetic events by their very nature are unique, hence, strictly speaking, no two sounds are ever exactly identical even if they are perceived as such by users of the language: there are individual differences between speakers as far as their voice quality goes, and even the same speaker on different occasions will produce sounds that differ.

1. Consonant

A consonant is a speech sound that has a drag when it comes out of the lungs. In the consonant sound utterance there are three factors involved, namely the state of the vocal cords, the touching of one with the other, and the way the utterance comes into contact. A moving speech tool for generating language sounds is referred to as an active articulator. For example, the lower lip, lower teeth, and tongue. The area touched or approached is called the articulator area. For example, upper lip, upper teeth, upper gums, hard palate, soft palate, and children's pitch. The naming of the consonants is based on the articulator that works. For example, labio- (lower lip), apico- (tongue tip), lamino- (tongue-leaf), dorso- (behind the tongue), radiko- (tongue root), followed by articulate areas: - labial (upper lip), - dental (upper teeth), -alveolar (gums), -calct (hard palate), -varar (soft palate), and -uvular (child's throat). The way the articulator touches or approaches the area of articulation and how air comes out of the mouth is called articulation.

Based on the articulation, the sound of language is divided into several kinds. When the air from the lungs is totally inhibited, the sound produced by such articulation is called a resistor sound. When air currents pass through a

narrow channel of sound, there will be a hiss. Such a sound is called a fricative sound. When the tip of the tongue is in contact with the gums and air passes through the side of the tongue, the resulting sound is called a lateral sound. If the tip of the tongue touches the same place over and over again, the resulting sound is called a trill.

There are many consonants than vowels in English. Based on Skandera and Burleigh (2005) all English sounds are made with air that is pushed up from the lungs. In the production of approximately two thirds of these sounds, the air stream is obstructed in the throat, technically called the pharyngeal cavity or pharynx or in the vocal tract before it leaves the body through the mouth or nose these sounds are called consonants (p.13). They also said an important feature for the description of consonants is the exact place of articulation names the speech organs that are primarily involved in the production of a particular sound.

In other opinion Odden (2005) said that, consonant symbols are treating the place of articulation where the major constriction occurs as one axis, and treating properties such as voicing, being a continuant or nasality as the other axis. Eleven places of articulation for consonants are usually recognized: bilabial, labiodental, dental, alveolar, alveopalatal, retroflex, palatal, velar, uvular, pharyngeal and laryngeal, an arrangement which proceeds from the furthest forward to furthest back point of the vocal tract (p.27).

There are many more consonants than vowels. English only has a fraction of the full range of possible consonants, so illustration of many of these

symbols involves more extensive consideration of languages other than English. Most English dialects systematically use the following consonants:

/p/ pig	/b/ big
/m/ mug	/f/ fog
/v/ varmint	/Ɵ/ thing
/d/ this	/t/ top
/s/ sop	/d/ dog
/n/ nog	/Č/chuck
Š shuck	/Ĵ/ jug
Ž measure	/k/ cot
/g/ got	/ŋ/ hang
/h/ horse	

From the explanation above, Skandera and Bulreigh, Odden have different point of view each other. Skandera and Bulreigh tell about process producing consonant. They said that differentiation of consonant depends on obstruction of the vocal tract or called place of articulation. Oden explained consonant by places and manners of articulation.

A. Voiceless

According to McMahon (2001) A major division among speech sounds which is relevant for all languages is the dichotomy of voiced and voiceless. If you put your fingers on your ‘Adam’s apple’ or ‘voice box’ (technically the larynx), and produce a very long [zzzzzzz], you should feel vibration; this shows that [z] is a voiced sound. On the other hand, if

you make a very long [sssssss], you will not feel the same sort of activity: [s] is a voiceless sound (p. 26).

Gick, Wilson and Derrick (2013) stated that, in all this discussion of voice, let's not forget that voiceless sounds, too, play a big part in speech. In fact, there are many types of constriction of the vocal folds that can be used for making sounds. As we have mentioned, during modal voice, the vocal folds must be closed enough to vibrate and create a buzzing sound. However, there are times when we don't want the vocal folds to be vibrating (p. 89).

B. Place of Articulator

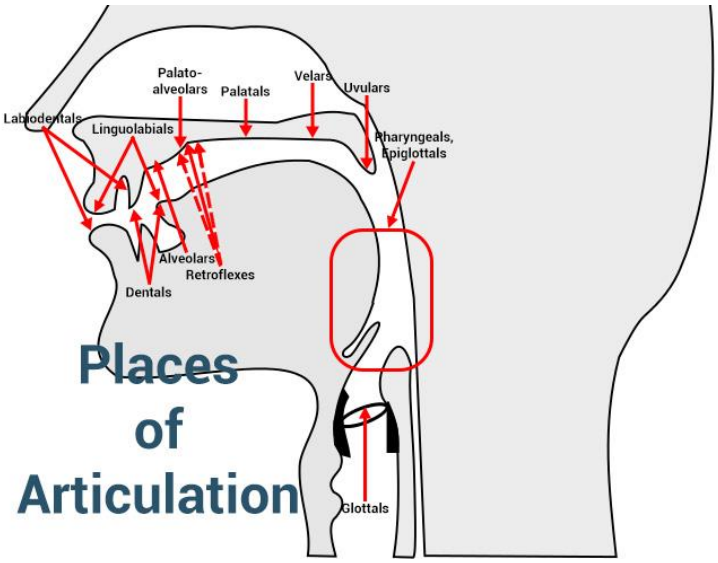

Figure 2.1 The physiology of Pronunciation

According to Forel and Puskás (2005) As saw above [p,t,k] are all voiceless, so there must be another way to distinguish between them, otherwise we would not be able to tell try apart from pry or cry, or pick from tick or kick. Apart from the behavior of the vocal folds, sounds can also be distinguished as to where in the oral cavity they are articulated

(where in the mouth there is most obstruction when they are pronounced). (p. 8) while to according Delahunty and Garvey said Place of articulation we mean the area in the mouth at which the consonantal closure or constriction occurs. English uses only seven places of articulation. (p. 94)

Progressing from the lips to the glottis, are briefly described, and the relevant English consonant phonemes for each category are given as IPA symbols. The speech chain is conceived to start with the phonological encoding of the targeted message, conceivably into a string of units like the phoneme although there need be no firm commitment on the nature of the units. These units are translated into an orchestrated set of motor commands which control the movements of the separate organs involved in speech.

Movements of the speech articulators produce slow pressure changes inside the airways of the vocal tract (lungs, pharynx, oral and nasal cavities) and when released these pressure differentials create audible sound. The sound resonates inside the continuously changing vocal tract and radiates to the outside air through the mouth and nostrils. At the receiving end of the speech chain, the acoustic speech signal is detected by the ears of the listener and transformed and encoded into a sensory signal that can be interpreted by the brain. Although often viewed as an encoding process that involves simple unidirectional translation or transduction of speech from one form into another.

Bickford and Floyd (2006) explained, to understand the term "place of articulation," you need to consider first what it does not refer to. The place of articulation is not the place where the active articulator comes in contact with some other part of the vocal apparatus (for example, alveolar ridge or velum); such a place is called the passive articulators. Rather, the "place of articulation" is actually the relationship (or "mapping" or "pairing") between the active and passive articulators as they shape or impede the airstream. The only difference between the pronunciations of the words lip, lit, and lick is the place of articulation of the final sound: p is bilabial, t is alveolar, and k is velar. (p. 5)

Others explained from Ball and Rahilly and Rahilly (1999) the final parameter we need to consider when describing individual sound segments is the place within the vocal where the articulators form a stricture. As we noted above, most sounds are made with one active and one passive articulator, or in some instances with two active articulators. (p. 53). It is usual, when describing the place of articulation, to note these articulators. However, when the tongue is the active articulator and the roof of the mouth the passive one, it is common to refer only to the part of the roof of the mouth concerned.

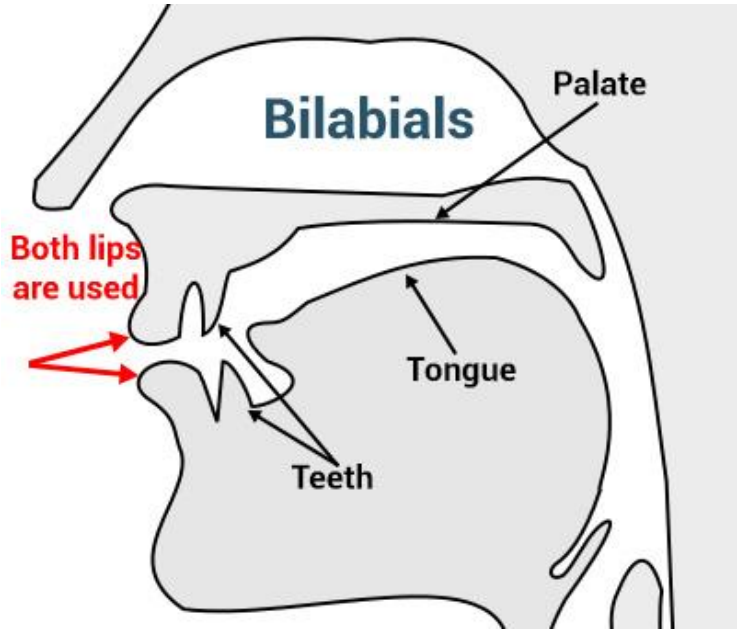

Figure 2.2 Bilabial

According to Rogers (2013), the lower lip articulates with the upper lip to form a bilabial consonant. The term bilabial is used rather than labio-labial. The bilabial stops are voiceless [p] and voiced [b] as in English. (p. 194) According Forel and Puskás (2005) Bilabial sounds are produced when the lips are brought together. Examples are [p], which is voiceless, as in pay or [b] and [m] which are voiced, as in bay, may. (p. 8)

Rogers (2013) also stated the lower lip articulates against the upper teeth to form labiodental consonants. Labiodental stops do not occur distinctively although they are quite easy to make if your teeth do not have gaps. (p. 193). According Forel and Puskás (2005) Labiodental sounds are made when the lower lip is raised towards the upper front teeth. Examples are [f] safe (voiceless) and [v] save (voiced). (p. 8)

Rogers (2013) explained more that, Dental sounds can be made with either the tip of the tongue, apico-dental, or with the blade, laminodental.

The dental fricatives are voiceless [†] theta and voiced [∂]. (p. 195) According Forel and Puskás (2005) Dental sounds are produced by touching the upper front teeth with the tip of the tongue. Examples are [S] oath (voiceless) and [C] clothe (voiced). (p. 8). Based Skandera and Burleigh (2005) sounds are produced with both lips. There is only one fortis bilabial in English, namely / p / as in peach, whereas there are two lenis bilabials, / b / as in banana and /m/ as in mango. (p. 20)

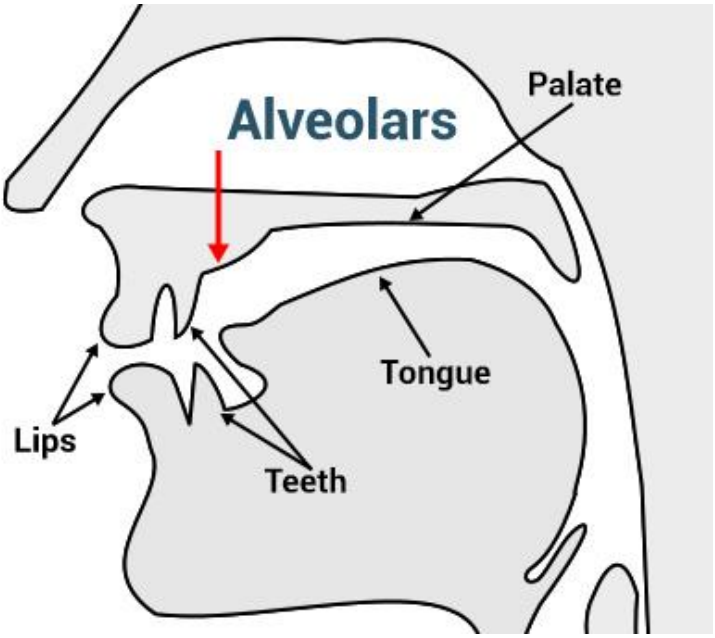

Figure 2.3 Alveolar

According Rogers (2013) the transition for alveolar sounds is in the mid-range, similar to the dentals. (p. 197). According Forel and Puskás (2005) Alveolar sounds are made by raising the tip of the tongue towards the ridge that is right behind the upper front teeth, called the alveolar ridge.

Examples are [t,s] too, sue, both voiceless, and [d,z,n,l,r] do, zoo, nook, look, rook, all voiced. (p. 9)

According Rogers (2013) alveolo-palatal place of articulation, different from the postalveolars. They are produced with the tip of the tongue behind the upper teeth and with the blade quite close to the back of the alveolar ridge and to the forward part of the hard palate. Shows the articulatory position of alveolo-palatals. The symbols are [Ç] for the voiceless fricative and [◊] for the voiced fricative. (p. 197). According Forel and Puskás (2005) Palatoalveolar sounds are made by raising the blade of the tongue towards the part of the palate just behind the alveolar ridge. Examples [R,tR] pressure, batch (voiceless) and [Y,dY] pleasure, badge (voiced). (p. 9)

Palatal sounds, the front of the tongue articulates with the hard palate. Note that the tip of the tongue points down, often touching the lower teeth. The stops, voiceless [c] and voiced [Ô], are considerably less common than alveolar or velar stops; the palatal nasal [µ], however, is quite common. The fricative symbols are [ç] for voiceless and [,] for voiced. (p. 200). According Forel and Puskás (2005) Palatal sounds are very similar to palatoalveolar ones, they are just produced further back towards the velum. The only palatal sound in English is [j] as in yes, yellow, beauty, new and it is voiced. (p. 9). Based Skandera and Burleigh (2005) sounds are made with the tongue tip coming near or touching the bony ridge behind the upper teeth, called the alveolar ridge. (p. 21)

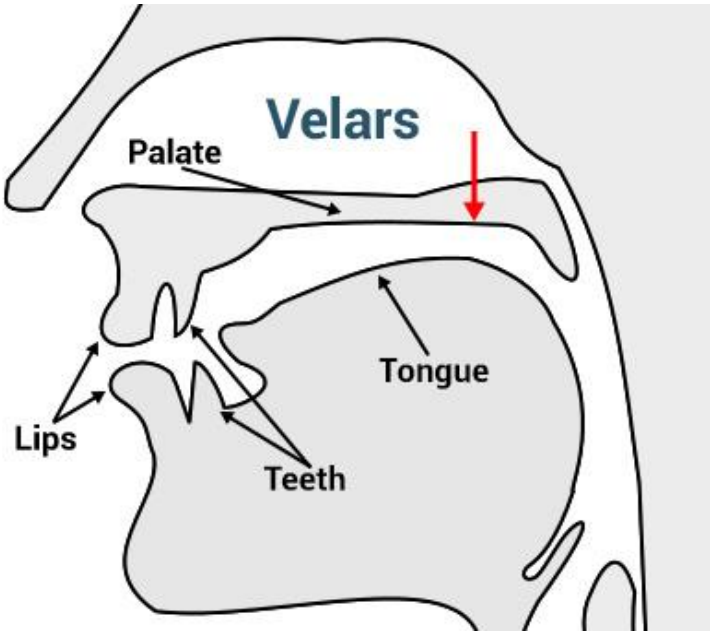

Figure 2.4 Velar

According Rogers (2013) the full term is dorso-velar, indicating that the back of the tongue articulates with the soft palate; however, the back of the tongue is the only articulator that is used to articulate with the velum, so the prefix dorso- is regularly omitted. (p. 200). According Forel and Puskás (2005) Velar sounds are made by raising the back of the tongue towards the soft palate, called the velum. Examples [k] back, voiceless, and [g, M] both voiced bag, bang. [w] is a velar which is accompanied with lip rounding. (p. 9)

Sounds are made by placing the back of the tongue against or near the velum, or soft palate. According Rogers (2013) Glottal is a curious category. It comprises three sounds: glottal stop [÷] and the fricatives [h] and [Ó]. These sounds function as consonants and can be said to have a glottal or laryngeal point of articulation. On the other hand, from a purely

phonetic point of view, [÷] is a state of the glottis involving complete closure of the vocal folds, [h] is a voiceless vowel, and [Ó] is a breathy voiced vowel. (p. 202). According Forel and Pusk ás (2005) Glottal sounds are produced when the air passes through the glottis as it is narrowed: [h] as in high. (p. 9)

	bilabial	labiodental	dental	alveolar	postalveolar
stop	p b			t d	
fricative		f v	θ ð	s z	ʃ ʒ
affricate					tʃ dʒ
nasal	m			n	
approximant				l	

	retroflex	palatal	velar	labial-velar
stop			k g	
fricative				ʍ*
affricate				
nasal			ŋ	
approximant	ɹ	j		w

Figure 2.5 English consonants

C. Manner of Articulator

The slashes / I are used to indicate the mental representation of a speech sound and the square brackets [ ] are used when we refer to an actual pronunciation. According Delahunty and Garvey said manner of articulation we mean the kind of closure or constrictionused in making the sound. We classify English consonants according to three manners of articulation: stops, fricatives and afficates. (p. 93) According Bickford and

Floyd (2006) An aspirated sound is one that is released with an audible puff of air called aspiration, a period of voicelessness following the release of the articulation. You can feel the aspiration if you hold your hand close to your mouth as you say the English words "pool," "tool," and "cool." (p. 23).

Plosives or stops are sounds for which the speaker makes a complete closure at some point in the vocal tract, builds up the air pressure while the closure is held, and then releases the air explosively through the mouth. English has three plosives, namely / p / as in peach, /t/ as in tiger, and /k/ as in Canada. The three plosives are (hi as in banana, /b/ as in dolphin /d/, and /g/ as in Greenland. The stops that begin those three words are all aspirated. Aspirated release of voiceless sounds is symbolized by a small superscript "h" following the basic symbol for the sound itself, for example, [p^h] for the first sound in "pool." Now distinguish between English consonants from two points of view, that of voicing, and that of place. We can see that [b] and [t] are different in both respects, [b] is voiced and bilabial, and [t] is voiceless and alveolar. [p] differs from [b] only in being voiceless, as both are bilabial, and [p] differs from [t] only in being bilabial, as both are voiceless.

According McMahon (2001) First, let us return to Modern English /t/ and /k/, which we have already met in tall versus call; in fact, we can add Paul to make a minimal triplet, adding /p/ to our phoneme system. Now hold a piece of paper up in front of your mouth by the bottom of the sheet,

so the top is free to flap about, and try saying Paul, tall, call. You will find that a little puff of air is released after the initial /p/, /t/ and /k/, making the paper move slightly this is called aspiration, and signaled in IPA transcription by adding a superscript [h] after the symbol in question. This means that /p/, /t/ and /k/ have the allophones [p^h], [t^h] and [k^h] word-initially; the aspiration is most noticeable with [p^h], since it is articulated with the lips, nearest to where the air exits. (p. 18).

According Gussmann (2002) English voiceless plosive consonants – the initial sounds in words like peace, tease, keen – are pronounced with a puff of air called aspiration and transcribed by means of the diacritic [^{h}] following the plosive: [$p^h$is], [t^hiz], [k^hin]. No aspiration is found when voiceless plosives appear after [s]; as a result we find pairs of very similar consonants: [p^h – p], [t^h – t], [k^h – k]. (p. 4) In general, a voiceless plosive before a stressed vowel is accompanied by strong aspiration. No aspiration is found when a plosive appears after [s]. (p. 4) Although phonetic descriptions usually note that aspiration before an unstressed vowel is relatively weak. Aspirated and non-aspirated plosives are phonetically different as sounds, but in English they are felt to be closely related.

According McMahon (2001) Feature notation can also show why certain sounds behave similarly in similar contexts, within these larger classes. For instance, English /p/, /t/ and /k/ aspirate at the beginnings of words. All three may also be glottally reinforced at the ends of words. All three are unaspirated after /s/; and no other English phoneme has the same

range of allophones, in the same environments. (p. 46) same as McMahon, Gussmann said furthermore, the aspiration may be reinforced or even replaced by the glottal stop [ʔ]. A word such as kick may be pronounced in any of the following ways: [kʰɪkʰ], [kʰɪk], [kʰɪʔk] or [kʰɪʔ]. Assuming the careful, perhaps somewhat studied pronunciation with the released plosive.

According Delahuty and Garvey (2010) said English speakers pronounce the [t] in toll differently from that in stole. The [t] of toll is breathier than the [t] of stole. The former is said to be aspirated, and the latter unaspirated. We represent the aspirated [t] as [tʰ], with the diacritic [ʰ] indicating aspiration. We represent the unaspirated [t] as [t] with no diacritic. (p. 110). The voiceless bilabial plosive /p/ in the word pin is aspirated. This means that between the opening of the closure formed with the lips and the beginning of vocal fold vibration for the vowel Irl there is a short time interval in which the airstream passes out of the mouth with an audible hiss. In the word spin, however, due to the influence of the preceding Is/, the Ipl is not aspirated. Moreover, for the articulation of Ipl at the end of a word (for example in stamp) or before another plosive (as in captain), the pulmonic airstream ends before the lips are openedthe /p/ is unreleased. (p. 50).

Description of speech sounds is the type or degree of closure of the speech organs involved. Thus the manner of articulation. refers mainly to the degree to which the air-stream is obstructed at the place of articulation

of consonants. When pronouncing the last sound in surf. when /p, t, k/ occur as the only consonant before a stressed vowel, they are aspirated and transcribed as [p^h], [t^h] and [k^h]. The voiceless plosives are therefore aspirated in pea, tea and key but not in spring, steam or clay. the phonemes /p, t, k/ are aspirated when they are not preceded by another segment in the syllable. The arrow indicates a phonological process, the slash (/) gives the condition (when) and the dot . stands for the boundary of a syllable. The _ refers to the position of the phonemes the allophonic rule applies to. When the phonemes /p, t, k/ occur at the end of a syllable after a vowel, they are often glottalized.

Brinton (2000) Aspiration means that you release a small puff of air after articulating these sounds. If you hold your fingers or a small piece of paper in front of your mouth, you should be able to feel, or see, the puff of air. (p. 28) Aspiration is entirely predictable, with the aspirated versions occurring word or syllable initial before a stressed vowel. In narrow transcription, aspiration is indicated with a diacritic or mark added to the letter, in this a case a superscript "^{h}", hence [p^h, t^h, k^h].

Roach (2009) All six plosives can occur at the beginning of a word (initial position), between other sounds (medial position) and at the end of a word (final position). To begin with we will look at plosives preceding vowels (which can be abbreviated as CV, where C stands for a consonant and V stands for a vowel), between vowels (VCV) and following vowels (VC). (p. 26) Initial position (CV): The closing phase for p, t, k and b, d, g

takes place silently. During the compression phase there is no voicing in p, t, k; in b, d, g there is normally very little voicing - it begins only just before the release. Medial position (VCV): The pronunciation of p, t, k and b, d, g in medial position depends to some extent on whether the syllables preceding and following the plosive are stressed. Final position (VC): Final b, d, g normally have little voicing; if there is voicing, it is at the beginning of the compression phase; p, t, k are always voiceless. The plosion following the release of p, t, k and b, d, g is very weak and often not audible.

Roach (2009) Some phoneticians say that p, t, k are produced with more force than b, d, g, and that it would therefore be better to give the two sets of plosives (and some other consonants) names that indicate that fact; so the voiceless plosives p, t, k are sometimes called Fortis (meaning 'strong') and b, d, g are then called lenis (meaning 'weak'). It may well be true that p, t, k are produced with more force, though nobody has really proved it - force of articulation is very difficult to define and measure. (p. 28).

In addition Jensen (1993) Aspirated stops appear initially in words before a vowel and medially in words before a stressed vowel. Unaspirated stops do not occur in these positions, but do occur in all other positions. They never occur in the same environment, and so we group them together as one phoneme. (p. 2). Based according Skandera and Burleigh can find easy to check each sound refers to the process of writing down spoken

language in phonetic symbols as well as to the resultant written text. If we want to write down speech sounds as accurately as possible, we cannot depend on traditional spelling. We need a method that relates sounds to letters or symbols more systematically: Each sound must be represented consistently by the same symbol, and conversely, there must be a separate symbol for each distinctive sound. Such a one-to-one correspondence between speech and writing is referred to as a phonographic relationship. (p.7).

The symbols that we use to represent speech sounds in this manner are phonetic symbols. A whole set of them form a phonetic alphabet. Marks that we can add to indicate slight alterations to the usual value of a phonetic symbol are called diacritics [diakritiscbe Zeicben]. The term phonetic transcription [from Latin transcriptio, 'writing over'; pbonetiscbe Umschrift, Lautscbrift] refers to the process of writing down spoken language in phonetic symbols as well as to the resultant written text.

The phonemes is speech sounds that we have so far rather elaborately referred to as "having a function within the sound system", or as "part of the speakers' langue or competence" (p. 21)

2. Vowels

Characteristic vowel qualities are determined by the height of the tongue in the mouth the part of the tongue raised (front, middle, or back) the configuration of the lips; and the tension of the muscles of the oral tract. An articulatory description of a vowel must include all of these features.

According Rogers (2013) Vowels lying between front and back are called central vowels; those lying between high and low are called mid. A vowel right in the Centre of the vowel area is thus a mid-central vowel. We can use higher high, lower high, higher mid, lower mid, higher low, lower low if we need to distinguish more than three heights. Some writers use close and open instead of high and low. (p. 175)

According to Bickford and Floyd (2006) vowel are another way to look at the difference between vowels and consonants, more of a phonological approach than phonetic, is to focus on the way that they function in syllables. A vowel prototypically forms the nucleus of a syllable, that is, the most prominent, acoustically resonant peak of the syllable. A consonant prototypically constitutes the periphery of a syllable, either preceding or following the nucleus. (p. 33)

Based on Ball and Rahilly (1999) Vowels are more difficult than consonants to describe articulatory, because there is no contact or near contact between the articulators. Most phoneticians, therefore, have avoided the place of articulation labels used for consonants, although recently there has been a tendency to see whether descriptions for consonants and vowels can be brought further together. (p. 91)

According to Delahunty and Garvey (2010) Vowels are distinguished from consonants in several ways. As people have seen, consonants are produced by constricting the airstream to various degrees as it flows through the oral tract. Vowels are produced with a smooth, unobstructed airflow through the

oral tract. Differences in vowel quality are produced by different shapes of the oral cavity. (p. 99)

Become accustomed to the different degrees of openness of these two vowels, pronounce ate between eat and at. The degree of openness of its vowel falls between those of eat and at, so there is a continuous increase in mouth openness as you go from one vowel to another. These degrees distinguish high, mid, and low vowels. People will use the following symbols for this sequence of vowels:

eat [i] High ate [e] Mid at [æ] Low

According Forel and Puskás (2005) we shall first have a closer look at the way in which vowels differ from consonants. Then we shall analyze vowels phonetically, tongue position: how high in the mouth is the tongue, and which part of the tongue is the highest, length are the vowels long or short, rounding are the lips rounded or not, nasality is there free passage of air through the nose, diphthongs are they steady, or do they somehow change in character. (p. 13).

Tongue position is described using two criteria: the height (how high is the tongue) and the part of the tongue involved in the production of the sound. In English the tongue may either be high, i.e. when the speaker produces e.g. [i:, u:] in [bi:t, bu:t] beat, boot, intermediate, e.g. [e,N:] in [bet, bN:t] bet, bought, or low, e.g. [z,a:] in [bzt, ba:t] bat, Bart.

Depending on the language we can have several intermediate tongue heights. English has three heights: high, mid and low, whereas French has

two intermediate tongue heights with a total of four tongue heights: high, mid high, mid low and low. Vowels usually occupy the centre of a syllable. Even though most languages have over twice as many consonants as vowels, in a way, vowels can be seen as predominant.

G. Speech

Speech act is a matter of producing an utterance with addressee-directed communicative intentions. An indirect speech act is a speech act that one performs by either performing or making as if to perform some other speech act. According Meyer (2009) Speech segments can be either phonemes or allophones. Phonemes are distinctive speech sounds; that is, they create meaningful differences in words. One way to determine whether a speech sound is distinctive is to examine minimal pairs: words that differ by only a single phoneme in the same position in a word. For instance, the words bat and cat differ by only one sound: the second and third segments are the same vowel and consonant – /æ/ and /t/, respectively – but the two initial sounds are different bat begins with /b/ and cat with /k/. That bat and cat are different words provides evidence that the sounds /b/ and /k/ in English are phonemes. (p. 196).

According to Merriam Webster's in Dictionary of Law (, free speech entails "the right to express information, ideas, and opinions free of government restriction based on content and subject only to reasonable limitations as the power of the government to avoid a clear and present danger esp. as guaranteed by the first and fourteenth. Amandments to the U.S Constitution. "Freedom of

Speech. Free speech especially important to us as public speakers because expressing information and ideas is the purpose of public speaking.

H. Research of Relevance

The writer has tried to find the relevance research in English S1 Program. The writer finds the same title in the STBA-JIA library. This research is needed to be compared by other relevant research in order to make the research better.

BENI ALAM (043131.51062.015) (2011). *The Analysis of Aspirated and Unaspirated Six Plosive Phonemes in The Three Ernest Hemingway's Poetries (All Armies are The Same, Ripato D'Assalto, and Along with Youth) Phonologicallyl*. The similarity are found in analyzing. Properties of Aspiration and Unaspiration Phonemes. The different are in the setting data object, he is analysis in three of poetry and every sentences in transcript phonetics to know which aspiration and unaspiration.

CHAPTER III

RESEARCH METHODOLOGY

A. Method of the Research

This research needs some steps to accomplish research method which divided into two steps, they are:

1. Time of the Research

The research entitled aspiration and unaspiration Phonemes in Obama's Speech at State of the Union 2016 was arranged approximately from the beginning of March 2018 to the end of July 2018. During this term, the writer commits every necessary things related to the process of writing. The activities are like to collect references, to accumulate data and to form it as a theory. It took place in STBA JIA library. The references are populated by collecting to fulfill the data study at University of Indonesia and STBA JIA library.

2. Kind of the Research

This research used the type of descriptive qualitative research method in this research. One of them is collecting data. The collecting data is important for the research. It means the writer actively searches for every supporting thing needed in this research. Concerning the instruments, there are books of reference and phonetic dictionaries. Qualitative methodology refers to research that produces descriptive data which are people's own written or spoken words and also observable behavior. (Taylor & DeVault, 2016 p. 7).

In addition, the data of qualitative research cannot be easily quantified and the analysis is interpretive rather than statistical. (Gass & Mackey, 2005, p.2).

In Creswell (2009) defined qualitative method is means for exploring individuals or groups a scribe to social or human problem. The process of research involves emerging question and procedures, data building from particular to general themes, and the researcher making interpretation of the meaning of data. (p.4).

The books as sources here have role as the basic theory and data. Two dictionaries supporting the research are to indicate the phonetics transcription. If the writer emphasizes to one dictionary only, it could be that the phoneme gives in some words are different. The use of the more than one dictionary is as comparison to minimize the error in writing phonetics is to strengthen the theory of plosives consonants.

B. Procedure of The Research

The writer has some procedures in this research to complete this paper. Those procedures which are used:

1. Preparation

The several basic things during the writing are to identify the problem, to select the fixed title, to formulate and limit the statement of the research and considers the advantage later. The research uses books of theories to strengthen and to prove of the research. Despite having read some books, it is important to seek some advices from Advisor I and Advisor II.

2. Implementation

To obtain the research well, the implementation presents aspiration and unaspiration phonemes relation which can be found in the speech by Obama's. Watching and listen speech, inserting the elected data into table of analysis based on the technique of data analysis, analyzing the data, obtaining the result of the research. Several phases to write the paper well are to gather references correlated to what the writer analyzes, to learn and select the information, to analyze and apply the data collected to the writing as theory and supporting literature and to report the result.

During the analysis, routine consultation also has crucial role for the writer. This was done several times first and second with counsellors to criticize any possible error either in the material or in the technical writing. The checking and repairing mistakes in the paper become the effort to minimize uncredible content.

3. Finishing

a. Composing the analyzed data

Before reporting the result to finish the research, the data analysis need to be composed after giving the mark, to be gathered with aspiration and unaspiration phoneme in the speeches.

b. Discussing with the counselors

Discussing with first and second counselor has been done every time to maximize the result of the research.

c. Revising the result

During the analysis chapter, it is important to seek advices about how to analyze aspiration and unaspiration phonemes in the speech by Barack Hussein Obama from counselor 1 and counselor II. The counselor gave some corrections on mistaken words in the material or technical in writing. Revising the mistakes in the research is important to make the research better.

d. Concluding the result

The final phase to make the research can be understood is concluding the result of all chapters. The result is based from all chapters in the research. The research can be concluded with the changing aspiration and unaspiration speech by Barack Hussein Obama.

C. Technique of the Data Collection

The point of arranging scientific research must be done through systematical process and logical steps. It gives an impression that a good planning is necessary to help the writing run well to achieve the qualified result. The use of correct method during the research is to have the data analyzed accurately. In doing the research, the systematical manners are helpful to strengthen the research itself. What the writer means as the systematical ways are to support the research by providing the reliable data to make the report scientifically and to arrange the description in the correct sequence.

The scientific writing should be also presented in a sequence. The reason is to explain the subject of the discussion from the beginning to the end. Every matter will be easy to comprehend when it is analyzed from the identification and then comes to the description. The identification is to recognize the indication of the problem while the description is to portray the result being analyzed during the research. It creates a relevant and continuous matter from one discussion to another part. The writer uses descriptive method. What a researcher should do with this method is to develop concepts and to collect facts without testing a hypothesis. The writer trying to listen the speech of Obama, then choose some word think aspiration or unaspiration phonemes. The writer compares it with oxford dictionary to find the result analysis.

D. Technique of Data Analysis

Before doing the research, the data that will be analyzed need to be understood first. After collecting data from the data source, the data need to be analyzed using the basic technique in order to obtain the accurate data. There are several steps to analyze the data; collecting the data, identifying the type of the words, outlining the data based on manner of articulation position and aspiration and unaspiration properties, and concluding the data.

It is important to collect references and linguistic book from some sources. The data can be collected if the data match with the characterization of phonemes types based on manner of articulation properties. The analysis uses some references which related to phonology and phonetic transcription.

The first step to do in this research is identifying the type of the phonemes. The writer seeks the data in the form of aspiration and unaspiration. The writer looks into the phonology properties in order to know what type the phonemes is. The types of aspiration and unaspiration consist of one words.

The second step to do in this research is outlining the data based on phonology properties and phonetic transcription. On phonology properties, the writer looked into the word order of the aspiration and unaspiration. Each type of aspiration and unaspiration has its own order. So, the writer must look the phonetics transcription first. The words can affect the aspiration position of the phonemes. The different position appear in the each words.

The third step to do in this research is concluding the data. After outlining the words, the words can be concluded what phonology properties and phonetic transcription are in it. The words appeared with different position of manner of articulation properties and phonetics transcription.

E. Sources of the Primary and Secondary Data

1. Primary Data Sources

In this research the writer use “Barack Hussein Obama” as a primary data. To find aspiration and unaspiration phonemes [p], [t], [k], [b], [d], [g] Primary data sources are actual sources when it happened in the data collection.

Barack Hussein Obama II born August 4, 1961 is an American attorney and politician who served as the 44th President of the United States

from January 20, 2009, to January 20, 2017. A member of the Democratic Party, he was the first African American to serve as president. He was previously a United States Senator from Illinois and a member of the Illinois State Senate. Obama was born in 1961 in Honolulu, Hawaii, two years after the territory was admitted to the Union as the 50th state. Raised largely in Hawaii, he also spent one year of his childhood in Washington State and four years in Indonesia. After graduating from Columbia University in 1983, he worked as a community organizer in Chicago. In 1988, he enrolled in Harvard Law School, where he was the first black president of the Harvard Law Review. After graduating, he became a civil rights attorney and a professor, teaching constitutional law at the University of Chicago Law School from 1992 to 2004. He represented the 13th district for three terms in the Illinois Senate from 1997 to 2004, when he ran for the U.S. Senate. He received national attention in 2004 with his unexpected March primary win, his well-received July Democratic National Convention keynote address, and his landslide November election to the Senate. In 2008, he was nominated for president a year after his campaign began and after a close primary campaign against Hillary Clinton. He was elected over Republican John McCain and was inaugurated on January 20, 2009

2. Secondary Data Sources

Secondary data sources are the other sources which have been exist before the research is done, and explain those primary data, like articles in

social media, text books, research result, group discussion and *Obama's Speech at State of the Union 2016.*

CHAPTER IV

DATA ANALYSIS

A. Data Description

The problem of the research will be answered in this chapter. This chapter presents the data analysis and the interpretation of research findings. The data are taken from Obama's speech at State of the Union 2016. Originally were written in 1863 which will are analyzed phonologically in this chapter. The way to analyze is to make every word in the speech be transcribed into the phonetics transcription. This effort is to know what phonemes will appear in every letter.

Occasionally, the writer finds some words which the phonetics transcription are not available either in Oxford dictionary. Word like the name of place, city or unusual thing is not written in those dictionaries. If this happens, additional dictionary, such as Webster, is used. The writer also uses phonetical websites to transcribe difficult word.

Whenever there are phonemes that fulfill qualification to be aspiration, they are highlighted by yellow color, whereas the unaspiration one caused by following fricatives will be highlighted by blue color. When the analysis is complete, the result is shown in a table to compare the plosive contents in detail.

B. Data Analysis

In the data of the research, they are analyze from Obama's speech at State of the Union 2016. The descriptions are listed below to make this interpretation of the data analysis easily.

No	Word	Minute	Phonetics Transcription	Actual in Obama's speech
1	Permanent	02.57	/ˈpəːm(ə)nənt/	/ˈpəːm(ə)nənt/
2	Together	03.00	/təˈgɛðə/	/təˈgɛ ðə/
3	Priorities	03.03	/prʌɪˈɒrɪti/	/prʌɪˈɒrɪti/
4	Battling	03.13	/ˈbat(ə)ling/	/ˈbat(ə)ling/
5	Proposals	03.31	/prəˈpəʊz(ə)l/	/prəˈpəʊz(ə)l/
6	Plenty	03.35	/ˈplɛnti/	/ˈplɛnti/
7	Believe	03.45	/bɪˈliːv/	/bɪˈliːv/
8	Done	03.46	/dʌn/	/dʌn/
9	Kids	03.53	/kɪds/	/kɪds/
10	Education	05.02	/ɛdjʊˈkeɪʃ(ə)n/	/ɛdjʊˈkeɪʃ(ə)n/
11	Dogmas	06.09	/ˈdɒgmə/	/ˈdɒgmə/
12	Spirit	07.21	/ˈspɪrɪt/	/ˈspɪrɪt/
13	Benefits	07.59	/ˈbɛnɪfɪt/	/ˈbɛnɪfɪt/
14	Becoming	10.10	/bɪˈkʌmɪŋ/	/bɪˈkʌmɪŋ/
15	Decline	12.00	/dɪˈklʌɪn/	/dɪˈklʌɪn/
16	Disagreement	20.08	/dɪsəˈgriːmənt/	/dɪsəˈgriːmənt/

17	Corporate	20.47	/ˈkɔːp(ə)rət/	/ˈkɔːp(ə)rət/
18	Bargaining	21.17	/ˈbɑːgɪning/	/ˈbɑːgɪning/
19	Spread	22.26	/sprɛd/	/sprɛd/
20	Debating	26.21	/dɪˈbeɪting/	/dɪˈbeɪting/
21	Business	26.23	/ˈbɪznəs/	/ˈbɪznəs/
22	Support	27.55	/səˈpɔːt/	/səˈpɔːt/
23	Carbon	28.03	/ˈkɑːb(ə)n/	/ˈkɑːb(ə)n/
24	Status	29.31	/ˈsteɪtəs/	/ˈsteɪtəs/
25	Strong	30.03	/strɒŋ/	/strɒŋ/
26	Combined	30.57	/ˈkɒmbʌɪn/	/ˈkɒmbʌɪn/
27	Because	32.03	/bɪˈkɒz/	/bɪˈkɒz/
28	Diminished	32.23	/dɪˈmɪnɪʃt/	/dɪˈmɪnɪʃt/
29	Pace	33.16	ˈpɑːtʃeɪ/	/ˈpɑːtʃeɪ/
30	Damage	34.09	/ˈdamɪdʒ/	/ˈdamɪdʒ/

Table 4.1. Data Description

Datum 1

Based on Obama speech, he is said “permanent” it is have phonemes stop on /p/ at initial phonemes position and the writer agree if the “/’pəːm(ə)nənt/” is it phonemes stop on /p/ initial phonemes position. The first data is found when Obama said “permanent” One phoneme in the word permanent is /p/ the voice. The phonetic transcription is /ˈpəːm(ə)nənt/ while the allophone is marked as /’pʰəːm(ə)nənt^{h}/. The writer said that indeed there is phoneme /p/ is aspiration, this

appears in the beginning. The phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released. Phoneme /t/ is aspiration it is the final position. The consonant is alveolar where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 2

The next data, he said “together” there is not have phonemes stop release, although /g/ in the medial position is stop phonemes. The writer not agree about it, it is should be release but in Obama speech he does not said it, as phonetic transcription based Obama speech is “/təˈgɛ ðə/”. The phonetic transcription is /təˈgɛðə/ while the allophone is marked as /tʰəˈgʰɛ ðə/. In the beginning phonemes is /t/ its aspiration although there is not syllable stress before phonemes, since /t/ one of phonemes at alveolar, it is including voice. /g/ should be release but actual Obama said not release on the final position phonemes. Second phoneme in the word hope is /g/ the voiceless. The writer said that indeed there is phonemes /g/ is aspiration, this appears in the medial position. The final phonemes in that word are velar. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum.

Datum 3

The next is “priorities” based on Obama said it is have phonemes stop on /p/ at initial phonemes position and the writer not agree although the “/prʌɪˈɒrɪti/” is it phonemes stop on /p/ initial phonemes position. The data is found when Obama

said “priorities” one phoneme in the word priorities is /t/ the voice. The phonetic transcription is /prʌɪˈɒrɪti/ while the allophone is marked as /prʌɪˈɒrɪtʰi/. The writer said that indeed there is phoneme /t/ is aspiration, this appears in the final. The consonant is alveolar where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 4

The next is “battling” it is have phonemes stop on /b/ at initial phonemes position and the writer agree if the “/ˈbat(ə)ling/” is it phonemes stop on /b/ initial phonemes position. The data is found when Obama said “battling” one phoneme in the word battling is /b/ voiceless. The phonetic transcription is /ˈbat(ə)ling/ while the allophone is marked as /ˈbʰat(ə)ling/. The writer said that indeed there is phoneme /b/ is aspiration, this appears in the beginning. The phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released. Phoneme /t/ is not aspiration.

Datum 5

In the six data, the writer can be found “proposals” it is have phonemes stop on /p/ at medial phonemes position, but on Obama’s speech the writer cannot listen, he said same as the oxford dictionary of phonemes and the writer agree if the “/prəˈpəʊz(ə)l/” is it phonemes stop on /p/ medial phonemes position. The data is found when Obama said “proposal” one phoneme in the word proposal is /p/ the voice. The phonetic transcription is /prəˈpəʊz(ə)l/ while the allophone is marked as /prəˈpʰəʊz(ə)l/. The writer said that indeed there is phoneme /p/ is aspiration, this

appears in the medial. The phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released. Phoneme /p/ is not aspiration, although this appears in the initial. Because phonemes /p/ hampered by consonant ‘r’.

Datum 6

Seven data, he is said “plenty” it is have phonemes stop on /p/ at initial phonemes position and the writer agree if the “/ˈplɛnti/” is it phonemes stop on /p/ initial phonemes position. The data is found when Obama said “plenty” two phonemes in the word plenty are /p and /t/ the voice. The phonetic transcription is /ˈplɛnti/ while the allophone is marked as /ˈpʰlɛntʰi/. The writer said that indeed there is phoneme /p/ is aspiration, this appears in the beginning. The first phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released. Phoneme /t/ is aspiration it is appear in the final position. The consonant is alveolar where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 7

The next is “believe” it is have phonemes stop on /b/ at initial phonemes position and the writer agree if the “/bɪˈliːv/” is it phonemes stop on /b/ initial phonemes position. The data is found when Obama said “battling” one phoneme in the word battling is /b/ voiceless. The phonetic transcription is /bɪˈliːv/ while the allophone is marked as /bʰɪˈliːv/. The writer said that indeed there is phoneme /b/ is aspiration, this appears in the beginning. The phoneme in that word are bilabial. It

means that the explosion should happen after the closing lips is released. Phoneme /t/ is not aspiration.

Datum 8

The writer found phonemes stop /d/ on “done”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /d/ at initial phonemes position and the writer agree if the “/dʌn/” is it phonemes stop on /d/ initial phonemes position. The data is found when Obama said “done” one phoneme in the word done is /d/ voiceless. The phonetic transcription is /dʌn/ while the allophone is marked as /dʰʌn/. The writer said that indeed there is phoneme /d/ is aspiration, this appears in the beginning. The phoneme in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 9

Next data, found when Obama’s said “kids” in there have two phonemes /k/ and /d/, but Obama’s not said kids with stop phonemes on the both of phonemes. The writer said it is have phonemes stop on /k/ at initial phonemes position should be aspiration since /k/ is voice and after consonant followed by vowel. The phonetic transcription is /kɪdz/ by Obama’s said. By the phonetic transcription /kɪds/ while the allophone is marked as /kʰɪds/ should be release. The writer said that indeed there is phoneme /k/ is aspiration, this appears in the beginning. The phoneme in that word are velar. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum. And the one phonemes again, it is

unaspiration because after phonemes followed by /s/ phonemes. since /s/ hamper stop phonemes be release.

Datum 10

The writer found phonemes stop /d/ and /k/ on “education”. It is have phonemes stop on /d/ and /k/ at medial phonemes position, the phonetic transcription /ɛdjʊˈkeɪʃ(ə)n/ by Obama’s said. The phonetic transcription is /ɛdjʊˈkeɪʃ(ə)n/ while the allophone is marked as /ɛdjʊˈkʰeɪʃ(ə)n/. But /d/ phonemes unaspiration phonemes because it is followed consonant. /d/ phonemes is voiceless and /k/ is voice. The writer said that indeed there is phoneme /k/ is aspiration, this appears in the beginning. The phoneme in that word are velar. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum.

Datum 11

The writer found phonemes stop /d/ on “dogmas”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /d/ at initial phonemes position and the writer agree if the “/ˈdɒgmə/” is it phonemes stop on /d/ initial phonemes position. The data is found when Obama said “dogmas” one phoneme in the word dogmas is /d/ voiceless. The phonetic transcription is /ˈdɒgmə/ while the allophone is marked as /ˈdʰɒgmə/. The writer said that indeed there is phoneme /d/ is aspiration, this appears in the beginning and after stress syllable. The phoneme in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 12

In this case the writer found there is one aspiration phonemes appear after /s/ in “spirit”. It is unaspiration because meet to /s/. The phonetic transcription is /ˈspɪrɪt/ while the allophone is marked as /ˈspɪrɪt/. The writer said that indeed there is phoneme /t/ is aspiration, this appears in the final. The phoneme in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 13

The next is “benefits” it is have phonemes stop on /b/ at initial phonemes position and the writer agree if the “/ˈbɛnɪfɪt/” is it phonemes stop on /b/ initial phonemes position. The data is found when Obama said “benefits” one phoneme in the word benefits is /b/ voiceless. The phonetic transcription is /ˈbɛnɪfɪt/ while the allophone is marked as /ˈbʰɛnɪfɪt/. The writer said that indeed there is phoneme /b/ is aspiration, this appears in the beginning. The phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released. Phoneme /t/ should be aspiration also, but the writer cannot hear he is it.

Datum 14

The next is “becoming” it is have phonemes stop on /b/ at initial phonemes position and /k/ at medial phonemes position. The writer agreed if the “/bɪˈkʌmɪŋ/” is it phonemes stop on /b/ initial phonemes position and /k/ / at medial phonemes position. The data is found when Obama said “becoming” two phonemes in the word benefits is /b/ voiceless and /k/ is voice. The phonetic transcription is

/bɪˈkʌmɪŋ/ while the allophone is marked as /bʰɪˈkʰʌmɪŋ/. The writer said that indeed there is phoneme /b/ is aspiration, this appears in the beginning. The phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released. And phoneme /k/ is aspiration, this appears in the medial. The phoneme in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 15

The writer found phonemes stop /d/ and /k/ on “decline”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /d/ at initial phonemes position and /k/ at medial phonemes position. The writer agreed if the “/dɪˈklʌɪn/” is it phonemes stop on /d/ initial phonemes position. The data is found when Obama said “decline” two phonemes in the word is /d/ voiceless and is /k/ voice. The phonetic transcription is /dɪˈklʌɪn/ while the allophone is marked as /dʰɪˈkʰlʌɪn/. The writer said that indeed there is phoneme /d/ is aspiration, this appears in the beginning. The phoneme in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released. Phoneme /k/ is aspiration, this appears in the medial. The phoneme in that word are velar. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum.

Datum 16

The writer found phonemes stop /d/, /g/ and /t/ on “disagreement”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /d/ at initial phonemes position, /g/ at medial phonemes position and /t/ at final phonemes position. The writer agree if the “/dɪsəˈgriːmənt/” is it phonemes stop on /d/ at initial phonemes position, /g/ at medial phonemes position and /t/ at final phonemes position. The data is found when Obama said “disagreement” the phonemes in the word is /d/ and /g are voiceless and /t/ is voice. The phonetic transcription is /dɪsəˈgriːmənt/ while the allophone is marked as /dʰɪsəˈgʰriːmənt ʰ/. The writer said that indeed there is phoneme /d/, /g/ and /t/ are aspiration, /d/ appears in the beginning and /t/ appears in the final. It is phonemes in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released. /g/ appears in the medial, the phonemes in that word is velar. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum.

Datum 17

The writer found phonemes stop /k/, /p/ and /t/ on “corporate”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /k/ at initial phonemes position, /p/ at medial phonemes position and /t/ at final phonemes position. The writer agree if the “/ˈkɔːp(ə)rət/” is it phonemes stop on /k/ at initial phonemes position, /p/ at medial phonemes position and /t/ at final phonemes position. The data is found when Obama said “corporate” the phoneme

in the word is /k/, /p/ and /t/ are voice. The phonetic transcription is /ˈkɔːp(ə)rət/ while the allophone is marked as /ˈkɔːp(ə)rət/. The writer said that indeed there is phoneme /k/ and /t/ are aspiration, /k/ appears in the beginning it is phonemes in that word are velar. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum and /t/ appears in the final. It is phonemes in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released. /p/ appears in the medial, the phonemes in that word is bilabial and it is unaspiration because not followed by syllable stress.

Datum 18

The writer found phonemes stop /b/ and /g/ on “bargaining”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /b/ at initial phonemes position, /g/ at medial phonemes position and final phonemes position. The writer agree if the “ˈbɑːgɪning” is it phonemes stop on /b/ at initial phonemes position, /g/ at medial phonemes position and final phonemes position. The data is found when Obama said “bargaining” the phoneme in the word is /b/ and /g/ are voiceless. The phonetic transcription is /ˈbɑːgɪning/ while the allophone is marked as /ˈbʰɑːgɪning. The writer said that indeed there is phoneme /b/ is aspiration appears in the beginning it is phonemes in that word is bilabial. It means that the explosion should happen after the closing lips is released. And /g/ appears in the medial and final. It is phonemes in that word are velar. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum.

Datum 19

In this case the writer found there is one aspiration phonemes appear after /s/ in “spread”. It is unaspiration because meet to /s/. The phonetic transcription is /sprɛd/ while the allophone is marked as /sprɛd/. The writer said that indeed there is phoneme /d/ is aspiration, this appears in the final. The phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released.

Datum 20

The writer found phonemes stop /d/, /b/, /t/ and /g/ on “debating”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /d/ at initial phonemes position, /b/ at medial phonemes position, /t/ at medial phonemes position and /g/ at final phonemes position. The writer agree if the “/dɪˈbeɪting/” is it phonemes stop on /d/ at initial phonemes position, /b/ at medial phonemes position, /t/ at medial phonemes position and /g/ at final phonemes position. The data is found when Obama said “debating” the phonemes in the word is /d/, /b/ and /g are voiceless and /t/ is voice. The phonetic transcription is /dɪˈbeɪting/ while the allophone is marked as /dɪˈbʰeɪtʰing/. The writer said that indeed there is phoneme /b/ and /t/ are aspiration, /b/ appears in the medial after stress syllable and /t/ appears in the medial before vowel and after vowel. /b/ phonemes is in that word are bilabial. It means that the explosion should happen after the closing lips is released. /t/ phonemes is in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind

the closure before finally it is released. /d/ appear in the initial and /g/ appears in the final, it is unaspiration.

Datum 21

The next is “business” it is have phonemes stop on /b/ at initial phonemes position and the writer agree if the “/ˈbɪznəs/” is it phonemes stop on /b/ initial phonemes position. The data is found when Obama said “business” one phoneme in the word is /b/ voiceless. The phonetic transcription is /ˈbɪznəs/ while the allophone is marked as /ˈbʰɪznəs/. The writer said that indeed there is phoneme /b/ is aspiration, this appears in the beginning. The phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released.

Datum 22

The writer found phonemes stop /p/ and /t/ on “support”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /p/ at medial phonemes position and /t/ at final phonemes position. The writer agree if the “/səˈpɔːt/” is it phonemes stop on /p/ at initial phonemes position and /t/ at final phonemes position. The data is found when Obama said “support” the phoneme in the word is /p/ and /t/ are voice. The phonetic transcription is /səˈpɔːt/ while the allophone is marked as /səˈpʰɔːtʰ/. The writer said that indeed there is phoneme /p/ and /t/ are aspiration, /p/ appears in the medial it is phonemes in that word are bilabial. It means that the explosion should happen after the closing lips is released and /t/ appears in the final. It is phonemes in that word are alveolar. It where tongue

tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 23

The next data, he said “carbon” there is have phonemes stop release, it is /k/ in the initial position is stop phonemes. The writer agree about it, phonetic transcription based Obama speech is “/ˈkɑːb(ə)n/”. The phonetic transcription is /ˈkɑːb(ə)n/ while the allophone is marked as /ˈkʰɑːb(ə)n/. In the beginning phonemes is /k/ it is aspiration one of phonemes at velar, it is including voice. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum. /b/ phonemes is unaspiration because it is not followed by stress syllable.

Datum 24

In this case the writer found there is one aspiration phonemes appear after /s/ in “status”. It is unaspiration because meet to /s/. The phonetic transcription is /ˈsteɪtəs/ while the allophone is marked as /ˈsteɪtəs/. The writer said that indeed there is phoneme /t/ is aspiration, this appears in the medial. The phoneme in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 25

In this case the writer found there is one aspiration phonemes appear after /s/ in “strong”. It is unaspiration because meet to /s/. The phonetic transcription is

/strɒŋ/ while the allophone is marked as /strɒŋ/. The writer cannot indeed any phonemes stop in the word.

Datum 26

The next data, he said “combined” there is have phonemes stop release, it is /k/ in the initial position and /b. in medial position are stop phonemes. The writer agreed about it, phonetic transcription based Obama speech is “/ˈkɒmbʌɪn/”. The phonetic transcription is /ˈkɒmbʌɪn/ while the allophone is marked as /ˈkʰɒmbʰʌɪn/. In the beginning phonemes is /k/ it is aspiration one of phonemes at velar, it is including voice. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum. /b/ it is aspiration, one of phonemes at bilabial, it is including voiceless. It means that the explosion should happen after the closing lips is released.

Datum 27

The next data, he said “because” there is have phonemes stop release, it is /k/ in the medial position is stop phonemes. The writer agreed about it, phonetic transcription based Obama speech is “/bɪˈkɒz/”. The phonetic transcription is /bɪˈkɒz/ while the allophone is marked as /bɪˈkʰɒz/. In the medial phonemes is /k/ it is aspiration one of phonemes at velar, it is including voice. It means sounds are made by raising the back of the tongue towards the soft palate, called the velum.

Datum 28

The writer found phonemes stop /d/ on “diminished”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /d/ at initial phonemes position and the writer agree if the “/dɪˈmɪnɪʃt/” is it phonemes stop on /d/ initial phonemes position. The data is found when Obama said “diminished” one phoneme in the word done is /d/ voiceless. The phonetic transcription is /dɪˈmɪnɪʃt/ while the allophone is marked as /dʰɪˈmɪnɪʃt/. The writer said that indeed there is phoneme /d/ is aspiration, this appears in the beginning. The phoneme in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

Datum 29

The next is “pace” it is have phonemes stop on /p/ at initial phonemes position and the writer agree if the “/ˈpɑːtʃeɪ/” is it phonemes stop on /p/ initial phonemes position. The data is found when Obama said “pace” one phoneme in the word is /p/ voice. The phonetic transcription is /ˈpɑːtʃeɪ/ while the allophone is marked as /ˈpʰɑːtʃeɪ/. The writer said that indeed there is phoneme /p/ is aspiration, this appears in the beginning. The phoneme in that word are bilabial. It means that the explosion should happen after the closing lips is released.

Datum 30

The writer found phonemes stop /d/ on “damage”, after listen Obama’s speech, he said same as the oxford dictionary. It is have phonemes stop on /d/ at initial

phonemes position and the writer agree if the "/ˈdamɪdʒ/" is it phonemes stop on /d/ initial phonemes position. The data is found when Obama said "demage" one phoneme in the word done is /d/ voiceless. The phonetic transcription is /ˈdamɪdʒ/ while the allophone is marked as /ˈdʰamɪdʒ/. The writer said that indeed there is phoneme /d/ is aspiration, this appears in the beginning. The phoneme in that word are alveolar. It where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just behind the closure before finally it is released.

C. Interpretation of the research findings

According to the data analysis which have been analyzed in the Obama's Speech at State of the Union 2016 which consist aspiration and unaspiration phonemes. The interpretation of the data is formed in the following tables:

Aspiration and Unaspiration					
	Phonemes position	Aspiration	Unaspiration	Total	Percentage
		Range			
Bilabial	Initial	10	2	12	23%
	Medial	3	3	6	11%
Alveolar	Initial	7	3	10	19%
	Medial	1		1	2%
	Final	9	1	10	19%
Velar	Initial	3	1	4	7%
	Medial	4	3	7	13%
	Final		3	3	6%
total		37	16	53	100&

Table 4.2. Aspiration and Unaspiration Research Findings

After analysis aspiration and unaspiration. It needs discuss about the data found. From the data on table above, it shows that the total data is 53 and differs from the number of datum for analysis data. That's all because in each datum not only has one stop phonemes position, for example as the datum number 16, word of "disagreement" has three stop phonemes / dʰɪsəgʰriːməntʰ /. In the table the

author must write the data according to the analysis data as explained below. On bilabial find two stop position, initial aspiration has 10 data, unaspiration 2, total data 12 and has percentage (23%) for medial aspiration having data 3, unaspiration 3 total data 6 and percentage (11%). On alveolar find three stop position, for initial aspiration has 7 data aspiration 3 total data 10 and has percentage (19%) for medial aspiration has data 1 and has presentation (2%) for final aspiration has data 9 unaspiration 1 total data 6 and have percentage (19%). On velar find three stop position, for aspiration, initial has data 3 and aspiration 1 total data 4 has percentage (7%), for aspiration, medial has data 4 and unaspiration 3 total data 7 has percentage (13%) and for unaspiration, the final has a total of 3 data with presentations (6%).

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

The research has been particularly concerned at the aspiration and unaspiration in Obama's speech at State of the Union 2016. To sum up this chapter, the writer focused from the release stop phonemes in the Obama's speech. After analyzed the data of this study, the writer draws some conclusion as follows:

1. Position stop phonemes in aspiration or unaspiration on Obama's Speech, are have three position on stop phonemes. It is initial position, medial position and final position. For example the initial position is /ˈbʰat(ə)ling/ the closing phase takes place silently. Example for the medial position is /prəˈpʰəʊz(ə)l/ depends to some extent on whether the syllables preceding and following the plosive are stressed. And the final position normally have little voicing or voiceless /ˈbʰɛnɪfɪt/.

2. The environment of stop phonemes is aspiration or unaspiration on Obama's Speech. Based on consonant, voice has two types, voice and voiceless. Voice are /p/, /t/, /k/ and voiceless are /b/, /d/, /g/. Based on the place of articulation stop phonemes has three types place bilabial, alveolar and velar. Bilabial is the explosion should happen after the closing lips is released. Alveolar is where tongue tip touches alveolar ridge so the air is blocked in the oral cavity just

behind the closure before finally it is released. Velar is sounds are made by raising the back of the tongue towards the soft palate, called the velum.

3. The most stop phonemes is aspiration or unaspiration on Obama's Speech is initial position of bilabial place of articulation the most stop phonemes. The writer found aspiration 10 data and unaspiration 2 data.

B. Suggestion

Based on the conclusion above, the writer would like give some suggestion that may be useful in the future. To whom the writer concerns are:

1. for the readers, for this research takes speech as the object being analyzed. After reading this research, the writer expects them to be able in recognizing and producing every phonemes consonants if those are available in the speech they listen. Also, the more expectation is that they care to find any phonology aspects not phonemes.

2. for the lecturer, during the teaching of phonology class, the writer found that the material of phonology given by the lecturer was sufficient. The obstacle why the students do not take this science as the main topic of their paper probably by their miscomprehension. This miscomprehension can be as they do not understand the point of the lesson or they have already had negative image regarding this subject in their mind.

Finally, to all who have interested to this subject, the writer hopes the research gives information about how to distinguish aspiration and unaspiration stop phonemes is for our knowledge.

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BIOGRAPHY

The writer was born in Bandung on January 29th, 1995, her mother is Siti Asiyah and father is Hening Aries. She is the two of four children and educated at SDN 11 School Jatimulya in 2002. She continued studying to Junior High School of SMPN 4 Tambun Selatan in 2007. She continued studying to Senior High School of SMA Yadika 8 Bekasi in 2010.

After finished study, she worked as PPIC Staff at PT. Kahoindah Citragarment for 5 years while the writer decided to continue her study and join in the School of Foreign Language – JIA Bekasi at English Literature in 2014. Besides her formal education, the writer finished Seneior High School only and continued work at PT. Kahoindah Citragarment for 5 years until now, she worked at morning and evening continued to study in English Literature JIA.

The writer loves swimming, and she has pleasure to sleep or travelling when her have more time.