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Segmental Variation in Egyptian Arabic and American English Dialects: A Sociophonetic Approach

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Abstract

This study investigates the segmental variation in selected Egyptian Arabic (EA) and American English (AE) dialects in the current age. It adopts a synchronic comparative approach in an attempt to compare between chosen dialects of both EA and AE in everyday speech. This comparison aims at removing various confusions observed in colloquial speech presented by these dialects through displaying the similarities and differences of segmental changes between some EA and AE. This present paper examines 20 words in both EA and AE dialects which are carefully observed, collected, and analyzed. These words are extracted from *YouTube* platform and *International Dialects of English Archive* (IDEA) website. The extracted segmental variation includes 12 phonological processes between EA and AE: fronting, backing, shortening, lengthening, lenition, fortition, regressive assimilation, insertion, dentalization, TH-stopping, /hæ/-Insertion, and /h/-dropping. This comparative study is conducted within the theoretical framework of Generative Phonology (GP) as presented by Noam Chomsky and Morris Halle (1968), within the broader framework of Sociophonetics of Manfred Woidich (1952) and William Labov (1991). The findings of the analysis approve the hypothesis of the comparative study. The essential finding of this study is that the segmental variation of EA and AE dialects have its own way of articulation, and this helps in achieving more simplification and more ease of pronunciation. This study highly recommends that Egyptian linguists and dialectologists should establish in Egypt an official website that displays free online database of EA audios and videos, namely *Dialects of Egyptian Arabic Archive* (DEAA) website.

Keywords: Segmental variation, Phonological process, Egyptian Arabic, American English, Dialect, Generative Phonology

1. Introduction

This paper adopts a sociophonetic approach which sets a synchronic comparative analysis between different selected dialects of EA and AE in everyday speech. EA and AE represent distinctive models of segmental variation through their numerous dialects. Linguistic researchers reflect this contemporary segmental variation in their countless theses and research papers. The purpose of this study is to remove the various confusions in colloquial speech presented in some dialects of EA and AE. Consequently, similarities and differences are traced between selected dialects of EA and AE through applying several phonological processes. This study examines 20 words in both EA and AE dialects which are carefully observed, collected, and analyzed. These 20 words belong to 20 different chosen dialects: 10 in EA and other 10 in AE. The words are extracted from YouTube platform and International Dialects of English Archive (IDEA) website. The extracted segmental variation includes 12 phonological processes divided into two sections. First section includes eight similar phonological processes between EA and AE: fronting, backing, shortening, lengthening, lenition, fortition, regressive assimilation, and insertion. Second section comprises four different phonological processes between EA and AE: dentalization, TH-stopping, /hæ/-Insertion, and /h/-dropping. Hence, this comparative study is conducted within the theoretical framework of Generative Phonology (GP) as presented by Chomsky and Halle (1968), within the broader framework of Sociophonetics of Manfred Woidich (1952) and William Labov (1991). This present study is divided into six sections: theoretical framework, review of literature, methodology, data collection and analysis, conclusion, and recommendations for future research.

2. Theoretical Framework

2.1. Generative Phonology (GP)

GP is the phonological aspect of generative linguistics. Chomsky and Halle presented a book called *The Sound Pattern of English* (SPE) in (1968) which is considered the founding book of GP (Carr, 2008, p. 63). Chomsky and Halle (1991) discuss that the GP theory aims at explaining the knowledge which a native speaker must have in order to be able to produce and understand the sound system of his or her language. They clarify that GP is based on an underlying “input” form and a surface “output” form, and they are known as “levels of representation”, and the movement from an input to an output is called a “derivation” (i.e., stage, Yip, 2002, p. 79). Distinctive features (DFs) in GP play an important role in the writing of phonological rules. The features are

represented in the form of a binary opposition; the feature is either present [+] or absent [-]. DFs are the minimal elements which provide a representation of an articulation of which phonetic and phonological transcription are combined. For instance, the close front unrounded vowel /i/ is understood according to a bundle of DFs as in the following Figure 1 (pp. 7, 19, 64, 65, 295):

Figure 1

Distinctive Features (DFs) Bundle of the vowel /i/



Chomsky and Halle (1991) discuss several types of DFs. DFs are divided into four classifications: major class features, cavity features, manner of articulation features, and source features. First, major class features include [+/- sonorant], [+/- vocalic], and [+/- consonantal]. Second, cavity features comprise [+/- coronal], [+/- anterior], tongue body features include [+/- high], [+/- low], [+/- back], [+/- round], [+/- nasal], and [+/- lateral]. Third, manner of articulation features comprise [+/- continuant], [+/- delayed release], and [+/- tense]. Finally, source features include [+/- voice] and [+/- strident] (pp. 299, 301-302, 304, 305, 309, 316, 317, 318, 324, 326, 329). Hayes (2009) illustrate the following examples about classifying segments by using DFs, the alveolars [t, d, s, z, n] are [+ coronal, + anterior], the bilabials [p, b, m] are [+ labial, - round, - labiodental] (pp. 85, 86). There are several notations which display the rule of GP. Chomsky and Halle (1991) explain that the square brackets [] are used in order to display the phonetic properties of the DFs. The rule of GP is formed of a linear ordered sequence of rules, for example, the following rule $X \rightarrow Y / Z - R$, where X and Y may be empty or any unit, $ZXR \rightarrow ZYR$ (pp. 31, 65, 391). For more clarification, a phonological rule has a segment which is called a focus, then this segment gets changed, and one or two environment strings, on the left and/or the right. This is shown in the following rule of Figure 2 (Hayes, 2009, p. 205):

Figure 2*Linear Order Rule of Generative Phonology (GP)*

X	→	Y	/	Z	—	R
Focus	Change	left environment string				right environment string

Note. The symbol slash (/) which is used in phonology means “in the environment”, a dash after the slash (/ — i) stands for where the phoneme /i/ occurs relative to its neighbors of other phonemes, therefore, it is read “in the environment before /i/”. As for (/ i —); it is read “in the environment after /i/” (Hayes, 2009, p. 28).

2.2. Sociolinguistics

Sociolinguistics is a field of study in contemporary sociology. It is the study of the effects of social and cultural variables on language’s usage, change, development, and the way language is used in local contexts. Sociolinguistics may use experimental methods and statistical analyses to study the variation in the social and geographical distribution of phonemic symbols (Turner, 2006, p. 593). Sociolinguistic researchers can search for synchronic variation. Synchronic variation is defined as speakers who exist at the same point in time but they may not share the same identity or live in the same place (Baker, 2010, p. 4). Thus, this present paper adopts the synchronic variation. Moreover, William Labov started the work of sociolinguistics (Turner, 2006, p. 593). Among Labov’s (2006) works is social differentiation of the linguistic structures of the dentals /θ/, /ð/ and the alveolar /d/ in New York City (NYC). He elucidates that /d/ which replaces /θ/ and /ð/ in the initial sound of *think* /'θɪŋk/ to be /'dɪŋk/ and *thing* /'θɪŋ/ to be /'dɪŋ/ is a characteristic of lower-class speakers than working class speakers. Furthermore, the use of /d/ instead of /ð/, as in the words *then* /'ðen/ to be /'den/ and *the* /'ðə/ to be /'də/ is a characteristic of both working class and lower class (pp. 154, 156-157).

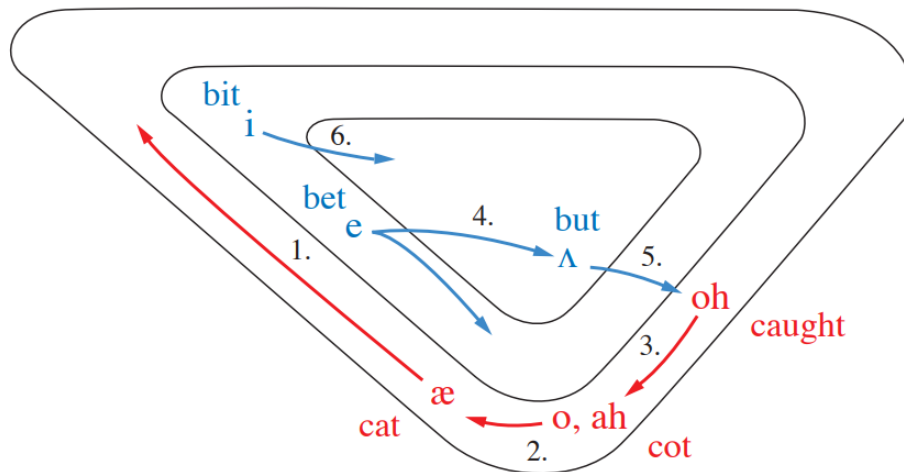
2.3. Sociophonetics

Sociophonetics is the examination of phonetic variation in speech production according to the effects of social factors in interaction with linguistic factors. For instance, vowels are examined based on a combination of region and one’s own production. This investigation perceives differences in vowel utterance known as *vowel shifts*. William Labov was among the first to work on speech communities and ideal-speaker-hearers. He focused on spontaneous

speech production and on informal interview data in order to investigate patterns of linguistic variation (Knight & Setter, 2022, pp. 551, 556, 557, 559). For example, Northern Cities Shift (NCS) is one of Labov's works which is a chain shift of vowels that are evident in the Inland North and parts of the Northern region of the U.S. The following Figure 3 represents the NCS (Labov, Ash, & Boberg, 2006, pp. 187, 190):

Figure 3

The Northern Cities Shift (NCS)



Note. NCS is characterized by the movements of six vowels: raising and fronting of /æ/, fronting of /a/, lowering of /ɔ/, lowering and backing of /e/, backing of /ʌ/ (Labov, Ash, & Boberg, 2006, p. 192), and lowering and backing of /ɪ/ (Labov, 2010, p. 15).

Katz and Assmann (2019) observe that sociophonetics was used primarily during the 1970s and 1980s in phonetic conferences as a field that analyzes dialectal differences in phonology. The usage of sociophonetics grew during the 1990s as sociolinguists began using it for studies of linguistic variation which use modern phonetic analyses, i.e., acoustic and articulatory investigations. Currently, sociophonetics is an essential element of phonetics and sociolinguistics (pp. 448, 460).

3. Review of Literature

3.1. Dialectology

Dialectology is the study of dialects. Dialects mean the deviation from the standard form of language, and they refer to varieties which are grammatically, lexically, and phonologically different from other varieties. The rise of sociolinguistics provides dialectologists with a wide range of studying language

variation as both dialectology and sociolinguistics focus on language in communities (Chambers & Trudgill, 2004, pp. 3, 5, 15, 187). Wenker and others are the pioneers of nineteenth century dialectology, and they are also regarded as the first sociophoneticians. Their work shows descriptive documentation of geographical variation, and it displays awareness of the social variation within communities (Hardcastle, Laver, & Gibbon, 2010, p. 712). Chambers and Trudgill (2004) argue that dialect differences are noticed when people talk to one another (p. 5). Accordingly, segmental phonetics/phonology is among the measured components of dialectologists (Maguire & McMahon, 2011, p. 124).

For instance, the word /te.le'fo:n/ "telephone" in Cairo is pronounced as /ta.la'fo:n/ in El Fayoum and Bani Suef (Woidich, 1997, pp. 186, 187). Hence, the close-mid front unrounded vowel /e/ in the first and second syllables is lowered to be the open front unrounded vowel /a/. As a result, the phonological processes; lowering is observed in the EA word "telephone". Lowering is when the body of the tongue is lowered from high or mid positions to low position (Wolfram & Johnson, 1982, p. 64).

Concerning AE, the word *idea* /aɪ'di:.ə/ is articulated by English people (Chambers & Trudgill, 2004, p. 13) in New Hampshire as *idear* /aɪ'di:.ər/ (Condé Nast Traveler, 2020, minutes 01:01-01:04). The alveolar trill /r/ is inserted in the third syllable. Therefore, this process is called insertion. In addition, dialectology has common ground with branches of linguistic science, especially phonetics, historical linguistics, and sociolinguistics (Chambers & Trudgill, 2004, p. 32).

3.2. A Brief History of Egyptian Arabic (EA)

Arabic is one of the major languages in the world. It is the mother tongue of millions of people. Being the language of Islam and the Holy Qur'an, many millions of Muslims in other countries know Arabic. In 1974, Arabic was made the sixth official language of the United Nations (Katzner, 2002, pp. 154-155). Versteegh (2014) notes that Arabic belongs to a group of languages known as the Semitic languages (p. 10). The Egyptian dialect was developed through several stages: ancient Egyptian language (3400 BC – 2400 BC), middle Egyptian language (2400 BC – 1350 BC), modern Egyptian language (1580 BC – 71 BC), Demotic language (700 BC – 7 BC), and Coptic language. Then, with the emergence of the reign of Ptolemies, Greek became the official language of Egypt. In the year 20 H, the Arabic commander 'Amr Ibn El 'As led an Arab conquest in Egypt, which formed a new linguistic environment, and caused the

Arabic language to defeat the Coptic, Greek, and other languages in Egypt (Solimān, 2016, pp.10-11, 16, 19).

As for EA geographical locations of its diverse dialects, they are divided into rural, urban, and Bedouin. The Nile Delta is a transitional area between the western and eastern groups of EA dialects. First, rural dialects are subdivided into three major groups: Central Delta (CD) dialects, Middle Egypt (ME) dialects, and Upper Egypt (UE) dialects. Second, urban dialects are found, for example, in the dialect of Cairo which is located in CD. Third, Bedouin dialects are spoken in the western Delta and farther west, in the eastern Delta and farther east, and in the desert areas of Egypt (Boberg, Nerbonne, & Watt, 2018, pp. 529, 530).

3.3. A Brief History of American English (AE)

English is the first language of millions of people around the world, and over 1 billion individuals worldwide use English as a second language as it is widely used in business, education, and political contexts. English is related to the Germanic branch of the Indo-European family of languages. The language of the twenty-first-century AE is developed in England about 1,550 years ago. The language of Angles, Saxons, and Jutes evolved into Old English (Amberg & Vause, 2009, pp. 34, 64, 66, 67). The period of Old English started from 600 AD to about 1100 AD (Wolfram & Schilling, 2016, p. 41). There are four varieties developed of Old English: Northumbrian and Mercian which are spoken in the areas settled by the Angles, West Saxon which is spoken in the area settled by the Saxons, and Kentish which is spoken in the area settled by the Jutes. From 1066 to 1489, English took about 400 years to be the national language of England (Amberg & Vause, 2009, pp. 68, 74). The period of Early Modern English began from 1500 AD to about 1800 AD (Wolfram & Schilling, 2016, p. 41). This period saw the birth of AE. In the late fifteenth century, Spanish speakers were the first European settlers to the lands of the United States (U.S.) (Amberg & Vause, 2009, pp. 76, 174).

Concerning AE geographical locations of its diverse dialects, most distinctive dialects of AE had been established by the late eighteenth century. In the U.S., the east is the richest regional diversity in the language due to the time depth of the settlement history which is seen in the first colonies. Concerning the mid and far west, they were not settled by English speakers until the nineteenth century. The main dialect areas are the following: the North, the Midland, and the South. Moreover, African American Vernacular English

(AAVE) is a Black English, and it is a dialect which is used by the black population of the U.S. (Melchers & Shaw, 2011, pp. 82-83, 84).

3.4. Previous Studies on Egyptian Arabic (EA)

This section shows some of the previous related studies of EA dialects. Mahmoud (2021) discusses two phonological processes which occur within the word in colloquial speech between Upper-EA and AE. The researcher illustrated that Upper-EA and AE have similarities in relation to regressive assimilation (pp. 495, 503, 505). Regressive assimilation is a following sound which has an effect on a preceding one (Wolfram & Johnson, 1982, p. 90). The segments which Mahmoud analyzed were related to single phonemes, i.e., vowel and consonant length. These phonemes are examined within the framework of GP. In Upper-EA, the lateral assimilation is one of the common examples of regressive assimilation. The alveolar lateral approximant /l/ of the definite article /ʔil/ “the” assimilates to a following phoneme if this phoneme is one of Al Ḥurūf Al Shamsiyah “the solar letters”, i.e., /t, T, d, D, θ, ð, Z, d, s, S, ʃ, z, r, n/, as in /ʔil'din.ja/ “life” which becomes /ʔid'din.ja/. However, the lateral /l/ remains unchanged if it is followed by one of Al Ḥurūf Al Qamariyah “the lunar letters”, i.e., /ʔ, b, ḥ, x, ʕ, ɣ, f, q, k, m, h, w, j/, as in /ʔil'ḥa:dʒa/ “the thing”. As for regressive assimilation in AE, in the word *king* /'kɪŋ/, when the alveolar nasal /n/ is followed by the velar plosive /g/, /n/ assimilates to /g/ as it is a regressive assimilation, consequently, /n/ which is [– back] changes to be the velar nasal /ŋ/ which is [+ back] (pp. 500, 508, 514, 521).

Rashad (2017) analyzes certain EA words in the 16th century which deviates from Classical Arabic (CA) utterance. The researcher adopts a synchronic-diachronic investigation within the framework of sociophonetics. The data of analysis is extracted from the epic of Al Zaahir Beibers. Rashad presents three phonological deviations. First, initial glottal plosive /ʔ/ insertion. For example, *nād* /'næd/ “call” changes to be /ʔin'dah/, *qif* /'qif/ “stand” deviates to be /ʔu'qaf/ (pp. 30-31). Second is shortening of the near-open front unrounded vowel /æ/ to be the open front unrounded vowel /a/. For instance, *ḥaj* /'ħædʒ/ “pilgrim” becomes /'ħag/ (p. 40). Third and final deviation is the conversion of dentals to be alveolars, i.e., TH-stopping. For example, /θ/ becomes /t/ plus vowel change; *ʕuthmān* /ʕuθ'ma:n/ “proper name” deviates to be /ʕit'mæn/, /ð/ becomes /d/; *khuth* /'xuð/ “take” changes to be /'xud/, /ð/ becomes /z/; *bithrah* /'bið.rah/ “seed” changes to be /'biz.rah/ (pp. 41-42).

YouTube platform displays several videos of EA dialects. These videos trace segmental variation through everyday speech of participants who are EA natives. One of the videos represents the dialect of El Gharbia. In this video, the people of Nagreg village talk in an interview about the good manners of their hometown football player Muhammad Salah. Hence, in this video, two phonological processes are observed through the spontaneous chat of two participants, i.e., lowering and fortition. The first participant is a male, 40s, and educated. He pronounces the word /se'meʕ.na/ “we heard” (as translated in Hinds & Badawi, 1986, p. 430) as /sa'maʕ.na/; the close-mid front unrounded vowel /e/ becomes the open front unrounded vowel /a/ in the first and second syllables. Thus, it is lowering. The second participant is a male, 50s, and educated. He articulates the word /ʔax'la:ʔ/ “manners” (as translated in Hinds & Badawi, 1986, p. 263) as /ʔax'la:g/. As a result, the voiceless glottal plosive in the second syllable /ʔ/ becomes the voiced velar plosive /g/. Accordingly, it is fortition (Mustafa Al Rasekh, 2019, minutes 03:04, 03:25).

3.5. Previous Studies on American English (AE)

This section shows some of the previous related studies of AE dialects. Hayes (2009) explains vowel raising process in AE. The articulation of this process is synchronic. He adopts the theory of GP for analysis. In AE, when the open back unrounded vowel /ɑ/ in the back-closing diphthong /aɪ/ follows voiceless consonants /t, r/, then it is raised to be the open-mid back unrounded vowel /ʌ/, i.e., /ʌɪ/. This is observed in a large number of AE dialects in the north east of the U.S. For example, the word *tripe* /'traɪp/ becomes /'trʌɪp/, *right* /'raɪt/ changes to be /'rʌɪt/, and *rice* /'raɪs/ becomes /'rʌɪs/. Therefore, the rule of these examples which is vowel raising is displayed in the following Figure 4 (p. 142):

Figure 4

Rule of Vowel Raising /aɪ/ → /ʌɪ/

$$/aɪ/ \longrightarrow /ʌɪ/ \quad / \quad \left[\begin{array}{l} - \text{syllabic} \\ - \text{voice} \end{array} \right]$$

Wolfram and Schilling (2016) examine various AE phonological processes of the U.S. First, monophthongization differentiates between southern and non-southern AE dialects. For instance, in Vermont, the word *tide* is pronounced as /'tard/, while in southern dialects, it is articulated as /'tahd/. Consequently, the

back-closing diphthong /aɪ/ becomes /ah/. Second is vowel raising. In a large area of the inland North of the U.S., the words *bag* /'bæg/ and *bad* /'bæd/ are uttered as /'beg/ and /'bed/. Hence, the near-open front unrounded vowel /æ/ is raised to be the close-mid front unrounded vowel /e/. Third and final variation is fortition. From the eastern shore of Maryland down through the Outer Banks of North Carolina, the back-closing diphthong /aʊ/ in *down* /'daʊn/ is pronounced as the front-closing diphthong /eɪ/ or the back-closing diphthong /aɪ/, as in /'dem/ or /'dam/, the diphthong in *brown* /'braʊn/ is articulated as /'breɪn/ or /'braɪn/ (pp. 70, 72, 73).

The IDEA website represents various audios of AE dialects. These audios belong to participants who are U.S. natives. Among the AE audios is a participant from Paducah city, Kentucky, female, 19, African American, and educated. This participant talks about her childhood with her father. Three phonological processes are traced through her utterance. First is lengthening in the word *did* /'dɪd/ to be /'dɪəd/; a mid-central vowel /ə/ is added after the near-close near-front unrounded vowel /ɪ/. Second process is lenition. The voiced alveolar plosive /d/ is replaced by the voiceless glottal plosive /ʔ/ in the first syllable of the word *didn't* /'dɪd.ɪnt/ which becomes /'dɪʔ.ɪnt/. Finally, monophthongization. The back-closing diphthong /aɪ/ in *time* /'taɪm/ is monophthongized to be the open front unrounded vowel /a:/, i.e., /ta:m/ (Frye, 2000, minutes 01:49, 01:56, 02:19).

4. Methodology

4.1. Hypothesis

This study investigates the segmental variation in selected Egyptian Arabic (EA) and American English (AE) dialects by applying generative phonology (GP) in a synchronic comparative approach.

4.2. Key Research Questions

This present paper intends to answer the following research questions:

- 1- What are the phonological processes involved in the analysis of different words in both EA and AE dialects?
- 2- What are the points of analysis in both sections A and B that are going to analyze each two compared words?
- 3- To what extent could YouTube platform and IDEA website be considered good representatives of EA and AE dialects?

4.3. Significance and Purpose of Research

Concerning the significance of this study, it will be one of a few to compare between the similarities and differences of segmental variation of some EA and AE dialects from a theoretical point of view. Accordingly, it will be a modest contribution to dialect variation studies. Many studies can be based on the results and findings of this paper for further research about EA and AE dialects. As for the statement of the problem, EA and AE dialects perform various segmental confusions in everyday speech. The receivers of speech observe these confusions in which people in both dialects tend to be sarcastic; they would inquire about how these segmental confusions are pronounced, and why they are different from their own dialects. This is shown in the following paragraphs.

Concerning EA, a program called *Al-Haya Helwa* “Life is Pleasant” (as translated and transliterated in Hinds & Badawi, 1986, pp. 223, 237) displays the confusion between EA dialects. The singer Lo’ay who is from Cairo interrupts the actor Ahmed Rizq who is from Alexandria by asking: “in Alexandria, people pronounce /so'goʔ/ “sausage” as /so'doʔ/, is that right?” (as translated and transliterated in Hinds & Badawi, 1986, p. 400). Thus, Rizq responds by affirming: “it’s /so'doʔ/” (Al Hayah TV Network, 2016, minutes 01:06, 01:36). Lo’ay uses the velar plosive /g/, while Rizq uses the alveolar plosive /d/. Therefore, Lo’ay’s articulation is fortition, while Rizq’s utterance is lenition. Fortition is a phonological process in which effort in pronunciation increase (Labov, 2010, p. 7), while lenition is a phonological process which means weakening in pronunciation (Jensen, 2004, p. 56).

As for AE dialects, in a video that traces the confusion between AE dialects, Stacie who is from North Carolina said that her way of pronunciation is right while that of her friend Sarah from Pennsylvania is wrong. Yet, Sarah refused what her friend said. Both of the two girls articulate a list of words as a challenge for each one of them to show how they utter words whether similarly or differently. When they pronounce the word *route*, Stacie pronounces it as /'raʊt/, while Sarah articulates it as /'ru:t/. Hence, Stacie uses a back-closing diphthong /aʊ/, while Sarah uses a close back rounded vowel /u:/. However, Stacie mocks Sarah by saying: “you’re a snob!” (Moorestyle10, 2012, minutes 00:48, 00:55). As a result, Stacie’s pronunciation is diphthongization, while Sarah’s articulation is monophthongization. Diphthongization is a process in which vowels or monophthongs change to be diphthongs. Monophthongization, on the other hand, is a process in which a diphthong changes to be a monophthong (Mesthrie, 2001, pp. 304, 417).

Accordingly, the purpose of this study is to remove the various confusions in colloquial speech presented in some EA and AE dialects. To achieve this purpose, this sociophonetic comparative study examines the segmental variation of selected EA and AE dialects in the current age as traced in YouTube platform and IDEA website. As a result, this study focuses on the synchronic variation that occurs within the word. Furthermore, the GP theory is adopted to phonologically analyze the extracted words of EA and AE dialects. Accordingly, the adequacy of the GP theory on the analysis is traced. Finally, several phonological processes are applied on the segments of the chosen words between some EA and AE dialects to show the similarities and differences between them. The phonemic symbols that display the two varieties of EA and AE is International Phonetic Alphabet (IPA) which is represented at the end of this study, i.e., see Appendix A, B, and C.

4.4. Quantitative Method

Quantitative method means counting the outcome of a particular phonological feature in a person's speech or counting quantitative variables, i.e., participant's social background (Rasinger, 2013, p. 10). The term *quantify* is derived from the Latin verb *quantificare* and the noun *quantus*. Quantitative research is concerned with aspects of human behavior in a variety of fields, i.e., phonetics, phonology, and sociolinguistics. This method provides descriptions of sociolinguistic phonological variation between dialects (Grant, Clark, Reershemius, Pollard, Hayes, & Plappert, 2017, pp. 4-5). For example, the close-mid front unrounded vowel /e/ in the word *pen* could be pronounced by a speaker as *pin* with the close front unrounded vowel /i/ or as /pɛn/ with the open-mid front unrounded vowel /ɛ/ by another speaker (Johnson, 2008, p. 144). Quantitative analysis is one of the methods in sociolinguistics research. The other one is *qualitative* (Wardhaugh & Fuller, 2015, p. 18). Quantitative method requires a large amount of data which allows researchers to explain the particular feature of reality they are interested in, in greater detail and accuracy. Consequently, a study which is based on 50 people gives a valid picture than a study based on 5 only. For instance, in Labov's study on the social stratification of the alveolar trill /r/ in NYC, he was able to collect data from 264 respondents. Accordingly, his results enabled him to make conclusions about the prestige of /r/ across different social classes (Rasinger, 2013, p. 36).

As a result, the findings of quantitative analysis try to find connections between social and phonemic symbols (Wardhaugh & Fuller, 2015, p. 18) which this present paper adopts. In addition, when a person is interviewed, then

his answers are linguistic data. Therefore, there are a large number of variables which is connected with this person: gender, age, dialect, socioeconomic status, size of vocabulary, etc. (Johnson, 2008, p. 36). This study utilizes the quantitative method in the data analysis section in order to trace the social variables of each participant, i.e., gender, age, ethnicity, education, employment, place of birth, and dialect. It also adopts this method in the conclusion section to count the participants and their social backgrounds.

5. Data Collection and Analysis

5.1. Data Collection

5.1.1. Media and Segmental Variation of Egyptian Arabic (EA)

Television and internet are two mediums which are illustrated in this sub-section and sub-section 5.1.2. as they are utilized in the analysis of this study. Thus, YouTube platform and IDEA website are adopted as media tools to examine the words of some EA and AE dialects. YouTube plays the programs which are broadcasted on television, as *Al Nahar TV* and *Al Hayah TV Network* of EA, and as Cable News Network (CNN) and American Broadcasting Company (ABC) news of AE. Concerning IDEA, it is an internet medium which represents the audios of AE. The emergence of television in Egypt as an electronic media started in 1960. The first TV channel was *Channel 5*. It focused on development and educational programs. The second one was *Channel 7* which focused on entertainment and religious programs. *Channel 9* began broadcasting in 1963. It targeted the foreigner living in Egypt (Chiba, 2010, p. 9). The beginning of private satellite television channels *Nilesat* was witnessed in the 1990s (Khamis, 2011, pp. 1, 3). As for the internet, it started in the Arab region in 1993. It empowered individuals to employ their right to receive, produce, and transmit information and ideas beyond their national borders. Moreover, the internet helped facilitate intercultural communication where differences of race, ethnicity, and class disappear (Albirini, 2016, p. 261).

Currently, television in Egypt presents talk shows and interviews of people who talk in spontaneous EA. Accordingly, EA dialects are observed. Fatma ‘Īd is an esteemed folk singer. She is born in Qanyāt city in El Sharqia, and she is a graduate of Arabic music Institute (Kassem, 2024). ‘Īd was 61 at the time she was chatting in a program called *El Mansi* “the forgotten” (as translated in Hinds & Badawi, 1986, p. 862) with the TV presenter Engy Heshām about her life and work. Devoicing is observed in the pronunciation of ‘Īd. It is a phonological process in which voiced segments change to be voiceless

(Wolfram & Johnson, 1982, p. 94). The voiced pharyngeal fricative /ʕ/ becomes the voiceless pharyngeal fricative /ħ/ in the second syllable, as in the word *basma* 'ha /bas'maħ.ha/ "I listen to it" which is articulated as /bas'maħa/; /bas'maħa wef 'nafs ʔel'waʔt meʃ kol ʔa'ʕæ:ni ʔl mah.ra.ɡa'næ:t kwaij'je.sa/ "I listen to it, but at the same time not all nowadays folk songs are good" (Hya TV, 2023, minutes 13:13-13:18). Concerning the internet, among the current websites is entitled *Talk in Arabic*. It teaches learners EA through representing audios by native speakers of Cairene dialect, for example, the everyday expressions /sa'lam.tak/ "get well soon!", spoken to male, and /sa'lam.tek/, spoken to female, is articulated by an EA native speaker called Mariam (TalkInArabic, 2024).

Segmental variation of EA is shown in one of Woidich's projects together with Peter Behnstedt which is *Die ägyptisch-arabischen Dialekte* "The Egyptian-Arabic Dialects". It displays a record of the linguistic variety found in Egypt. The authors' fieldwork was between 1975 and 1983 (Stewart, 1999, 335). Woidich (1996) analyzes the backing process which is observed in an EA dialect. For instance, in Suhag, /'bæ:b/ "door" (as translated in Hinds & Badawi, 1986, p. 110) is uttered as /'ba:b/, therefore, the near-open front unrounded vowel /æ:/ becomes the open back unrounded vowel /ɑ:/ (p. 8).

5.1.2. Media and Segmental Variation of American English (AE)

The emergence of television in the U.S. was in 1939. *National Broadcasting Company* (NBC), *Columbia Broadcasting System* (CBS), and *DuMont Television Network* (DuMont) stations started in NYC, and began limited broadcasting to few thousand households. NBC broadcasted local news about *the makers of Camel cigarettes* in February 1948. CBS launched its program *CBS Evening News*, and DuMont created an evening newscast called *News from Washington* in April 1948 (Ponce De Leon, 2015, pp. 5, 8). As for the internet, it started on April 30th, 1993 in the U.S. in that anybody anywhere in the world could use the World Wide Web protocols, and people could come together and talk. The internet had connected to it more than a million computers (Cassidy, 2002, p. 28).

Currently, television in the U.S. presents talk shows and interviews of people who talk in spontaneous AE. Thus, AE dialects are noticed. Barbara Walters was a late legendary television American broadcaster, journalist, and writer. She was born in Boston city, Massachusetts, and she had a bachelor's

degree in English (Biography.Com Editors, 2023). In a documentary program on ABC News called *Our Barbara*, Barabra Walters talks about her job when she became the first female anchor on an evening news program in 1976. This late journalist was in her 70s at the time of broadcasting the program *Our Barbara*. The R-dropping and lenition phonological processes are most common in her New England dialect, the word *anchor* /'æŋ.kər/ is pronounced as /'æŋ.kə/, *network* /net.wɜrk/ is articulated as /neʔ.wɜk/; “but here was my chance, historic, they told me to be the first female co-anchor of a network news program” (ABC News, 2023, minutes 00:26-00:34). Accordingly, the alveolar /r/ is dropped in /'æŋ.kər/, and the voiceless alveolar plosive /t/ in *network* /net.wɜrk/ is lenitioned to be the voiceless glottal plosive /ʔ/. Concerning the internet, among the current websites that help learners to interact in synchronic AE is *VOA Learning English*. Voice of America (VOA) is a multimedia source of news and information for English learners. One of the audios that is represented on this website is *Handwriting Returns in California Schools*, an AE native speaker called Mike Blake says: “Starting this year, six- to twelve-year-olds in California will be required to learn **cursive** handwriting.” (Blake, 2024, minutes 0:00-0:10).

Segmental variation of AE is shown in William Labov’s dictionary together with Sharon Ash and Charles Boberg (2006), i.e., *The Atlas of North American English* (ANAE). It provides a record of the regional dialects of English which is spoken in the United States and Canada in the urbanized areas and a number of smaller cities in the years 1992 to 1999. In this dictionary, the monophthongization process is traced in an AE dialect. For example, in the Midland region, as in Lawrence city, Kansas, Midland speakers have the tendency to delete the voiced palatal approximant /j/ before the voiced alveolar lateral approximant /l/, hence, *mile* /maɪl/ and *while* /waɪl/ are uttered as /'ma:l/ and /'wa:l/ (Labov, Ash & Boberg, 2006, pp. 3, 266).

5.2. Data Analysis

The synchronic comparative analysis of this study is conducted within the theoretical framework of GP as presented by Chomsky and Halle (1968), within the broader framework of Sociophonetics of Manfred Woidich (1952) and William Labov (1991). This present paper examines 20 different words: 10 words belong to EA and the other 10 are related to AE. The words of EA are /ʃar'ba:t/ “syrup”, /'jes.ref/ “to spend money”, /be'kæ:m/ “how much”, /ʃan'dena/ “we have”, /del'waʔ.ti/ “now”, /ga'mi:la/ “beautiful”, /mʊs'taf.fah/ “hospital”, /be'tæ:ʃ/ “indicate possession: of”, /wa'zi:fa/ “job”, and /'di/

“This”. As for AE words, they are *much* /'mʌtʃ/, *oil* /'ɔɪl/, *pecan* /pɪ'kɑ:n/, *egg* /'ɛg/, *mountain* /'maʊnt.ən/, *Mrs.* /'mɪs.əz/, *street* /'stri:t/, *porridge* /'pɔ:r.ɪdʒ/, *bath* /'bæθ/, and *human* /'hju:mən/. The dialects of EA which are analyzed in this study include six regions: far North-East region; North Sinai, far North-West region; Marsa Matruh, North-East Delta region; Damietta, North-Mid; Suez, North-West Delta region; Alexandria, and finally, South region; El Minya, Suhag, Qena, and Aswan. Concerning the dialects of AE words which are analyzed in this study, they comprise five regions: North East region; New York, North Central region; Wisconsin, South East region; North Carolina, South Carolina and Georgia, South region; Texas, and finally West region; Colorado, Utah, Washington, and California.

The segments being examined include features that belong to single phonemes and clusters. As for the phonological processes under investigation, they are 12 processes as follows: fronting, backing, shortening, lengthening, lenition, fortition, regressive assimilation, insertion, dentalization, TH-stopping, /hæ/-Insertion, and /h/-dropping. The transcription and glossing of EA are based on *A Dictionary of Egyptian Arabic* (1986), and *An Arabic-English Dictionary of The Colloquial Arabic of Egypt* (1999). Concerning AE, it is based on *Cambridge Dictionary of American English* (2008), and *Longman Dictionary of American English* (2009). The analysis of each word is divided into two sections: A and B. Section A, sociolinguistic part, displays the social background of the two compared words in nine points: source of the word, social background of the speaker which consists of gender, age, ethnicity, education, employment, place of birth whether in a governorate or a state, before applying the phonological process according to IPA of EA and AE, after applying the phonological process based on IPA, grammatical category, meaning, original sentence, and dialect background. As for Section B, phonological part, it analyzes the phonological processes of each two compared words by adopting the theoretical framework of GP as presented by Chomsky and Halle (1968).

Furthermore, all of the 20 chosen words are extracted from videos of YouTube channels and audio recordings of IDEA website. These videos and audios are spontaneous interviews in a conversational, informal style by native participants of each dialect. The words being examined in this paper adopt two mediums: YouTube and IDEA. They are chosen because they allow large, diverse speakers from various demographic backgrounds. Based on

Hosseinmardi, Ghasemian, Clauset, Mobius, Rothschild, and Watts (2021), YouTube is considered the largest and most engaging online media consumption platform in the world (p. 1). The former employees of online commerce website PayPal who are Chad Hurley, Steve Chen, and Jawed Karim founded YouTube website. It was officially launched in June 2005. YouTube is one of the services that aim at removing the technical barriers to the widespread sharing of video online. The website provided a very simple interface within which users could upload, publish, and view streaming videos. By November 2007, YouTube became the most popular entertainment website in Britain. In April 2008, YouTube hosted 85 million videos, a number that continues to increase (Burgess & Green, 2009, pp. 1, 2).

This present paper chooses some AE words from videos known as “accent tag challenge” uploaded by several users who have channels on YouTube. According to Tatman (2017), speakers of AE dialects identify their language background by uploading videos as part of the “accent tag challenge”. This accent tag was developed by Bert Vaux and based on the Harvard dialect survey. It has become a prominent continued internet phenomenon. Although accent tag was designed to represent differences between dialect regions in the U.S., but it has achieved wide popularity across people who speak English. The accent tag challenge has various names, i.e., “dialect meme”, “accent challenge”, “Tumblr/Twitter/YouTube accent challenge”. In these videos, speakers first introduce themselves, and they describe their linguistic background focusing on their regional dialect. Then, they read a list of words which show their phonological dialect differences. Among these words are *Atlantic*, *Bandanna*, *coupon*, *data*, *figure*, *lawyer*, and *theater*. The word *lawyer* for instance is pronounced as /lɔɪ.jər/ in California, but /lə.jər/ in Georgia (pp. 53, 54).

The second medium which is IDEA website is considered the first online archive of primary-source recordings of English language dialects of native speakers and accents as heard around the world. It was created in 1998. It has more than 1,600 samples from 135 countries and territories, and more than 170 hours of recordings. Today, IDEA is the largest archive of its kind. Paul Meier is the International Dialects of English Archive’s founder, director, and personal contributor. He collected 20 percent of the archive. Meier established IDEA to provide actors with the real-life models they need for their characters’ accents and dialects. This website provides researchers with the country, state, province, and characteristics of each speaker, i.e., ethnicity, age, and employment. In

addition, researchers or readers in general could listen conveniently to the streaming audio while reading at the same time the accompanying transcription and commentary. Each recording includes a passage called “Comma Gets a Cure” or “the Rainbow passage”, and some speech is unscripted (Meier, 2022). This study chooses some AE audios from IDEA website in which their participants read the passage “Comma Gets a Cure” or talk about their lives.

5.2.1. First: Similarities of Phonological Processes between Egyptian Arabic (EA) and American English (AE) Dialects

This section examines the similarities between some EA and AE dialects by applying eight phonological processes: fronting, backing, shortening, lengthening, lenition, fortition, regressive assimilation, and insertion. The synchronic comparative analysis of these processes is applied on 16 extracted words from some EA and AE dialects: /ʃar'ba:t/ “syrup” and *much* /'mʌtʃ/, /'jes.ref/ “to spend money” and *oil* /'ɔɪl/, /be'kæ:m/ “how much” and *pecan* /pi'ka:n/, /ʃan'dena/ “we have” and *egg* /'ɛg/, /del'waʔ.ti/ “now” and *mountain* /'maʊnt.ən/, /ga'mi:.la/ “beautiful” and *Mrs.* /'mɪs.əz/, /mʊs'taʃ.fah/ “hospital” and *street* /'stri:t/, /be'tæ:ʃ/ “indicate possession: of” and *porridge* /'pɔ:r.ɪdʒ/. Consequently, the 16 chosen dialects are as follows: Alexandria and Washington, Suez and North Carolina, North Sinai and California, Qena and Wisconsin, Damietta and Utah, Aswan and Georgia, El Minya and Colorado, Suhag and South Carolina.

1- Fronting

Fronting is a process in which sounds are produced further forward than their usual position at the front of the tongue and/or mouth (Llamas, Mullany & Stockwell, 2007, p. 215).

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

sharbāt /ʃar'ba:t/ “syrup”

- 1- **Source of the Word:** YouTube channel (M Yawmeyāt maruoma, 2020, minute 00:50).
- 2- **Social Background of the Speaker:** female – 30s – Egyptian – educated – owner of a YouTube channel.
- 3- **Place of Birth:** Governorate of Alexandria (North-West Delta).
- 4- **Before Applying Fronting:** شرابات /ʃar'ba:t/ (Spiro, 1999, p. 308).
- 5- **After Applying Fronting:** شرابات /ʃar'bæ:t/.

- 6- **Grammatical Category:** noun (Hinds & Badawi, 1986, p. 457).
- 7- **Meaning:** syrup (Spiro, 1999, p. 308).
- 8- **Original Sentence:** "عندنا هنا في اسكندريه المشروب دوت بيتعمل أساسي يوم مولد النبي يعني يوم واحد في السنه بيتعمل المشروب دوت. المشروب دوت عباره عن موز، شربات، و الشربات بالموز دوت بيتعمل في كل مكان فيكي يا اسكندريه"
- /ʕan'dena 'he.na fe es.ken.de.rej'ja ʔel maʃ'ru:b daw'wat be.jet'ʕa.mal ʔa.sa:'si 'jo:m 'muld ʔen'nabi 'jaʕ.ni 'jo:m wa:'hed fes'sa.na be.jet'ʕa.mal ʔel maʃ'ru:b daw'wat ʔel maʃ'ru:b daw'wat ʕe'ba.ra ʕan 'mo:z, ʕar'bæ:t, weʃ ʕar'bæ:t bel 'mo:z daw'wat be.jet'ʕa.mal fe kol ma'ka:n fi:'ki ja es.ken.de.rej'ja/
- “Here in Alexandria, we make this syrup especially on the day of Mawlid Al Nabi —memorial of the Prophet Muḥammad’s birthday—. That is this syrup is done only once a year. This drink includes bananas, syrup, and it is done everywhere in Alexandria” (M Yawmeyāt maruoma, 2020, minutes 00:40-00:55).
- 9- **Dialect Background:** Based on the observation of the study, some native people of Alexandria; north-west Delta region tend to front vowels in everyday language. For example, the word *'arba'* /ʔar'baʕ/ “wednesday” (as translated and transliterated in Spiro, 1999, p. 216) is pronounced as /ʔar'baʕ/ (Monawa‘āt Maṣriya, 2018, minute 00:39). Hence, the open back unrounded vowel /ɑ/ in the first and second syllables is fronted to be the open front unrounded vowel /a/. This participant is a female, 20s, Egyptian, educated, and unknown employment.

American English (AE)

much /'mʌtʃ/

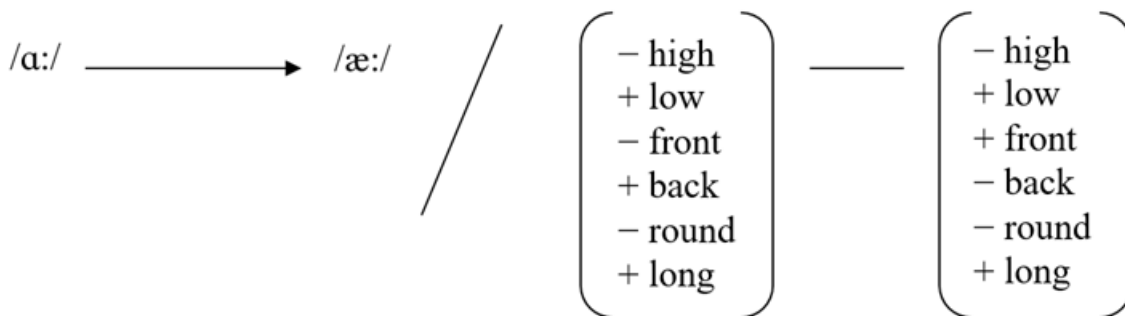
- 1- **Source of the Word:** IDEA website (Danford, 2018, minute 00:27).
- 2- **Social Background of the Speaker:** female – 19 – Caucasian – American – educated – student.
- 3- **Place of Birth:** Arlington city, State of Washington (North-West).
- 4- **Before Applying Fronting:** *much* /'mʌtʃ/ (Cambridge Dictionary of American English, 2008, p. 564).
- 5- **After Applying Fronting:** *much* /'mætʃ/.
- 6- **Grammatical Category:** adverb (Cambridge Dictionary of American English, 2008, p. 564).
- 7- **Meaning:** great in amount, degree, or range (Cambridge Dictionary of American English, 2008, p. 564).

- 8- **Original Sentence:** “So she was very happy to start a new job at a suburb private practice in north square near the Duke Street Tower, that area was much nearer for her and more to her likin' ” (Danford, 2018, minutes 00:20-00:29).
- 9- **Dialect Background:** Based on the data of Labov, Ash, and Boberg (2006), the fronting of the vowel /ʌ/ is strong among younger speakers in Ohio, Indiana, and Kansas; Midland region, and Pennsylvania; north-east region (p. 266). Based on the observation of the study, some native people of Washington, west region, tend to front vowels in everyday language. For instance, the word *aunt* /'ɑ:nt/ (Cambridge Dictionary of American English, 2008, p. 49) is articulated as /'ænt/ (Sparky's Joint, 2017, minute 04:29). As a result, the open back unrounded vowel /ɑ:/ is fronted to be the near-open front unrounded vowel /æ/. This participant is a male, 30s, Caucasian, American, educated, retired U.S. marine corps soldier, and owner of a YouTube channel.

Section B: Phonological Analysis: In EA, the open back unrounded vowel /ɑ:/ changes to be the near-open front unrounded vowel /æ:/ in the second syllable of the word *sharbāt* /ʃar'ba:t/. Therefore, /ʃar'ba:t/ becomes /ʃar'bæ:t/. Likewise, in AE, the open-mid back unrounded vowel /ʌ/ in the word *much* /'mʌtʃ/ changes to be the near-open front unrounded vowel /æ/. Thus, /'mʌtʃ/ becomes /'mætʃ/. Accordingly, both words belong to the fronting process. Based on GP, consider the following Figures 5 and 6 on the selected dialects. The DFs are adopted from Hayes (2009, p. 98):

Figure 5

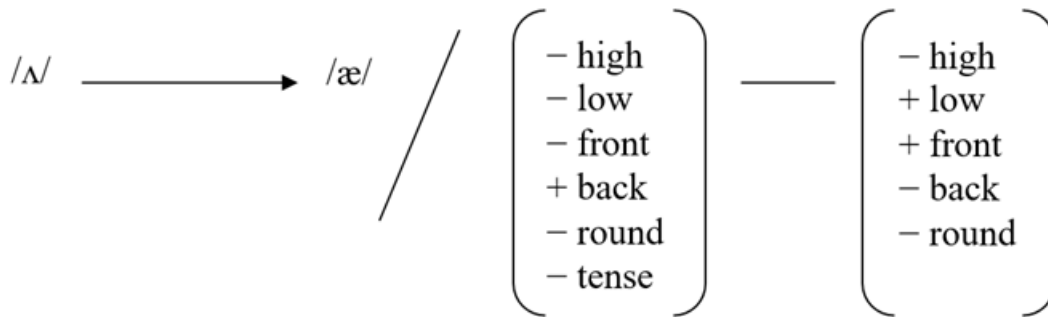
Fronting Rule on the word sharbāt /ʃar'ba:t/ → /ʃar'bæ:t/



Note. Both vowels /ɑ:/ and /æ:/ share most of DFs; [- high], [+ low], [- round] and [+ long], and they are different in other two DFs; the vowel /ɑ:/ is [- front] and [+ back], and it changes to be the vowel /æ:/ which is [+ front] and [- back].

Figure 6

Fronting Rule on the word *much* /'mʌtʃ/ → /'mætʃ/



Note. Both vowels /ʌ/ and /æ/ share some of DFs; [- high] and [- round], and they are different in other DFs; the vowel /ʌ/ is [- low], [- front], [+ back], and [- tense], and it becomes the vowel /æ/ which is [+ low], [+ front], and [- back].

2- Backing

Backing is a process in which the positions of vowels become at the back of the tongue (Llamas, Mullany & Stockwell, 2007, p. 105). This process is the opposite of fronting.

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

jeʃref /'jes.ref/ “to spend money”

- 1- **Source of the Word:** YouTube channel (Al Nahar TV, 2019b, minute 05:56).
- 2- **Social Background of the Speaker:** male – 65 – Egyptian – educated – retired general manager.
- 3- **Place of Birth:** Al Khōr harbor, Governorate of Suez (North-Mid).
- 4- **Before Applying Backing:** *يصرف* /'jes.ref/ (Hinds & Badawi, 1986, p. 501).
- 5- **After Applying Backing:** *يصرّف* /'jos.rof/.
- 6- **Grammatical Category:** transitive verb (Hinds & Badawi, 1986, p. 501).
- 7- **Meaning:** to spend money (Hinds & Badawi, 1986, p. 501).

Original Sentence: "ايامها لما مكانش في فلوس لدفع اجرة العمال كان بيدولوه (يقصد والده) جلده مختوم عليها ختم الملك .. ختم الملك يعني يصرّفها في أي وقت لما يكون الخزينة بتاعت البنك فيه فلوس "

/ʔaj'jam.ha 'lama ma'kanʃ fi 'flu:s le 'daʃʃ 'ʔog.rat ʔel ʃom'mæ:l 'kæ:n be.jed'du:luh 'gel.da max'tu:m ʃa'le:ha 'xetm ʔel ma'lek .. 'xetm ʔel ma'lek 'jaʃ.ni jos'rof.ha fi ʔaj 'waʔt lam'ma je'ku:n ʔel xa'zi:na be.tæ:'ʃet ʔel 'bank 'fi:h 'flu:s/

“Back in the day, when there was no money to pay the workers their wages, they gave him (he means his father) a piece of leather that has on it the King’s seal .. the King’s seal means that he can exchange it with money at any time when the bank safe has cash” (Al Nahar TV, 2019b, minutes 05:48-05:59).

- 8- **Dialect Background:** Based on the data of Woidich (2020), native people of El Farafra Oasis tend to use backing in everyday language, i.e., the word *henāk* /he'næk/ “there” is uttered as /he'nak/ (p. 35). Based on the observation of the study, some native people of Central Delta region; El Menoufia and El Qalyubia, NME; Bani Suef and El Fayoum, south region; Suhag, Luxor, and Aswan, tend to back vowels in everyday language. The same example is presented by another participant in El Fayoum, north-mid region, the word *yesref* /'jes.ref/ is uttered as /'tos.rof/ (Al Nahar TV, 2018d, minutes 07:13). This participant is a male, 60s, Egyptian, unknown education, and owner of loofah factory.

American English (AE)

oil /'ɔɪl/

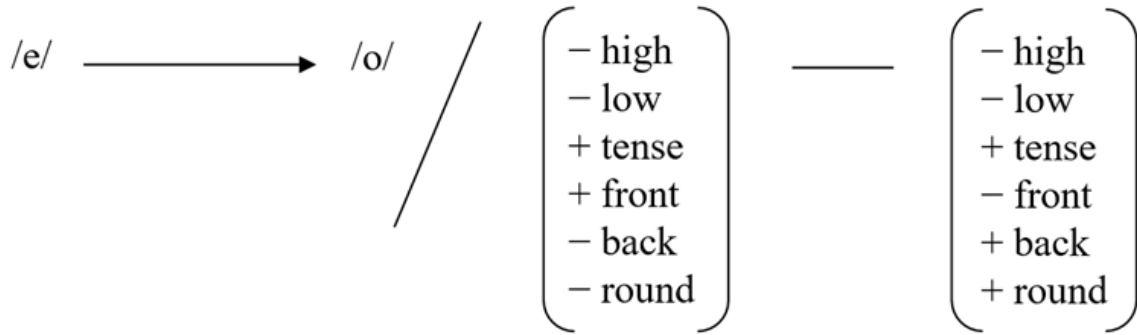
- 1- **Source of the Word:** YouTube channel (Chris Jones, 2012, minute 05:21).
- 2- **Social Background of the Speaker:** male – 20s – Caucasian – American – educated – university science student and works in grocery business.
- 3- **Place of Birth:** Mount Airy city, State of North Carolina (South-East).
- 4- **Before Applying Backing:** *oil* /'ɔɪl/ (Longman Dictionary of American English, 2009, p. 698).
- 5- **After Applying Backing:** *oil* /'ɔ:l/.
- 6- **Grammatical Category:** noun (Longman Dictionary of American English, 2009, p. 698).
- 7- **Meaning:** a thick dark liquid from under the ground, from which gasoline and other products are made (Longman Dictionary of American English, 2009, p. 698).
- 8- **Original Sentence:** “we don’t say boil or oil, its all” (Chris Jones, 2012, minutes 05:18-05:21).
- 9- **Dialect Background:** Based on the data of Labov, Ash, and Boberg (2006), the backing of the back-front closing diphthong /ɔɪ/ is most strongly represented in Kansas, Iowa, Missouri, and Illinois; the Midland region, for example, *oil* /'ɔɪl/ is pronounced as /'ɔ:l/. Backing is also evident in North Carolina, South Carolina, Georgia, and Florida (p. 99). Based on the observation of the study, some native people of North Carolina; south-east

region tend to back vowels in everyday language. The same example is presented by another participant in North Carolina, the word *oil* /'ɔɪ/ is articulated as /'ɔ:l/ (Anna Odom, 2012, minute 02:35). This participant is a female, 30s, Caucasian, American, educated, owner of a YouTube channel, and she is born in Blue Ridge Mountains.

Section B: Phonological Analysis: In EA, the close-mid front unrounded vowel /e/ changes in the first and second syllables to be the close-mid back rounded vowel /o/ of the word *jesref* /'jes.ref/. Consequently, /'jes.ref/ changes to be /'jos.rof/. Similarly, in AE, the back-front closing diphthong /ɔɪ/ changes to be the open-mid back rounded vowel /ɔ:l/ of the word *oil* /'ɔɪ/. Hence, /'ɔɪ/ becomes /'ɔ:l/. As a result, both words are related to backing process. Based on GP, consider the following Figures 7, 8, and 9 on the selected dialects. The DFs are adopted from Wells (2000, inside front cover), and Hayes (2009, p. 98):

Figure 7

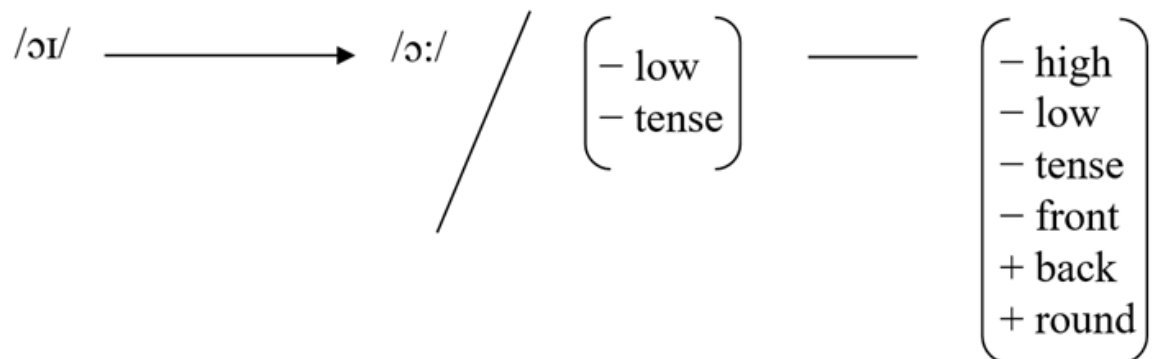
Backing Rule on the word jesref /'jes.ref/ → /'jos.rof/



Note. Both vowels /e/ and /o/ share some of DFs as shown above in the environment, but when the vowel /e/ changes to be /o/, the vowel /o/ does not share the following DFs: [- front], [+ back], and [+ round].

Figure 8

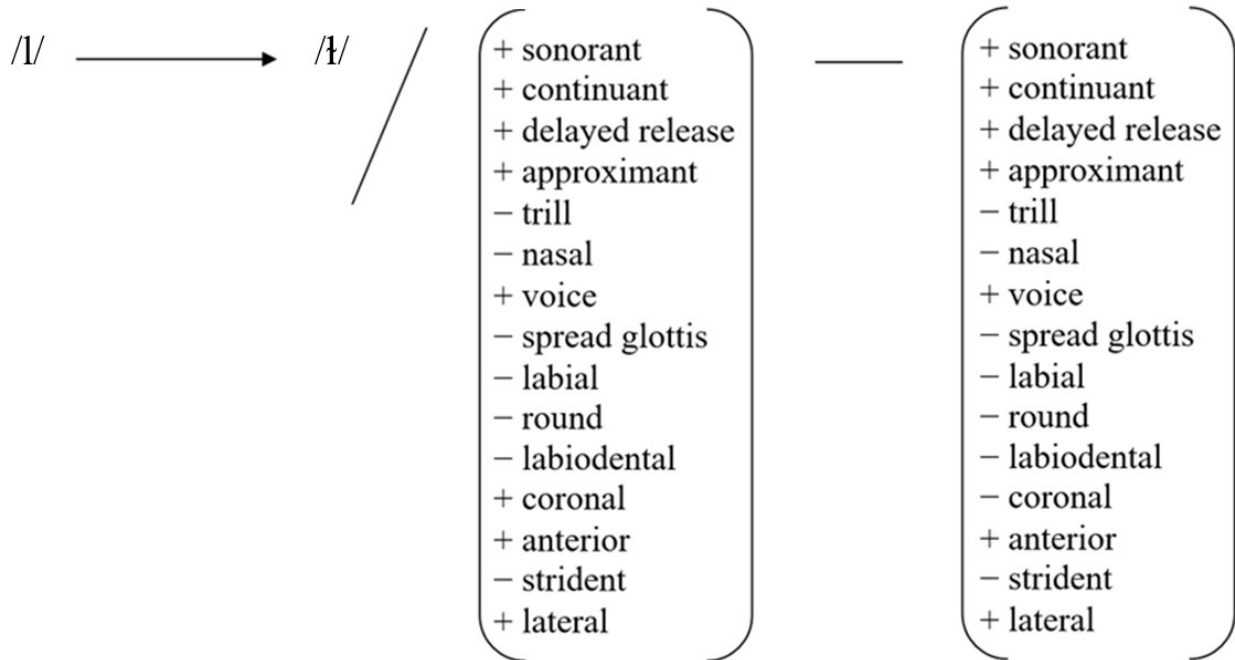
Backing Rule on the word oil /'ɔɪ/ → /'ɔ:l/



Note. Both the diphthong /ɔɪ/ and the vowel /ɔ:/ share two DFs; [– low] and [– tense], but when the diphthong /ɔɪ/ becomes the vowel /ɔ:/, it has a bundle of DFs as displayed above. Due to the complication of articulation of the word *oil* /'ɔɪl/, the backing of diphthong /ɔɪ/ to be the long vowel /ɔ:/ led the consonant /l/ to be velarized /ɫ/. The following Figure 9 represents this change:

Figure 9

Velarization Rule on the word oil /'ɔɪl/ → /'ɔ:ɫ/



Note. Both of the phonemes /l/ and /ɫ/ share most of DFs as shown above in the environment, except the following DF: [+ coronal] becomes [– coronal].

3- Shortening

Shortening is a process in which long phonemes are shortened (Labov, Ash & Boberg, 2006, p. 292). This process is the opposite of lengthening.

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

bekām /be'kæ:m/ “how much”

- 1- **Source of the Word:** YouTube channel (Sameh Mohamed, 2021, minute 05:15).
- 2- **Social Background of the Speaker:** male – 20s – Bedouin – Egyptian – student – an owner of a YouTube channel.
- 3- **Place of Birth:** Al Arēsh city, Governorate of North Sinai (far North-East).
- 4- **Before Applying Shortening:** بكام /be'kæ:m/ (Spiro, 1999, p. 507).
- 5- **After Applying Shortening:** بكم /'ba.kam/.

- 6- **Grammatical Category:** Interrogative quantifier (Hinds & Badawi, 1986, p. 762).
- 7- **Meaning:** how much (Spiro, 1999, p. 507).
- 8- **Original Sentence:** " أول حاجة أتعلمها في الاسماعيليه إن عمرك ما تروح تشتري حاجة و تقول بكم هادي؟ .. إسمها بكام دي "
 /ʔa'wel hæ:'ʒa ʔet.ʕal'lamha fi ʔel es.ma:ʕi.li.j'ja ʔen ʕom'rak ma
 'tru:h 'teʃ.te.ri hæ:'ʒa wet'ʔu:l 'ba.kam 'ha:.di ? .. ʔes'ma.ha be'kæ:m
 di/
 "The first thing you should learn in El Ismailia is that when you buy something never say "Bakam Haady" "How much is this" in North Sinai Dialect, it is "Bekām Di" "How much is this" in Cairene Dialect" (Sameh Mohamed, 2021, minutes 05:11-05:17).
- 9- **Dialect Background:** Based on the data of Behnstedt and Woidich (2021, Vol. IV), shortening is characterized, for instance, in the word *bekām* /'ba.kam/. This word is common in North Sinai, as in Rmēliy and Swērkiy tribes (p. 154). Based on the observation of the study, some native people of North Sinai, far north-east region, tend to shorten vowels in everyday language. The same example is presented by another participant in Al Arēsh city, the word *bekām* /be'kæ:m/ is uttered as /'ba.kam/ (Bēt Al Mashāwy Al Turkey, 2020, minute 01:26). This participant is a male, 20s, Bedouin, Egyptian, educated, and owner of a YouTube channel.

American English (AE)

pecan /pi'ka:n/

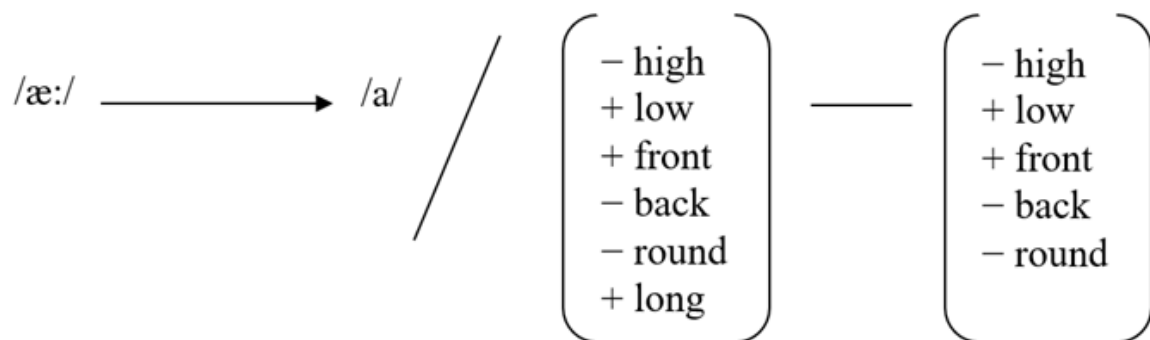
- 1- **Source of the Word:** YouTube channel (Tonys Channel, 2013, minute 01:16).
- 2- **Social Background of the Speaker:** male – 30s – Hispanic – American – educated – Graphic designer on his YouTube channel.
- 3- **Place of Birth:** Mexico City – South America, moved to the U.S. at the age of 4, lives in State of California (West), see Appendix F.
- 4- **Before Applying Shortening:** *pecan* /pi'ka:n/ (Cambridge Dictionary of American English, 2008, p. 631).
- 5- **After Applying Shortening:** *pecan* /pi'ken/.
- 6- **Grammatical Category:** noun (Cambridge Dictionary of American English, 2008, p. 631).
- 7- **Meaning:** an edible nut with a smooth shell (Cambridge Dictionary of American English, 2008, p. 631).

- 8- **Original Sentence:** “water, New Orleans, pecan” (Tonys Channel, 2013, minutes 01:14-01:16).
- 9- **Dialect Background:** Based on the data of Labov, Ash, and Boberg (2006), Inland, Midland, and north-west, small concentrations in south-west, i.e., California, small concentrations in north-east, i.e., central New York have shortening. For example, the word *roof* /'ru:f/ in these regions is pronounced as /'ruf/ (p. 292). As a result, the long close back rounded vowel /u:/ changes to be the short close back rounded vowel /u/. Based on the observation of the study, some native people of Colorado and California; west region tend to shorten vowels in everyday language. For instance, in California, south-west region, the word *ether* /'i:θər/ (Cambridge Dictionary of American English, 2008, p. 285) is articulated as /'e.ðər/ (Marshall, 2015, minute 01:34). Therefore, the close front rounded vowel /i:/ is shortened to be the close-mid front rounded vowel /e/ in the first syllable. This participant is a female, 16, Cherokee-Comanche, Guatemalan, American, 11th grade in high school, student, and she is born in Torrance city.

Section B: Phonological Analysis: In EA, the near-open front unrounded vowel /æ:/ is shortened to be the open front unrounded vowel /a/ in the second syllable of the word *bekām* /be'kæ:m/. Thus, /be'kæ:m/ becomes /'ba.kam/. Likewise, in AE, the open back unrounded vowel /ɑ:/ is shortened to be the close-mid front unrounded vowel /e/ in the second syllable of the word *pecan* /pɪ'ka:n/. Accordingly, /pɪ'ka:n/ changes to be /'pɪ.ken/. Consequently, both words are related to shortening process. Based on GP, consider the following Figures 10, 11, and 12 on the selected dialects. The DFs are adopted from Hayes (2009, pp. 98):

Figure 10

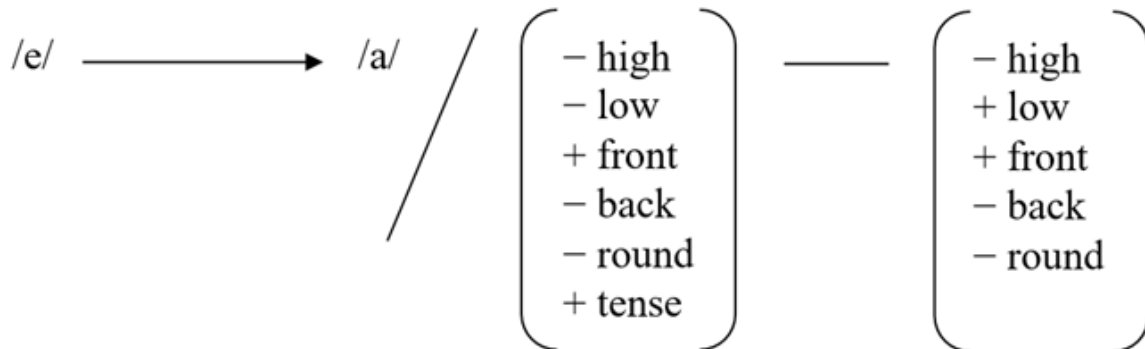
Shortening Rule on the word bekām /be'kæ:m/ → /'ba.kam/



Note. The vowel /æ:/ has several DFs as displayed above in the environment before /a/, but when it is shortened to the vowel /a/, it shares all the DFs of the vowel /æ:/ except [+ long]. Due to the complication of utterance of the word *bekām* /be'kæ:m/, the vowel /e/ in the first syllable in /be'kæm/ is lowered to be the vowel /a/; /'ba.kam/. The following Figure 11 represents this change:

Figure 11

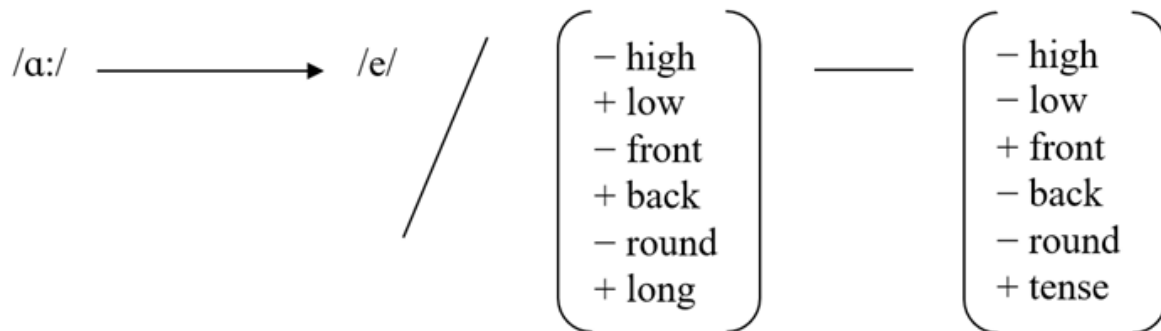
Lowering Rule on the word bekām /be'kæ:m/ → /'ba.kam/



Note. The vowel /e/ has several DFs as shown above in the environment before /a/, but when it is lowered to /a/, it shares most of the DFs of the vowel /e/ except [+ low] and [+ tense] as displayed above in the environment after /e/.

Figure 12

Shortening Rule on the word pecan /pɪ'ka:n/ → /'pɪ.ken/



Note. The vowel /ɑ:/ has several DFs as represented above in the environment before /e/, but when it is shortened to /e/, it shares some of the DFs of the vowel /ɑ:/ except [- low], [+ front], [- back], and [+ tense] as shown above in the environment after /ɑ:/.

4- Lengthening

Lengthening is a process in which short vowels are lengthened (Wolfram & Johnson, 1982, p. 34).

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

'andena /ʕan'de.na/ "we have"

- 1- **Source of the Word:** YouTube channel (Al Nag'aweya, 2019, minute 00:39).
- 2- **Social Background of the Speaker:** male – 40s – Egyptian – unknown education – farmer.
- 3- **Place of Birth:** Nag' Hammadi city, Governorate of Qena (South).
- 4- **Before Applying Lengthening:** عندنا /ʕan'de.na/ (Hinds & Badawi, 1986, p. 605).
- 5- **After Applying Lengthening:** عندينا /ʕen'di:.na/.
- 6- **Grammatical Category:** adverb (Hinds & Badawi, 1986, p. 604).
- 7- **Meaning:** we have (Hinds & Badawi, 1986, p. 605).
- 8- **Original Sentence:** " جصب نجع حمادي عندينا هنا مفيش تاني " /'gɑ.sab 'nagʕ ham'ma:.di ʕen'di:.na 'he.na ma'fi:ʃ 'ta:.ni/ "The sugar cane of Nag' Hammadi that we have here has no competitive" (Al Nag'aweya, 2019, minutes 0:37-0:40).
- 9- **Dialect Background:** Based on the data of Woidich (2007), he interviewed a participant whose name is Muḥammad, 35, Bedouin, Egyptian, educated, teacher, farmer, and he is born in Ilbašandi village, El Dakhla Oasis, Western Desert, Giza, south region. For example, he utters the word *dakatra* /da'kat.ra/ (as translated and transliterated in Spiro, 1999, p. 203) as /da.kæ:'tra/ (p. 150). Therefore, the open front unrounded vowel /a/ in the second syllable is lengthened to be the near-open front unrounded vowel /æ:/. Based on the observation of the study, some native people of Suhag, Luxor, Aswan, and Red Sea; UE region, El Fayoum; north-mid region tend to lengthen vowels in everyday language. For instance, in El Sagīfa, Quseir city, Red Sea, south region, the preposition *mennaha* /men'naha/ "from it" (as translated and transliterated in Hinds & Badawi, 1986, p. 834) is pronounced as /men'ni:ha/ (Mahmoud Nagy, 2019, minute 03:45). Thus, the open front unrounded vowel /a/ in the second syllable is lengthened to be the close front unrounded vowel /i:/. This participant is a male, 70s, Egyptian, unknown education, retired from a phosphate company and worked as a fisherman.

American English (AE)

egg /'eg/

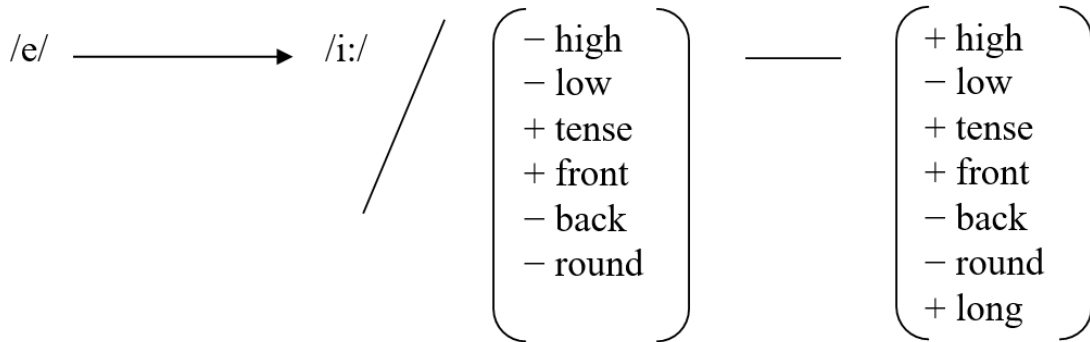
- 1- **Source of the Word:** YouTube channel (Condé Nast Traveler, 2019, minute

- 03:13).
- 2- **Social Background of the Speaker:** male – 40s – Caucasian – American – educated – unknown employment.
 - 3- **Place of Birth:** State of Wisconsin (North-Central).
 - 4- **Before Applying Lengthening:** egg /'eg/ (Cambridge Dictionary of American English, 2008, p. 268).
 - 5- **After Applying Lengthening:** egg /'i:g/.
 - 6- **Grammatical Category:** noun (Cambridge Dictionary of American English, 2008, p. 268).
 - 7- **Meaning:** an oval, rounded object with a hard shell produced by female birds and female reptiles (Cambridge Dictionary of American English, 2008, pp. 268-269).
 - 8- **Original Sentence:** “I have some iggs an’ a pig” (Condé Nast Traveler, 2019, minutes 03:12-03:14).
 - 9- **Dialect Background:** Based on the data of Berkovits (1993), lengthening has the strongest effect on the final syllable, and it gradually decreases towards the beginning of the word. This lengthening of final syllables is restricted to vowels and any following fricative consonant (pp. 481, 486). Based on the observation of the study, some native people of Colorado and Wyoming; west region tend to lengthen vowels in everyday language. For example, in Colorado, mid-west region, the word *expensive* /ɪk'spen.sɪv/ (Cambridge Dictionary of American English, 2008, p. 293) is articulated as /ɪk.spen'si:v/ (Sortore, 2012, minute 02:31). Accordingly, the near-close near-front unrounded vowel /ɪ/ in the third syllable changes to be the close front unrounded vowel /i:/. This participant is a female, 79, Caucasian, American, high school, a business course, a housewife, and she is born in Rocky Ford city.

Section B: Phonological Analysis: In EA, the short close-mid front unrounded vowel /e/ is lengthened to be the long close front unrounded vowel /i:/ in the second syllable of the word *'andena* /ʕan'de.na/. Consequently, /ʕan'de.na/ becomes /ʕen'di:.na/. Likewise, in AE, the short close-mid front unrounded vowel /e/ is lengthened to be the long close front unrounded vowel /i:/ in the word *egg* /'eg/. Hence, /'eg/ changes to be /'i:gz/. As a result, both words are related to lengthening process. Based on GP, consider the following Figures 13 and 14 on the selected dialects. The DFs are adopted from Hayes (2009, p. 98):

Figure 13

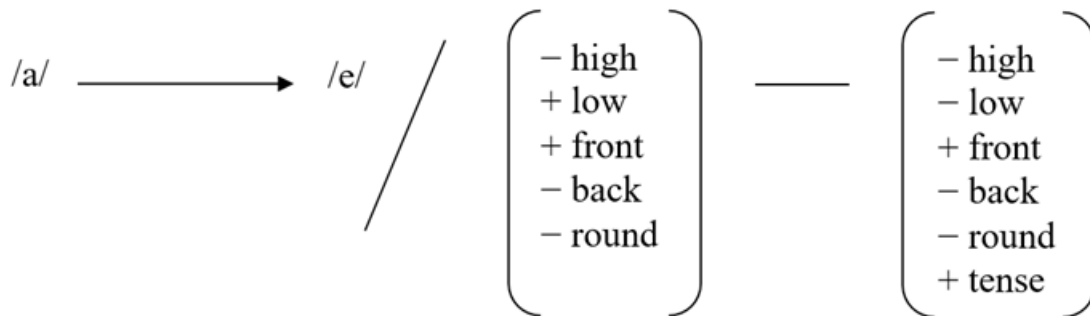
Lengthening Rule on the words ‘andena /ʕan'de.na/ → /ʕen'di:.na/ and egg /'eg/ → /'i:g/



Note. The vowel /e/ has several DFs as shown above in the environment before /i:/, but when it is lengthened to /i:/, it shares all the DFs of the vowel /e/ except [+ high] and [+ long] as shown above in the environment after /e/. Due to the complication of utterance of the word ‘andena /ʕan'de.na/, the open front unrounded vowel /a/ in the first syllable in /ʕan'de.na/ is raised to be the close-mid front unrounded vowel /e/, i.e., /ʕen'di:.na/. The following Figure 14 displays this change:

Figure 14

Vowel Raising on the word ‘andena /ʕan'de.na/ → /ʕen'di:.na/



Note. The vowel /a/ has several DFs as displayed above in the environment before /e/, but when it is raised to /e/, it shares all the DFs of the vowel /a/ except [− low] and [+ tense] as represented above in the environment after /a/.

5- Lenition

Lenition is a process which means weakening, i.e., it refers to a reduction in the degree of openness in an articulation of a sound (Jensen, 2004, p. 56). This process is the opposite of fortition.

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

delwa'ti /del'waʔ.ti/ “now”

- 1- **Source of the Word:** YouTube channel (Al Nahar TV, 2018c, minute 08:51).
- 2- **Social Background of the Speaker:** female – 30s – Egyptian – unknown education – sweets factory worker.
- 3- **Place of Birth:** Governorate of Damietta (North-East Delta).
- 4- **Before Applying Lenition:** دلوقتي /del'waʔ.ti/ (Spiro, 1999, p. 647).
- 5- **After Applying Lenition:** إلوقتي /ʔel'waʔ.ti/.
- 6- **Grammatical Category:** adverb (Hinds & Badawi, 1986, p. 950).
- 7- **Meaning:** now (Spiro, 1999, p. 647).
- 8- **Original Sentence:** " طب استورجي شغلانه كويسه ! .. لأماعدتش كويسه في البلد (تقصد دمياط) اللي احنا فيها الوقتي يعني بصراحه " /'tab ʔos'tor.gi ʃoɣ'la:.na kwaj'je.sa ! .. laʔ ma.ʕa'detʃ kwaj'je.sa fil 'ba.lad ʔel'e.ħna 'fa.ha ʔel'waʔ.ti 'jaʕ.ni 'bsa.ra:.ħa/ “Wood painter is a good job ! .. No, it is not good any more in this country (she means Damietta) right now” (Al Nahar TV, 2018c, minutes 08:48-08:53).
- 9- **Dialect Background:** Based on the data of Woidich (1996), native people of north-east Delta tend to use lenition in everyday language, as in the word *delwa'ti* /ʔel'waʔ.ti/ (p. 14). The observation of the study is the same. The same example is presented by another participant in Port Said, north-east Delta region, the word *delwa'ti* /del'waʔ.ti/ is pronounced as /ʔel'waʔ.ti/ (Al Nahar TV, 2018b, minute 11:01). This participant is a female, 50s, Egyptian, educated, plays El Semsemiya musical instrument, and an employee.

American English (AE)

mountain /'maʊnt.ən/

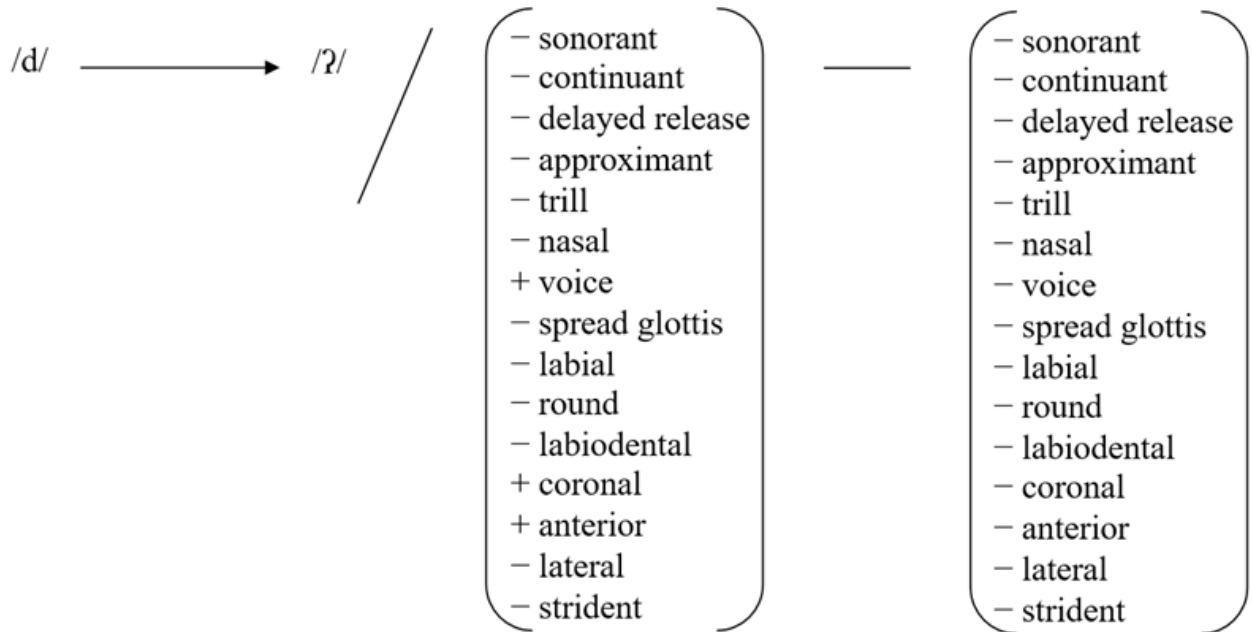
- 1- **Source of the Word:** YouTube channel (Güera's World, 2016, minute 00:32).
- 2- **Social Background of the Speaker:** female – 20s – Caucasian – American – educated – owner of a YouTube channel.
- 3- **Place of Birth:** State of Utah (West).
- 4- **Before Applying Lenition:** mountain /'maʊnt.ən/ (Cambridge Dictionary of American English, 2008, 561).
- 5- **After Applying Lenition:** mountain /'maʊnʔ.ən/.
- 6- **Grammatical Category:** noun (Cambridge Dictionary of American English, 2008, 561).

- 7- **Meaning:** a raised part of the earth's surface which is larger than a hill (Cambridge Dictionary of American English, 2008, 561-562).
- 8- **Original Sentence:** "I'm from Utah, so I have what we call Utah accent like you say Mountain Brighton Layton like you don't pronounce T's and some stuff" (Güera's World, 2016, minutes 00:26-00:36).
- 9- **Dialect Background:** Based on the data of Eddington and Savage (2012), native people of Utah, west region, tend to use lenition in everyday language. The consonant /t/ is dropped in words like *kitten* /'kɪt.ən/ to be /kɪ'ʔən/ and *mountain* /'maʊnt.ən/ to be /'maʊnʔ.ən/. The observation of the study is the same. The same example is presented by another participant in Utah, the word *mountain* /'maʊnt.ən/ is articulated as /'maʊnʔ.ən/ (Graham, 2010, minute 03:38). This participant is a female, 19, Caucasian, American, educated, college student, and she is born in Salt Lake City.

Section B: Phonological Analysis: In EA, the alveolar consonant /d/ is lenitioned to be the glottal plosive /ʔ/ in the first syllable of the word *delwa'ti* /del'waʔ.ti/. Therefore, /del'waʔ.ti/ changes to be /ʔel'waʔ.ti/. Similarly, in AE, the alveolar plosive /t/ is lenitioned to be the glottal plosive /ʔ/ in the first syllable of the word *mountain* /'maʊnt.ən/. Thus, /'maʊnt.ən/ becomes /'maʊnʔ.ən/. Accordingly, both words belong to lenition process. Based on GP, consider the following Figures 15 and 16 on the selected dialects. The DFs are adopted from Chomsky and Halle (1991, pp. 307, 413), and Hayes (2009, pp. 95, 96):

Figure 15

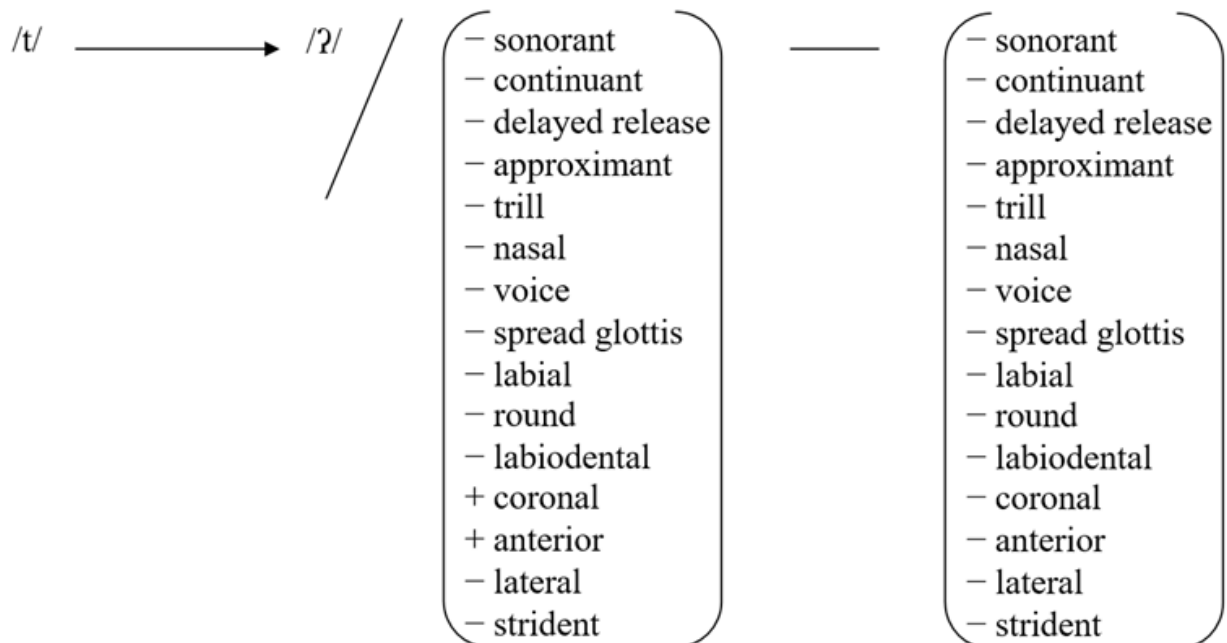
Lenition Rule on the word delwa'ti /del'waʔ.ti/ → /ʔel'waʔ.ti/



Note. The consonant /d/ has several DFs as represented above in the environment before /ɖ/, but when it changes to be the consonant /ɖ/, it shares most DFs of /d/ as shown above in the environment after /d/ except the following: [- voice], [- coronal], and [- anterior].

Figure 16

Lenition Rule on the word mountain /'maʊnt.ən/ → /'maʊnɖ.ən/



Note. The consonant /t/ has several DFs as displayed above in the environment before /ɖ/, but when it becomes the consonant /ɖ/, it shares most DFs of /t/ as represented above in the environment after /t/ except the following: [- coronal] and [- anterior].

6- Fortition

Fortition is a process in which effort in pronunciation increase (Labov, 2010, p. 7).

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

gamīla /ga'mi:.la/ “beautiful”

1- **Source of the Word:** YouTube channel (VideoYoum7, 2021, minute 00:38).

2- **Social Background of the Speaker:** female – 30s – Egyptian – unknown education – unknown employment.

3- **Place of Birth:** 'Al Ashrāf city, Governorate of Aswan (South).

4- **Before Applying Fortition:** جميلة /ga'mi:.la/ (Hinds & Badawi, 1986, p. 172).

5- **After Applying Fortition:** چميلة /ʒa'mi:.la/.

6- **Grammatical Category:** adjective (Hinds & Badawi, 1986, p. 172).

7- **Meaning:** beautiful (Hinds & Badawi, 1986, p. 172).

8- **Original Sentence:** " طبعاً هي القرية ديتي مش كانت كده، القرية ديتي عدلوها واخلوها " جميله خالص. الجامع طوروه مش كان كده، أنا دلوجتي لما يكون وجت فاضي معايا بجيب اطفالى وعيالي و كلهم واطفال الجيران كله بناجى نلعب هنا يعني الصراحه مكان خلوه جميل جميل صح " /'tab.ʃan hej'ja ʔel qar'ja 'de.ti 'meʃ kæ:'net 'ke.da, ʔel qar'ja 'de.ti ʃa.de.lo'hal.na we xal.lo'hal.na ʒa'mi:.la xa:'les ʔeʒ'za:.meʃ ta.wa'ru:h meʃ 'kan 'ke.da, 'ʔa.na del'wag.ti lam'ma je'ku:n 'wagt 'fa:.di ma.ʃa:'ja ba'zi:b ʔat'fa:li we ʃe'ja:.li we kol'lo.hom we ʔat'fa:l ʔeʒ'ze.ra:n kol'lo 'bna:zi 'nel.ʃab 'he.na 'jaʃ.ni ʔes'sa.ra:ħa ma'ka:n xal'lo:h ʒa'mi:.l ʒa'mi:.l saħ/

“Of course, this village did not look like this before. They transformed it to us to a very beautiful place. They improved the building of the mosque. If I have a spare time, I would come, bring my children, and the neighbors’ children, and we would play here” (VideoYoum7, 2021, minutes 00:32-00:51).

9- **Dialect Background:** Based on the data of Woidich (1996), native people of UE, east Delta, west Delta, and WDO, tend to use fortition in everyday language. For example, *gamal* /'ga.mal/ “camel” is pronounced as /'ʒa.mal/ or /'dʒa.mal/ (p. 7). Based on the observation of the study, some native people of Bani Suef, Suhag, Luxor, Marsa 'Alam and Halayeb in Red Sea; south region, El Sharqia, Kafr El Sheik, El Gharbia, El Menoufia, Alexandria, El Beheira, Giza; Delta region, El Dakhla Oasis; WDO region, Marsa Matruh; far north-west region, and North Sinai; far north-east region

tend to use fortition in everyday language. For instance, in Esna city, Luxor, south region, the word *gadīd* /gi'di:d/ “new” (as translated and transliterated in Hinds & Badawi, 1986, p. 150) is articulated as /za'di:d/ (Muḥammad El Mat'ny 2, 2021, minute 03:25). This participant is a male, 60s, Egyptian, educated, and school principal.

American English (AE)

Mrs. /'mɪs.əz/

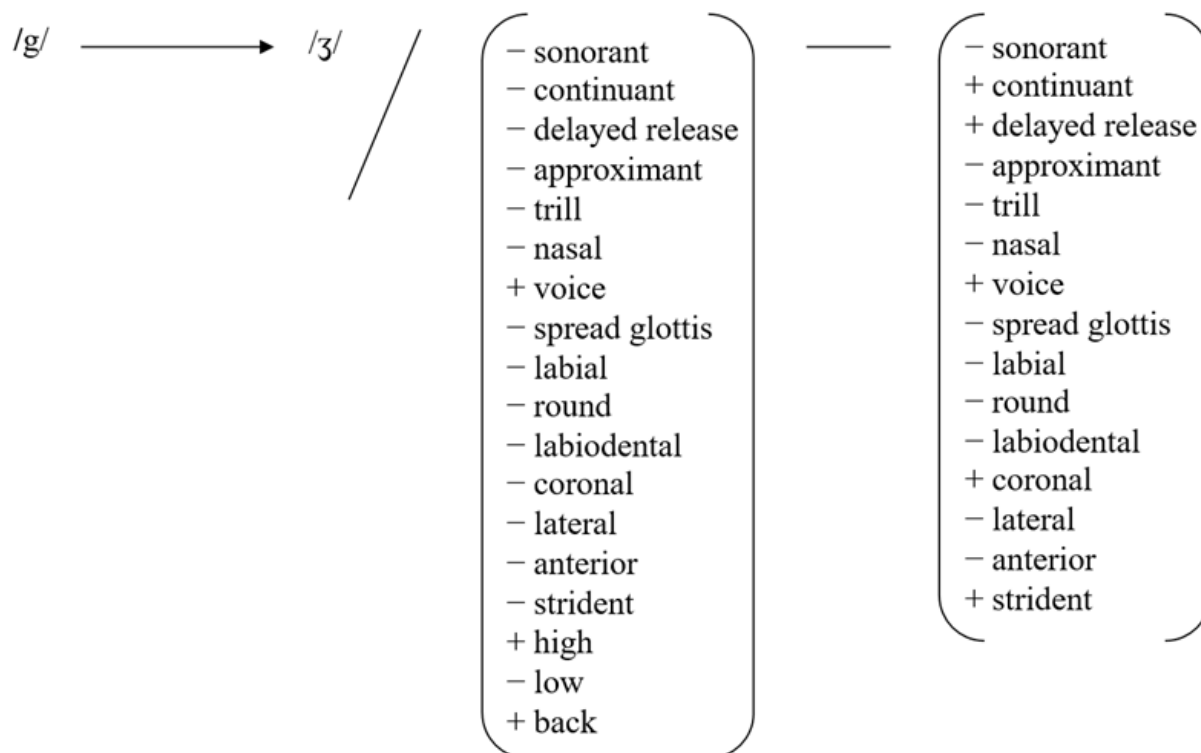
- 1- **Source of the Word:** IDEA website (Meier, 2000, minute 02:11).
- 2- **Social Background of the Speaker:** male – 43 – Caucasian – American – educated – hospitality manager.
- 3- **Place of Birth:** Savannah city, State of Georgia (South-East).
- 4- **Before Applying Fortition:** *Mrs.* /'mɪs.ɪz/ (Longman Dictionary of American English, 2009, p. 661).
- 5- **After Applying Fortition:** *Mrs.* /'mɪz.əz/.
- 6- **Grammatical Category:** noun (Cambridge Dictionary of American English, 2008, p. 563).
- 7- **Meaning:** a title used before a married woman's family to be polite when you are speaking to her (Longman Dictionary of American English, 2009, p. 661).
- 8- **Original Sentence:** “But Mrs. Harrison, a millionaire's lawyer, thought it was a fair price for a cure.” (Meier, 2000, minutes 02:11-02:16).
- 9- **Dialect Background:** Based on the data of Hargrave, Southall, and Walker (2022), southwest Virginians, in south-east region, tend to use fortition in everyday language. To demonstrate, southern voiced consonants are evident in southwest Virginia than other regional U.S. dialects, i.e., word-final /s/ is voiced to be /z/. Based on the observation of the study, some native people of Alabama; south-east region tend to use fortition in everyday language. For example, in Alabama, the word *face* /'feɪs/ (Longman Dictionary of American English, 2009, p. 360) is uttered as /'feɪz/ (Hague, 2007, minute 00:43). This participant is a male, 24, African American, college student, member of the Army National Guard, and he is born in Birmingham city.

Section B: Phonological Analysis: In EA, the velar plosive /g/ is fortitioned to be the postalveolar consonant /ʒ/ in the first syllable of the word *gamīla* /ga'mi:.la/. Consequently, /ga'mi:.la/ changes to be /za'mi:.la/. Likewise, in AE, the alveolar fricative /s/ is fortitioned to be the alveolar fricative /z/ in the first syllable of the word *Mrs.* Hence, /'mɪs.ɪz/ becomes

/ˈmiz.iz/. As a result, both words belong to fortition process. Based on GP, consider the following Figures 17 and 18 on the selected dialects. The DFs are adopted from Chomsky and Halle (1991, pp. 307, 413), and Hayes (2009, pp. 95, 96):

Figure 17

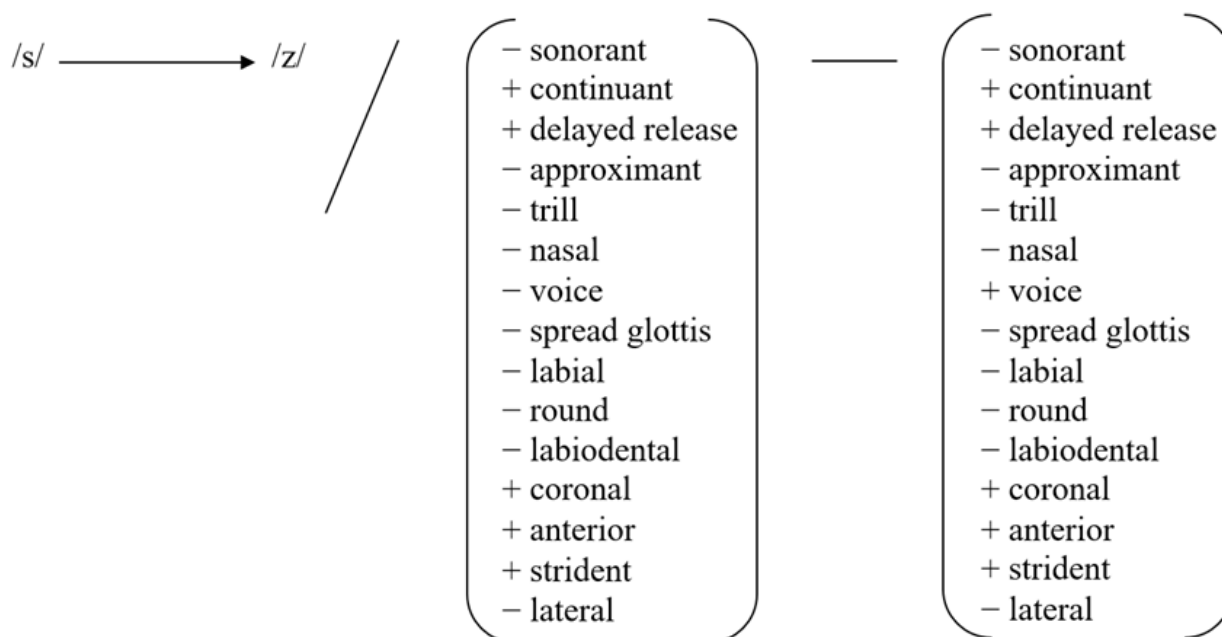
Fortition Rule on the word gamīla /gaˈmiː.la/ → /ʒaˈmiː.la/



Note. The consonant /g/ has several DFs as displayed above in the environment before /ʒ/, but when it changes to be the consonant /ʒ/, it shares most of DFs of /g/ as represented above in the environment after /g/ except the following: [+continuant], [+delayed release], [+coronal], [+strident], [+high], [-low], and [+back].

Figure 18

Fortition Rule on the word Mrs. /ˈmis.əz/ → /ˈmiz.əz/



Note. The consonant /s/ has several DFs as shown above in the environment before /z/, but when it becomes the consonant /z/, it shares most of DFs of /s/ as displayed above in the environment after /s/ except [+ voice].

7- Regressive Assimilation

Regressive assimilation is a process in which a following sound has an effect on a preceding one. Hence, assimilation is a sound that changes to take on the characteristics of a neighboring sound, whether a preceding or a following sound (Wolfram & Johnson, 1982, pp. 88, 90).

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

mustashfa /mus'taf.fah/ "hospital"

- 1- **Source of the Word:** YouTube channel (Al Nahar TV, 2018a, minute 17:45).
- 2- **Social Background of the Speaker:** female – 50s – Egyptian – uneducated – bread baker.
- 3- **Place of Birth:** Governorate of El Minya (South).
- 4- **Before Applying Regressive Assimilation:** مستشفى /mus'taf.fah/ (Spiro, 1999, p. 317).
- 5- **After Applying Regressive Assimilation:** مششفي /mʊf'taf.fah/.
- 6- **Grammatical Category:** noun (Hinds & Badawi, 1986, p. 470).
- 7- **Meaning:** hospital (Spiro, 1999, p. 470).
- 8- **Original Sentence:** " أنا أديلي أريج سنين أما انزف مش جادته أعمل الرحم .. أروح فين المششفي أتالجح و معايا واحده مواكله ما تعرفش حاجه ! "

/ʔa.na ʔadi.li ʔar'baħ se'ni:n ʔam'ma an'zef meʃ 'ga.dra aʃ'mel
er'ra.ħem .. ʔa.ro:ħ 'fe:n ʔel moʃ'taʃ.fah ʔat.la'gaħ we ma.ʃa:'ja waħ'da
mwa'ke.la ma.teʃ'refʃ 'ħe.za/

"I am waiting for the last four years to do a medical operation to my uterine as I am bleeding, and I cannot afford it..but how can I stay in the hospital and I am responsible for a woman in my family who cannot work for a living !" (Al Nahar TV, 2018a, minutes 17:40-17:48).

- 9- **Dialect Background:** Based on the data of Woidich (1996), native people of El Sharqia, parts of El Beheira, north west of El Menoufia, and northern Giza tend to use regressive assimilation in everyday language. For example, *itghasal* /it'ya.sal/ "it was washed" is uttered as /in'ya.sal/ (p. 12). Accordingly, the alveolar plosive /t/ is affected by the following consonant which is the velar fricative /ɣ/, consequently, /t/ assimilates to /ɣ/, and it becomes the alveolar nasal /n/. Based on the observation of the study, some native people of UE, Delta, and far north-west tend to assimilate consonants in everyday language. The same example is presented by another participant in Tema city, Suhag, south region, the word *mustashfa* /mos'taʃ.fah/ is uttered as /moʃ'taʃ.fah/ (Al Hayah TV Network, 2015, minute 09:30). This participant is a male, 40s, Egyptian, unknown education, and unknown employment.

American English (AE)

street /'stri:t/

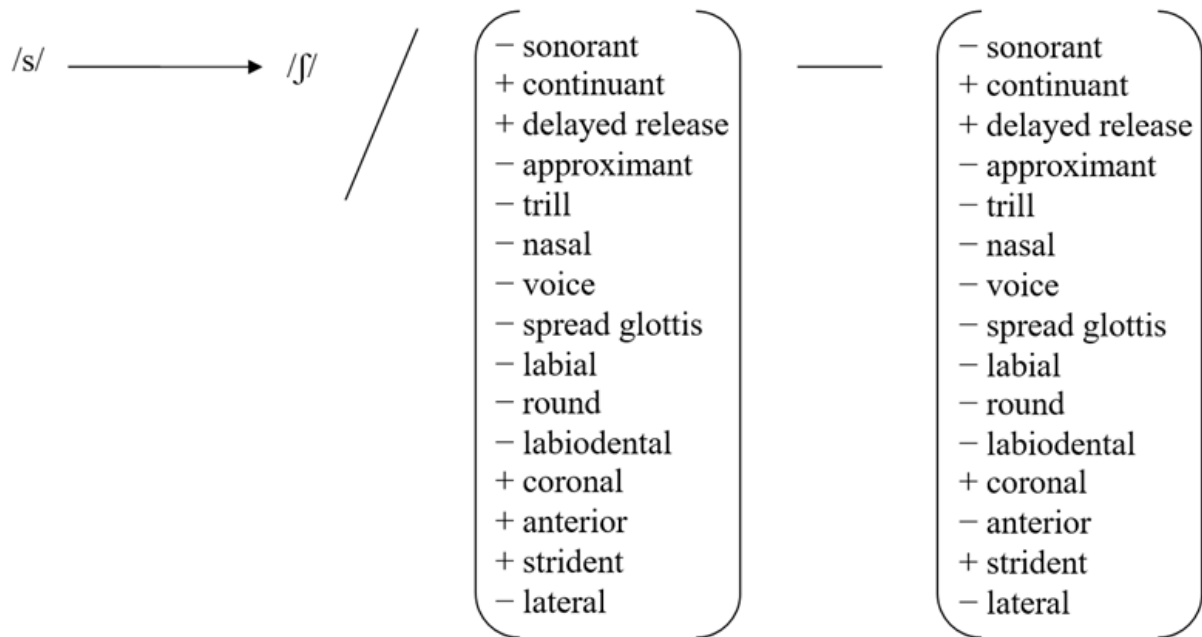
- 1- **Source of the Word:** IDEA website (McNish, 2017, minute 00:29).
- 2- **Social Background of the Speaker:** female – 24 – Caucasian – American – educated – massage therapist.
- 3- **Place of Birth:** Fort Morgan city, State of Colorado (Mid-West).
- 4- **Before Applying Regressive Assimilation:** *street* /'stri:t/ (Cambridge Dictionary of American English, 2008, p. 865).
- 5- **After Applying Regressive Assimilation:** *street* /'ʃtri:t/.
- 6- **Grammatical Category:** noun (Cambridge Dictionary of American English, 2008, p. 865).
- 7- **Meaning:** a road in a city or town, usually with buildings along one or both sides (Cambridge Dictionary of American English, 2008, p. 865).
- 8- **Original Sentence:** "So she was very happy to start a new job at a suburb private practice in north square near the Duke Shtreet Tower" (McNish, 2017, minutes 00:23-00:30).

- 9- **Dialect Background:** Based on the data of Shapiro (1995), native people of New York, New Jersey, and Washington, DC; north-east region, Louisiana and Alabama; south-east region, California; west region, tend to use regressive assimilation in everyday language. For instance, *strength* /'strenθ/ (Cambridge Dictionary of American English, 2008, p. 865) is pronounced as /'ʃtrenθ/ and *industry* /'m.də.stri/ (Cambridge Dictionary of American English, 2008, p. 444) is articulated as /'m.də.ʃtri/ (pp. 101-102). Based on the observation of the study, some native people of Michigan; north-central region, South Carolina; south-east region, Kansas, Colorado, and Washington; west region tend to assimilate consonants in everyday language. For example, in Michigan, north-central region, the word *strut* /'strʌt/ (Cambridge Dictionary of American English, 2008, p. 869) is uttered as /'ʃtrʌt/ (Espinosa, 2004, minute 01:06). This participant is a male, 20, African American, educated, college student, and he is born in Detroit city.

Section B: Phonological Analysis: In EA, the alveolar fricative /s/ in the first syllable is assimilated to the following cluster /taʃ/ in the second syllable of the word *mustashfa* /mʊs'taʃ.fah/. As a result, it changes to be the postalveolar fricative /ʃ/. Therefore, /mʊs'taʃ.fah/ becomes /mʊʃ'taʃ.fah/. Similarly, in AE, the alveolar fricative /s/ in the word *street* /'stri:t/ assimilates to the following cluster /tr/, and it changes to be the postalveolar fricative /ʃ/. Thus, /'stri:t/ becomes /'ʃtri:t/. Accordingly, both words are related to regressive assimilation process. Based on GP, consider the following Figure 19 on the selected dialects. The DFs are adopted from Chomsky and Halle (1991, pp. 307, 413), and Hayes (2009, p. 95):

Figure 19

Regressive Assimilation Rule on the words mustashfa /mʊs'taʃ.fah/ → /mʊʃ'taʃ.fah/ and *street* /'stri:t/ → /'ʃtri:t/



Note. The consonant /s/ has several DFs as represented above in the environment before /ʃ/, but when it changes to be the consonant /ʃ/, it shares most of DFs of /s/ as shown above in the environment after /s/ except [–anterior].

8- Insertion

Insertion or epenthesis is a process in which a segment whether vowel or consonant is inserted into a word (Wolfram & Johnson, 1982, p. 98). A segment is added to a form in order to facilitate pronunciation (Jensen, 2004, p. 57).

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

betā /be'tæ:ʕ/ “indicate possession: of”

- 1- **Source of the Word:** YouTube channel (Garēdat Al Badēl, 2014, minute 01:15).
- 2- **Social Background of the Speaker:** male – 40s – Egyptian – unknown education – unknown employment.
- 3- **Place of Birth:** Governorate of Suhag (South).
- 4- **Before Applying Insertion:** بتاع /be'tæ:ʕ/ (Spiro, 1999, p. 31).
- 5- **After Applying Insertion:** إبتاع /ʔeb'tæ:ʕ/.
- 6- **Grammatical Category:** In construct (Hinds & Badawi, 1986, p. 51).
- 7- **Meaning:** the property of (Spiro, 1999, p. 31).
- 8- **Original Sentence:** "من أولة إمبراح لحد الصبح نزل السيل مفيشي مسؤول دخل الشارع إبتاع مخر السيول"

/men 'ʔaw.we.let em'ba:reħ la'ħad ʔes'sobħ 'ne.zel ʔes'se:jl ma'fi.ʃi
mas'ʔu:l da'xal ʔeʃ'ʃæ:reʃ ʔeb'tæ:ʃ ma'xar ʔes'se.ju:l/

“The flood came down from the day before yesterday up till the morning. No official came to see the street of floods stream” (Garēdat Al Badēl, 2014, minutes 01:10-01:16).

- 9- **Dialect Background:** Based on the data of Woidich (1996), native people, as in El Sharqia; north-east Delta region, and south of Assiut; south region, tend to use insertion in everyday language. For instance, the word *hināk* /'hi.na:k/ “there” (as translated and transliterated in Hinds & Badawi, 1986, p. 913) is uttered as /ʔeh'na:k/ (p. 9). Based on the observation of the study, some native people of Suhag, Qena, and Luxor; UE, and Marsa Matruh; far north-west region tend to insert consonants in everyday language. For example, in Al Bayadiya city, Luxor, south region, the word *leghāyet* /le'ya:jet/ “as far as” (as translated and transliterated in Spiro, 1999, p. 425) is pronounced as /ʔel'ya:jet/ (Al Qanāh Al Thāmena. Al Telefezyōn Al Masri, 2016, minute 01:34). This participant is a male, 50s, Egyptian, educated, and unknown employment.

American English (AE)

porridge /'pɔ:r.ɪdʒ/

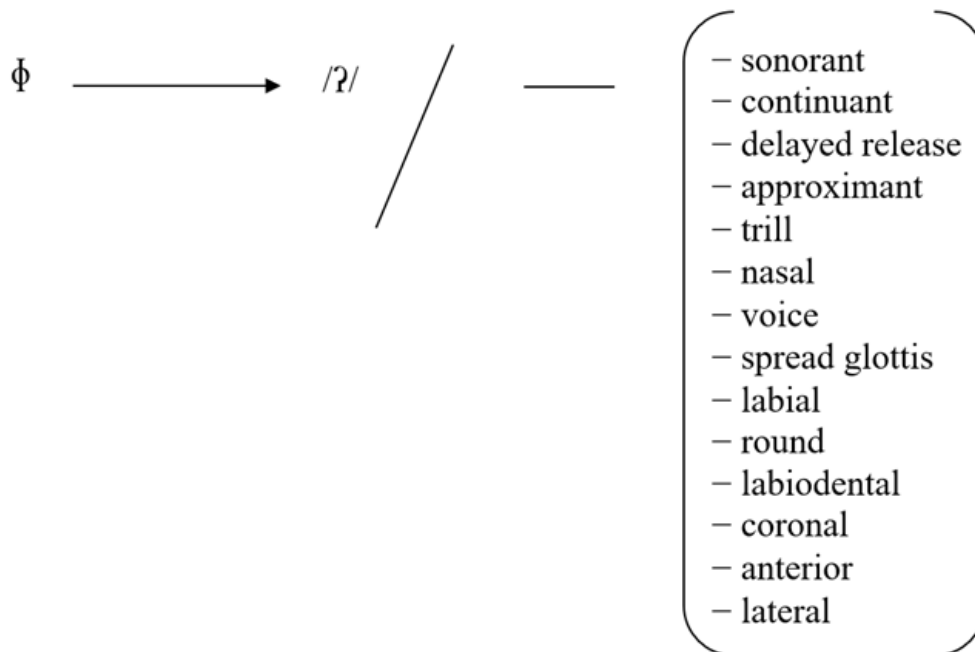
- 1- **Source of the Word:** IDEA website (Parker, 2005, minute 00:38).
- 2- **Social Background of the Speaker:** female – 25 – African American – educated – computer operator.
- 3- **Place of Birth:** Columbia city, State of South Carolina (South-East).
- 4- **Before Applying Insertion:** *porridge* /'pɔ:r.ɪdʒ/ (Cambridge Dictionary of American English, 2008, p. 662).
- 5- **After Applying Insertion:** *porridge* /pɔ:rt'ɪdʒ/.
- 6- **Grammatical Category:** noun (Cambridge Dictionary of American English, 2008, p. 662).
- 7- **Meaning:** a thick soft food made from oats (Cambridge Dictionary of American English, 2008, p. 662).
- 8- **Original Sentence:** “Even so on her first morning she felt stressed, she ate a bowl of porridge, checked herself in the mirror, and washed her face in a hurry” (Parker, 2005, minutes 00:34-00:43).
- 9- **Dialect Background:** Based on the data of Labov (2010), native people of Mid-Atlantic, i.e., New Jersey, New York, and Pennsylvania; north-east region tend to use /r/-insertion. For instance, the word *autistic* is articulated as *artistic*. Furthermore, native people of Midland region, i.e., Missouri and

Kansas tend to use /r/-insertion. For example, *Aubie's* is uttered as *Arbie's* (p. 44). Based on the observation of the study, some native people of South Carolina; south-east region tend to insert consonants in everyday language. The same example is presented by another participant in South Carolina, south-east region, the word *porridge* /'pɔ:r.ɪdʒ/ is pronounced as /pɔ:rt'ɪdʒ/ (Angland & Tobolski, 2005, minute 00:44). This participant is a female, 78, Caucasian, American, high school diploma, retired, and she is born in Leesville town.

Section B: Phonological Analysis: In EA, the glottal plosive /ʔ/ is inserted, the close-mid front unrounded vowel /e/ and the bilabial plosive /b/ are segment reversed in the first syllable of the word *betā'* /be'tæ:ʕ/ which changes to be /ʔeb'tæ:ʕ/. Similarly, in AE, the alveolar plosive /t/ is inserted in the first syllable, and the alveolar trill /r/ is inserted in the second syllable of the word *porridge* /'pɔ:r.ɪdʒ/ which becomes /pɔ:rt'ɪdʒ/. Therefore, both words are related to insertion process. Based on GP, consider the following Figures 20, 21, 22, and 23 on the selected dialects. The DFs are adopted from Chomsky and Halle (1991, pp. 307, 413), and Hayes (2009, pp. 95, 96, 98):

Figure 20

Insertion Rule on the word betā' /be'tæ:ʕ/ → /ʔeb'tæ:ʕ/

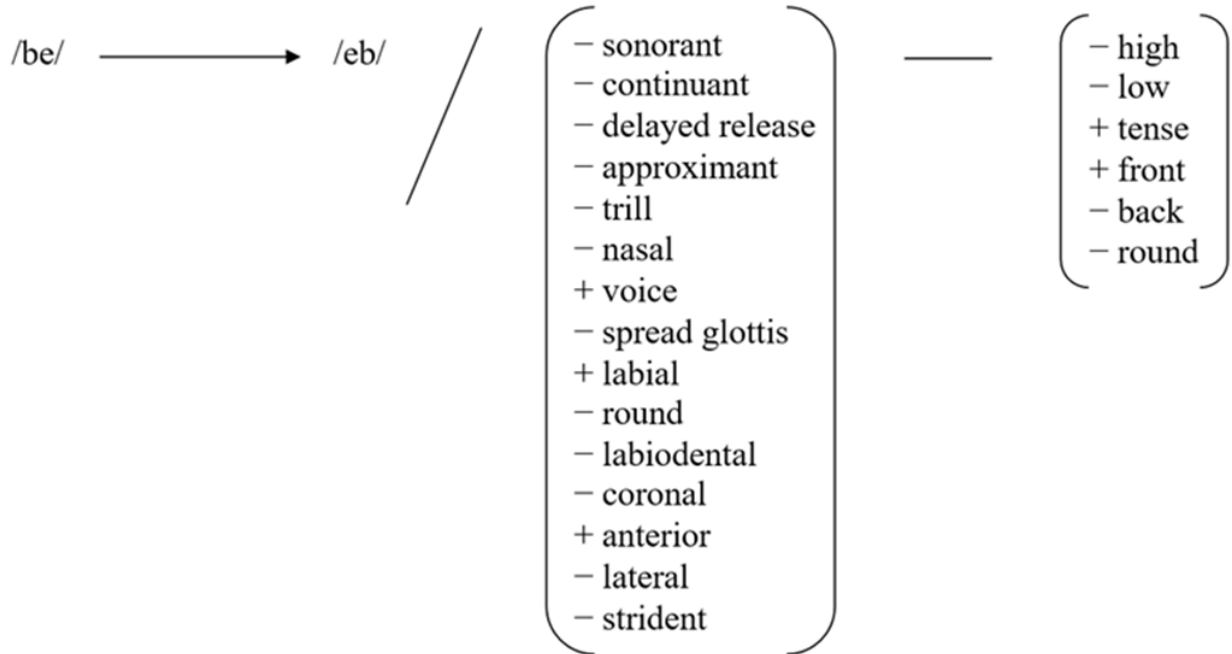


Note. The empty sign (Φ) in the underlying representation denotes that there is no phoneme. The insertion of the consonant /ʔ/ led to a bundle of DFs as displayed above in the environment after the sign (Φ). Due to the complication

of articulation of the word *betā* ' /be'tæ:ʕ/, the insertion of the consonant /ʔ/ led to segment reverse of the vowel /e/ and the consonant /b/ in the first syllable. Thus, /be'tæ:ʕ/ changes to be /ʔeb'tæ:ʕ/. The following Figure 21 represents this change:

Figure 21

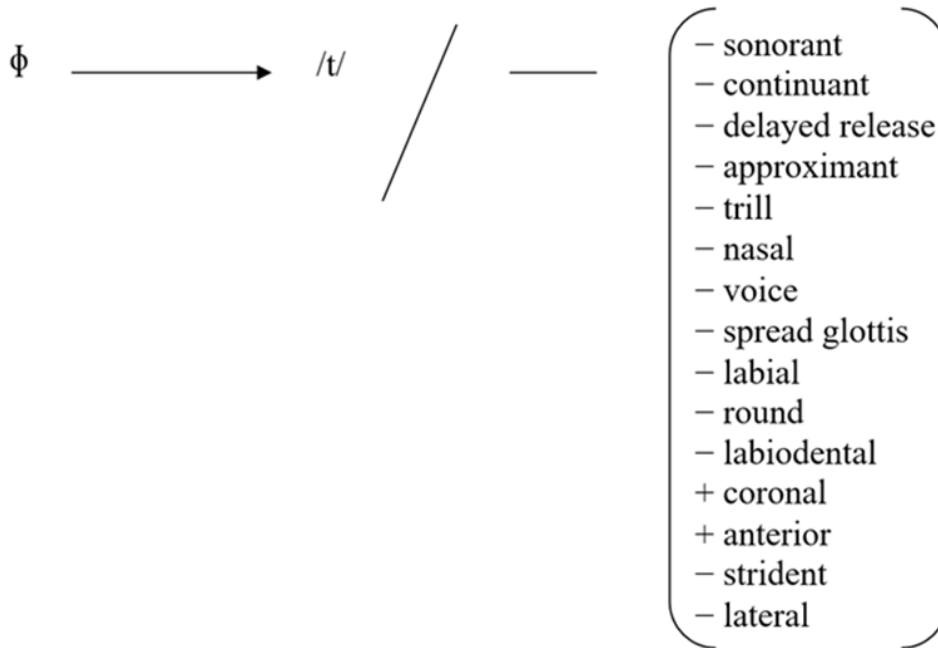
Metathesis Rule on the word betā ' /be'tæ:ʕ/ → /ʔeb'tæ:ʕ/



Note. The consonant /b/ and the vowel /e/ have different bundles of DFs as shown above in the environment, but when the cluster /be/ is segment reversed with the cluster /eb/, the bundles reverse positions. Accordingly, the bundle of the vowel /e/ is located before that of the consonant /b/ as displayed above in the environment after cluster /be/.

Figure 22

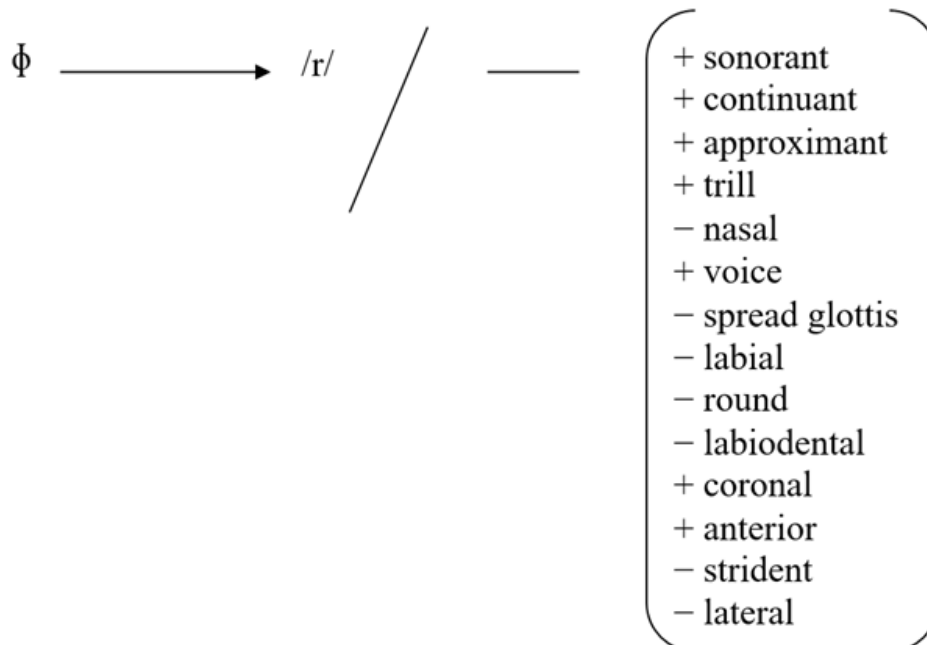
Insertion Rule on the word porridge /'pɔ:r.ɪdʒ/ → /pɔ:rt'ɪdʒ/



Note. The empty sign (Φ) in the underlying representation denotes that there is no phoneme. The insertion of the consonant /t/ in the first syllable led to a bundle of DFs as represented above in the environment after the sign (Φ). Consequently, the syllable /'pɔ:r/ becomes /'pɔ:rt/.

Figure 23

Insertion Rule on the word porridge /'pɔ:r.ɪdʒ/ → /'pɔ:rt'ɪdʒ/



Note. The empty sign (Φ) in the underlying representation denotes that there is no phoneme. The insertion of the alveolar /r/ in the second syllable led to a bundle of DFs as shown above in the environment after the sign (Φ). Hence, the syllable /ɪdʒ/ changes to be /'ɪdʒ/.

5.2.2. Second: Differences of Phonological Processes between Egyptian Arabic (EA) and American English (AE) Dialects

This section examines the differences between some EA and AE dialects by applying four phonological processes: dentalization is the opposite of TH-stopping, and /hæ/-Insertion is the opposite of /h/-dropping. The synchronic comparative analysis of these processes is applied on four extracted words from EA and AE dialects: /'wa.zʕi:.fa/ “job” versus *bath* /'bæθ/, /'di/ “This” versus *human* /'hju:.mən/. Thus, the four chosen dialects are as follows: Marsa Matruh versus Texas, Marsa Matruh versus New York.

9- Dentalization

Dentalization is a process in which the alveolars /t/ and /d/ are substituted with the dentals /θ/ and /ð/ (Bronstein, 1960, p. 525). This process is not found in AE.

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

wazīfa /wa'zi:.fa/ “job”

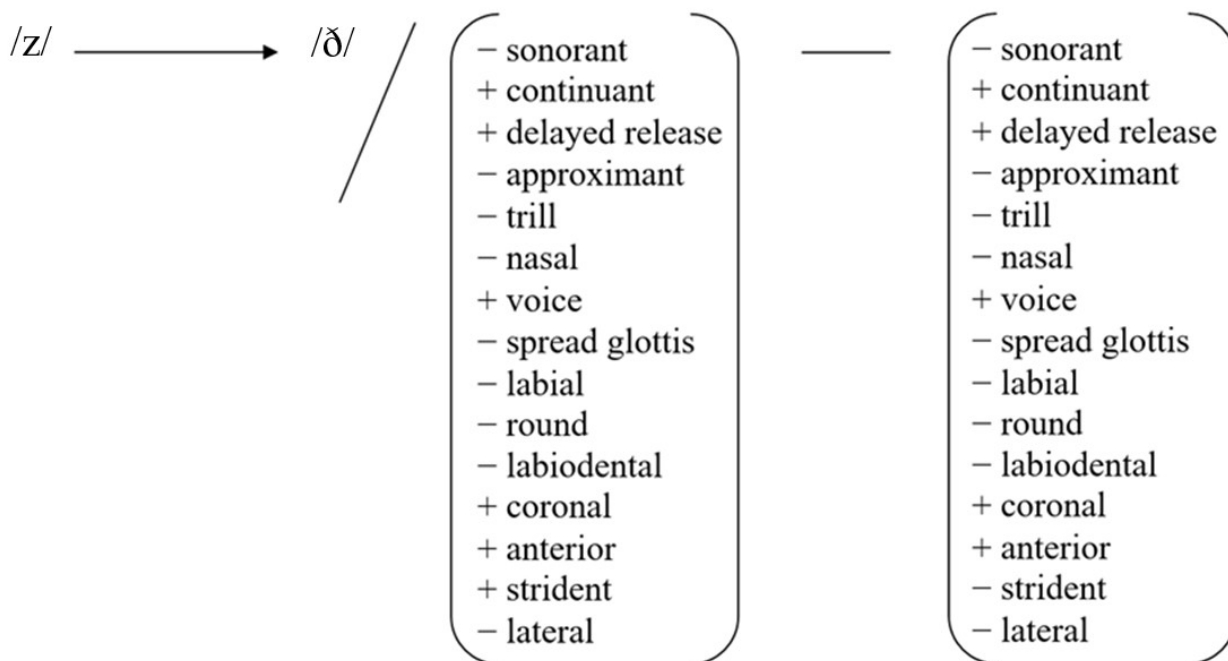
- 1- **Source of the Word:** YouTube channel (Al Nahar TV, 2021a, minute 19:47).
- 2- **Social Background of the Speaker:** male – 70s – Bedouin – Egyptian – unknown education – farmer and shepherd.
- 3- **Place of Birth:** Sēdi Brāni town, Governorate of Marsa Matruh (far North-West).
- 4- **Before Applying Dentalization:** وظيفه /wa'zi:.fa/ (Spiro, 1999, p. 646).
- 5- **After Applying Dentalization:** وظيفه /wa'ði:.fa/.
- 6- **Grammatical Category:** noun (Hinds & Badawi, 1986, p. 946).
- 7- **Meaning:** job (Hinds & Badawi, 1986, p. 946).
- 8- **Original Sentence:** "أنا طبعاً من الأجيال الجديمه شوي ولا اتوظفت ومفيش شَرَك (شغل) ولا وظائف"
 /'ʔa.na tab'ʔan men ʔel ʔaʒ'jæ:l ʔel ga'di:.ma 'fʷaj 'wa.la et.wa.ðɑ'fet we ma'fi:ʃ 'ʃɑ.rak 'wa.la wa.ðɑ:'jef/
 “Of course, I am one of the older generations, I was not employed, and I had no job” (Al Nahar TV, 2021a, minutes 19:40-19:47).
- 9- **Dialect Background:** Based on the data of Woidich (2007), he interviewed a participant who is a male, 60s, Bedouin, Egyptian, unknown education, farmer, and he is born in Ilbašandi village, El Dakhla Oasis, Western Desert, Giza, south region. He pronounces the word *ḥanḍal* /ħan'dal/ “colocynth”

(as translated and transliterated in Hinds & Badawi, 1986, p. 229) as /ħan'ðal/ (Woidich, 2007, p. 164). As a result, the voiced alveolar plosive /d/ changes to be the voiced dental fricative /ð/ in the second syllable. Based on the observation of the study, Bedouins of Marsa Matruh; far north-west region, tend to dentalize consonants in everyday language. For example, in Marsa Matruh, the word 'ard /'ʔard/ “earth” (as translated and transliterated in Hinds & Badawi, 1986, p. 14) is articulated as /'ʔarð/ (VideoYoun7, 2017, minute 02:06). Therefore, the alveolar plosive /d/ becomes the dental fricative /ð/. This participant is a male, 60s, Bedouin, Egyptian, educated, and unknown employment.

Section B: Phonological Analysis: In EA, the voiced pharyngealized alveolar fricative /z/ changes to be the voiced pharyngealized dental fricative /ð/ in the second syllable of the word *wazīfa* /wa'zi:.fa/. Thus, /wa'zi:.fa/ becomes /wa'ði:.fa/. Accordingly, this word belongs to dentalization process. Based on GP, consider the following Figure 24 on the selected dialect. The DFs are adopted from Chomsky and Halle (1991, pp. 307, 413), and Hayes (2009, p. 95):

Figure 24

Dentalization Rule on the word wazīfa /wa'zi:.fa/ → /wa'ði:.fa/



Note. The consonant /z/ has several DFs as shown above in the environment before /ð/, but when it changes to be the pharyngealized consonant /ð/, it shares most of DFs of /z/ except [- strident] as represented above in the environment after /z/.

10- TH-Stopping

TH-Stopping is a process in which the dental /θ/ becomes the alveolars /t/ or /d/ (Llamas, Mullany & Stockwell, 2007, p. 80).

Section A: Sociophonetic Analysis

American English (AE)

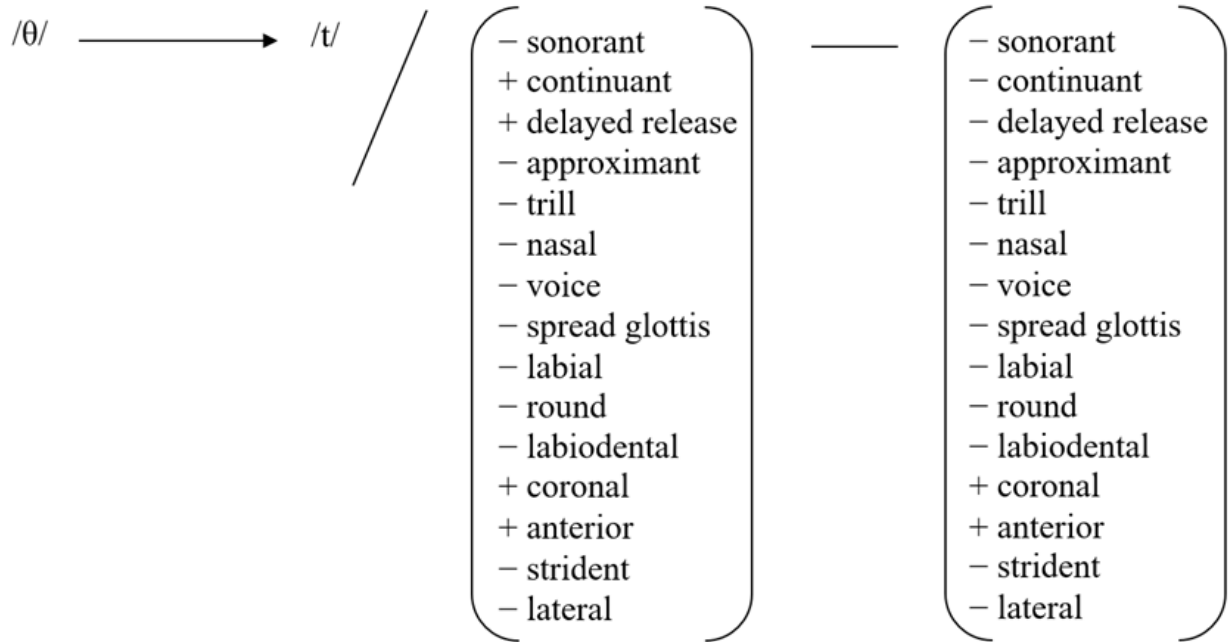
bath /'bæθ/

- 1- **Source of the Word:** IDEA website (Cordero, n.d., minute 02:24).
- 2- **Social Background of the Speaker:** female – 70s – Hispanic – American – grade 7 – unknown employment.
- 3- **Place of Birth:** Canutillo, El Paso County, State of Texas (South).
- 4- **Before Applying TH-Stopping:** *bath* /'bæθ/ (Longman Dictionary of American English, 2009, p. 76).
- 5- **After Applying TH-Stopping:** *bath* /'beɪt/.
- 6- **Grammatical Category:** noun (Longman Dictionary of American English, 2009, p. 76).
- 7- **Meaning:** an act of washing your body in the water that you put in a bathtub (Longman Dictionary of American English, 2009, p. 76).
- 8- **Original Sentence:** “The goose began to tire, so Sarah was able to hol'in to Camma and gave her a relaxing bat” (Cordero, n.d., minutes 02:15-02:24).
- 9- **Dialect Background:** Based on the data of Labov (2006), TH-stopping is common among native people in NYC. For instance, the word *think* /'θɪŋk/ is uttered as /'dɪŋk/ (p. 157). Based on the observation of the study, some native people of Miami city, Florida, south-east region, and New Mexico, west region tend to use Th-stopping in everyday language. For example, in New Mexico, the verb *throw* /'θrou/ (Cambridge Dictionary of American English, 2008, p. 914) is articulated as /'troʊ/ (AshleyVon Bones, 2013, minute 01:45). The participant is a female, 30s, Hispanic, American, educated, and owner of a YouTube channel.

Section B: Phonological Analysis: In AE, the dental fricative /θ/ becomes the alveolar plosive /t/ in the word *bath* /'bæθ/. Consequently, /'bæθ/ changes to be /'beɪt/. Hence, this word belongs to Th-stopping process. Based on GP, consider the following Figures 25 and 26 on the selected dialects. The DFs are adopted from Chomsky and Halle (1991, pp. 307, 413), Hayes (2009, p. 95, 98), and Wells (2000, inside front cover):

Figure 25

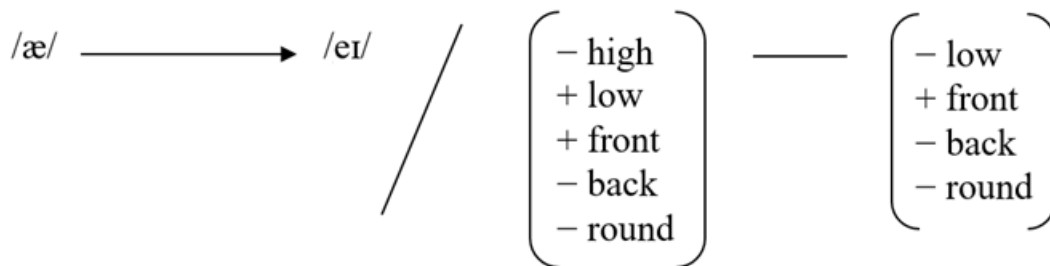
Th-Stopping Rule on the word bath /'bæθ/ → /'beɪt/



Note. The consonant /θ/ has several DFs as displayed above in the environment before /t/, but when it becomes the consonant /t/, it shares most of DFs of /θ/ as shown above in the environment after /θ/ except [– continuant] and [– delayed release]. Due to the complication of utterance of the word *bath* /'bæθ/, the near-open front unrounded vowel /æ/ is diphthongized to be the front-closing diphthong /eɪ/; /'beɪt/. The following Figure 26 represents this change:

Figure 26

Diphthongization Rule on the word bath /'bæθ/ → /'beɪt/



Note. The vowel /æ/ has several DFs as displayed above in the environment before the diphthong /eɪ/, but when it is diphthongized to /eɪ/, it shares most DFs of the vowel /æ/ except [– high] and [+ low] as shown above in the environment after /æ/.

11- /hæ/-Insertion

/hæ/-Insertion is a process in which the cluster /hæ/ is inserted in the beginning of words (Based on the efforts of the present study). This process is not found in AE.

Section A: Sociophonetic Analysis

Egyptian Arabic (EA)

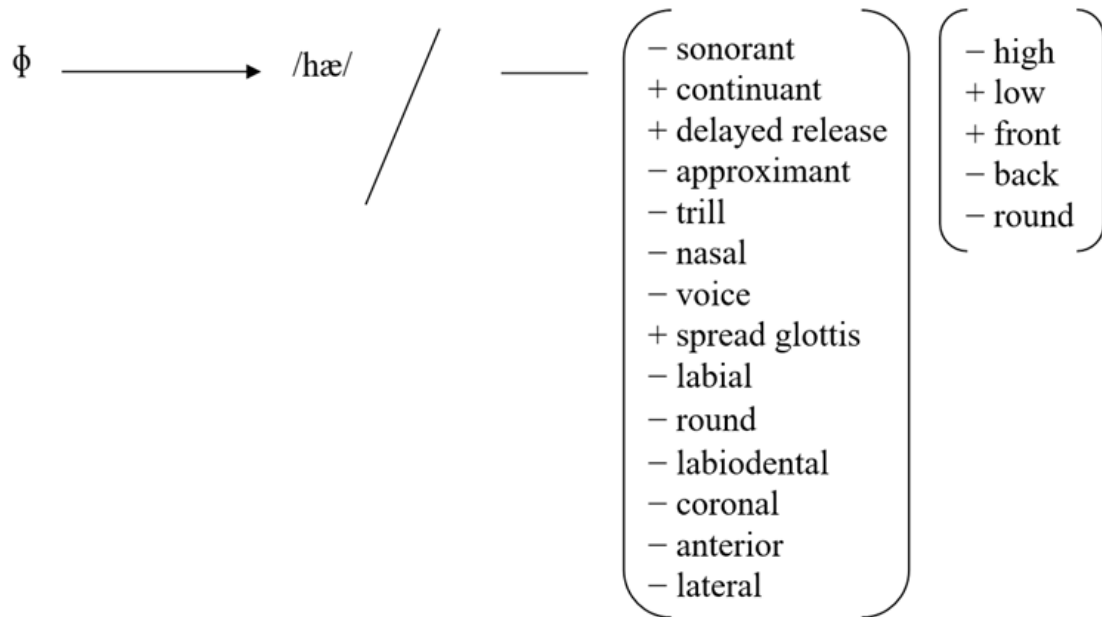
di /'di/ "This"

- 1- **Source of the Word:** YouTube channel (Al Nahar TV, 2021b, minute 02:10).
- 2- **Social Background of the Speaker:** male – 70s – Bedouin – Egyptian – unknown education – cupping therapist.
- 3- **Place of Birth:** Sēdi Brāni town, Governorate of Marsa Matruh (far North-West).
- 4- **Before Applying /hæ/-Insertion:** دي /'di/ (Hinds & Badawi, 1986, p. 273).
- 5- **After Applying /hæ/-Insertion:** هادي /'hæ.di/.
- 6- **Grammatical Category:** demonstrative pronoun (Hinds & Badawi, 1986, p. 273).
- 7- **Meaning:** this (Hinds & Badawi, 1986, p. 273).
- 8- **Original Sentence:** "شغل الجلامه (جز الصوف) عندك في الغنم هادي تَعْدَم (تتعب)"
/ʃoɣl ʔel ga.la:'ma ʃan'dak fel 'ʔa.nam 'hæ.di tʃad'dem/
"This job of shearing the sheep's wool is weary." (Al Nahar TV, 2021b, minutes 02:09-02:11).
- 9- **Dialect Background:** Based on the data of Behnstedt and Woidich (2021, Vol. IV), the demonstrative *hadi* /'hæ.di/ is common among Bedouin dialects (p. 269). The observation of the study is the same. Some native people of North Sinai, far north-east region, and Marsa Matruh, far north-west region, tend to insert the cluster /hæ/ in everyday language. The same example is presented by another participant in Al Arēsh city, the demonstrative *di* /'di/ is pronounced as /'hæ.di/ (Sameh Mohamed, 2021, minute 05:15). This participant is male, 20s, Bedouin, Egyptian, educated, student, and owner of a YouTube channel.

Section B: Phonological Analysis: In EA, the glottal fricative /h/ and the near-open front unrounded vowel /æ/ are inserted in the beginning of the demonstrative pronoun *di* /'di/. Hence, /'di/ changes to be /'hæ.di/. As a result, this word belongs to the /hæ/-Insertion process. Based on GP, consider the following Figure 27 on the selected dialect. The DFs are adopted from Chomsky and Halle (1991, pp. 307, 413), and Hayes (2009, pp. 96, 98):

Figure 27

/hæ/-Insertion Rule on the word di /'di/ → /'hæ.di/



Note. The cluster /hæ/ which is inserted in the first syllable as represented above in the environment after (ϕ) results in two bundles of DFs.

12- /h/-Dropping

/h/-Dropping is a process in which segments are lost in some contexts (Wolfram & Johnson, 1982, p. 95). This process is not found in EA.

Section A: Sociophonetic Analysis

American English (AE)

human /'hju:.mən/

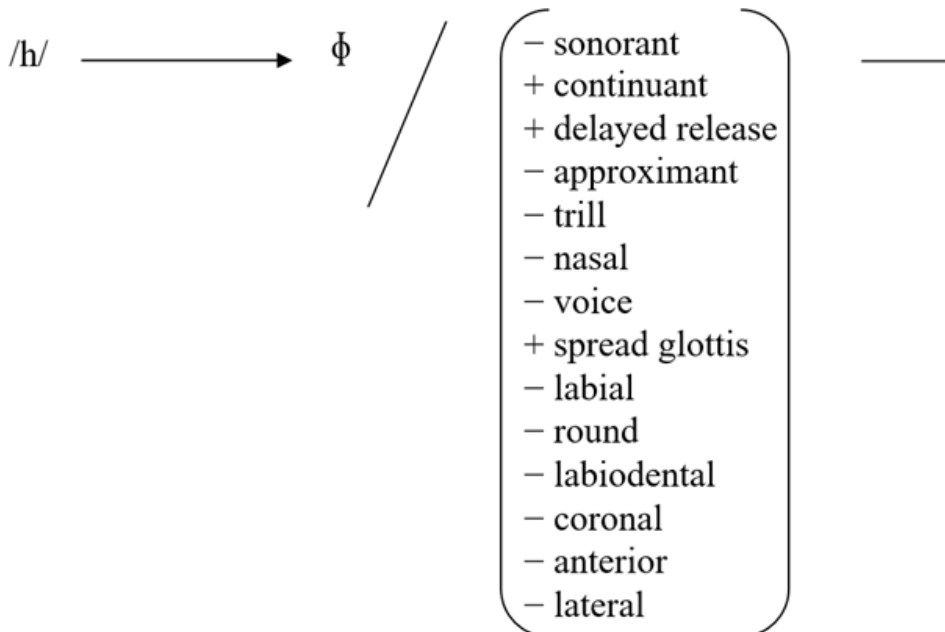
- 1- **Source of the Word:** YouTube channel (NBC News, 2019, minute 03:08).
- 2- **Social Background of the Speaker:** male – 78 – Caucasian – American – educated – U.S. Senator of Vermont.
- 3- **Place of Birth:** Brooklyn County, State of New York (North-East).
- 4- **Before Applying /h/-Dropping:** *human* /'hju:.mən/ (Cambridge Dictionary of American English, 2008, p. 424).
- 5- **After Applying /h/-Dropping:** *human* /'ju:.mən/.
- 6- **Grammatical Category:** adjective (Cambridge Dictionary of American English, 2008, p. 424).
- 7- **Meaning:** of or typical of people (Cambridge Dictionary of American English, 2008, p. 424).

- 8- **Original Sentence:** “And by that I mean, that heath care in my view is a uman right” (NBC News, 2019, minutes 03:03-03:09).
- 9- **Dialect Background:** Based on the data of Labov, Ash, and Boberg (2006), the loss of /h/ is evident in north-east states, i.e., Rutland city, Vermont, and Providence city, Rhode Island (p. 49). Based on the observation of the study, in Oklahoma, south region, some native people tend to drop the glottal fricative /h/ in everyday language. For instance, the word *humidity* /hju:ˈmɪd.ət.i/ (Cambridge Dictionary of American English, 2008, p. 425) is articulated as /ju:ˈmɪd.ət.i/ (Muller, 2000, 4b, minute 03:41). This participant is a male, 34, Caucasian, American, unknown education, fire department chief, and he is born in Wyandotte town.

Section B: Phonological Analysis: In AE, the glottal fricative /h/ in the first syllable is dropped in the word *human* /ˈhju:.mən/. Therefore, /ˈhju:.mən/ becomes /ˈju:.mən/. Thus, this word belongs to the /h/-dropping process. Based on GP, consider the following Figure 28 on the selected dialect. The DFs are adopted from Chomsky and Halle (1991, pp. 307, 413), and Hayes (2009, p. 96):

Figure 28

/h/-Dropping Rule on the word human /ˈhju:.mən/ → /ˈju:.mən/



Note. The glottal fricative /h/ has several DFs in the environment before (∅), when it is dropped, the DFs are deleted as displayed above in the environment after /h/.

6. Conclusion

6.1. Results

This present paper is a sociophonetic comparative study. It adopted a synchronic approach to the analysis of data in order to compare between the segmental variation of some EA and AE dialects in everyday speech. This comparison attempted to remove the various confusions of colloquial speech. The confusions are evident due to the various dialects whether in EA or AE which sometimes are not understood by its receivers. Hence, some similarities and differences of segmental changes between chosen EA and AE dialects had been represented to solve this issue. These segmental changes are characterized in 12 phonological processes in both EA and AE dialects, into two sections. First section comprised eight similar phonological processes between selected EA and AE: fronting, backing, shortening, lengthening, lenition, fortition, regressive assimilation, and insertion. Second section included four different phonological processes between EA and AE: dentalization, TH-stopping, /hæ/-Insertion, and /h/-dropping. The corpus of study comprised 20 words: 10 words in EA and 10 words in AE.

These 20 words belong to 20 different chosen dialects: 10 in EA and other 10 in AE. The analysis of each word had been divided into two sections: A and B. Section A is the sociolinguistic part which represented the social background of the two compared words in nine points: source of the word, social background of the speaker which consists of gender, age, ethnicity, education, employment, place of birth whether in a governorate or a state, before applying the phonological process according to IPA of EA and AE, after applying the phonological process based on IPA, grammatical category, meaning, original sentence, and dialect background. The adopted dictionaries that had been utilized for transcription and glossing of EA are *A Dictionary of Egyptian Arabic* (1986), and *An Arabic-English Dictionary of The Colloquial Arabic of Egypt* (1999). Concerning AE, they are *Cambridge Dictionary of American English* (2008), and *Longman Dictionary of American English* (2009).

The following Table 1 displays the full statistics of the 20 participants' social background: gender, age, ethnicity, education, employment, and governorate/state.

Table 1

Total Quantitative Statistics of the Participants' Sociodemographic Characteristics between Egyptian Arabic (EA) and American English (AE)

Participant	Gender	Age	Ethnicity	Education	Employment	Governorate/State
Egyptian	4 females	20s - 70s	7 Egyptians	3 educated	7 employed	10: North Sinai, Damietta, Suez
10	6 males		3 Egyptian Bedouins	1 uneducated 6 unknowns	1 unemployed 2 unknowns	Alexandria, Marsa Matruh El Minya, Suhag, Qena, Aswan
American	5 females	19 - 78	7 Caucasian Americans	10 educated	7 employed	10: New York, Wisconsin, North Carolina, South Carolina, Georgia, Texas, Colorado, Utah, Washington, California
10	5 males		1 African American 2 Hispanic Americans		1 unemployed 2 unknowns	

Note. The chosen regions of EA are six: far North-East, North-East Delta, North-Mid, North-West Delta, far North-West, and South. The chosen regions of AE are five: North East, North Central, South East, South, and West.

As for Section B, it is the phonological part which examined the phonological processes of each two compared words by adopting the theoretical framework of GP as presented by Chomsky and Halle (1968). It is a suitable theory for the analysis as it illustrated the phonemes before and after the segmental change of dialects through DFs, within the broader framework of Sociophonetics of Manfred Woidich (1952) and William Labov (1991). Moreover, these words are extracted from YouTube platform and IDEA website as they proved throughout the present study that they are good representatives of showing the spontaneous everyday language of native people who spoke the EA and AE dialects. The corpus of the study comprised 15 YouTube videos: 10 EA and five AE, and five IDEA AE audios. The recordings of these videos and audios are from the year 2000 till 2021. Finally, all of the chosen videos and audios are a total of one hr, 21 min, and 20 s.

6.2. Findings

Several findings are found in this study. First finding is evident in the similar phonological process, i.e., regressive assimilation, between EA and AE. Although the female of El Minya is uneducated while the female of Colorado is educated, but they both change the articulation of the alveolar fricative /s/ to be

the postalveolar fricative /ʃ/, i.e., /mʊs'taʃ.fah/ “hospital” becomes /mʊʃ'taʃ.fah/, and *street* /'ʃtri:t/ becomes *street* /'ʃtri:t/. Second, the 20 words being analyzed in this study are examined according to the similarities and differences of phonological processes not based on the similarities and differences of geographical regions. Yet, the following finding clarifies that among the words being investigated are similar geographical regions. For example, the word /ʃar'bæt/ in Alexandria and /'mætʃ/ in Washington which share the fronting process are both from north west of Egypt and north west of the U.S. Third finding, dentalization process in Marsa Matruh is the opposite of TH-stopping process in Texas. To demonstrate, in the word /wa'zi:fa/ “job”, the voiced pharyngealized alveolar fricative /z/ changes to be the voiced pharyngealized dental fricative /ð/; i.e., /wa'ði:fa/. However, this change from alveolar fricative to dental fricative is not found in AE. On the other hand, in the word *bath* /'bæθ/, the dental fricative /θ/ becomes the alveolar plosive /t/; i.e., *bat* /'beɪt/. Yet, this change from dental fricative to alveolar plosive is found in EA.

For more clarification, dental fricatives in EA are pronounced by Bedouins in several regions in Egypt, as in far North-East, far North-West, and WDO. On the other hand, the common pronunciation of dentals across the rest of EA dialects is changing it to alveolars. For instance, the word /wa'zi:fa/ “job” is articulated by most EA dialects with the voiced pharyngealized alveolar fricative /z/, while it is uttered as /wa'ði:fa/ with the voiced pharyngealized dental fricative /ð/ by Egyptian Bedouins. Fourth, /hæ/-Insertion process in Marsa Matruh is the opposite of /h/-Dropping process in New York. To demonstrate, in the word /'di/ “This”, the glottal fricative /h/ and the near-open front unrounded vowel /æ/ are inserted in the beginning of the demonstrative pronoun *di* /'di/ to be /'hæ.di/. However, this segmental variation is not found in AE. Likewise, in the word *human* /'hju:mən/, the glottal fricative /h/ in the first syllable is dropped to be /'ju:mən/. Yet, this segmental variation is not found in EA. Fifth and final essential finding, this study is important from a theoretical point of view as it shows diverse segmental variation of some EA and AE dialects which have its own way of articulation, and this helps in achieving more simplification and more ease of pronunciation.

7. Recommendations for Further Research

Finally, much future work has to be considered in sociophonetics as it is still a new field and needs more research. Two recommendations have to be carried out. First, this study highly recommends that an official website need to

be established in Egypt by Egyptian linguists and dialectologists. This website would display free online database of EA audios and videos, namely *Dialects of Egyptian Arabic Archive* (DEAA) website, and it would upload several diverse interviews of EA dialects in order to preserve the current vernacular identity of EA. Second recommendation is that YouTube videos about accent challenge between EA dialects need to increase as participations in this issue are so limited. Thus, it is recommended from EA YouTube users to start a project known as “accent tag”. Through this project native people across all Egyptian governorates would agree to upload videos that have certain colloquial words and phrases, and then they would pronounce them according to their own dialects. Accordingly, comparisons between EA dialects would start to appear. Therefore, if the above two recommendations are to be achieved, EA sources would increase, this would encourage researchers to fulfil more research in that field, and they would apply different linguistic theories to data.

Due to the limitations of this study, some points are not covered. Hence, the following suggestions have to be considered for future researches. Apart from the respectful efforts done by Woidich, Labov, and many other researchers in the field of dialectology, more comparisons between EA dialects or between AE dialects, or between both of them need to increase from a practical point of view. As a result, a collection of words can be carefully selected for these comparisons. For example, the word *delwa'ti* “now” is articulated differently across the governorates of Egypt, i.e., /del'waʔ.ti/ in Cairo, /del'wak/ and /del.wa'ki:.ti/ in UE. Similarly, the word *coffee* /'kɔ:.fi/ is uttered differently across the states of the U.S., i.e., /'kwɔ:.fi/ in New York. These regional differences can be traced and analyzed phonologically through practical examination by applying computational linguistics, i.e., adopting official software of geographical maps which would count the number of governorates/states that have common or different pronunciations of a certain chosen word based on the use of consonants, vowels, and diphthongs of IPA.

References

- ABC News. (2023, January 2). *Barbara Walters makes evening news history: 20/20 'Our Barbara' Part 4* [Video]. YouTube. https://youtu.be/45LPYJdBB0k?si=A2YCux1kr_Ye7A_P
- Albirini, A. (2016). *Sociolinguistics: Diglossia, codeswitching, attitudes and identity*. London and New York: Routledge Taylor & Francis Group.
- Amberg, J. S., & Vause, D. J. (2009). *American English: History, structure, and usage* (1st ed.). Cambridge, UK: Cambridge University Press.
- Angland, T. & Tobolski, E. (2005, April 10). *South Carolina 6* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive/south-carolina-6>
- Anna Odom. (2012, April 23). *The Southern accent (North Carolina) pt. 4* [Video]. YouTube. <https://youtu.be/Lwunob5vhUc?si=rrg24nXF9UJUjoXW>
- AshleyVon Bones. (2013, June 13). *Accent tag (Mexican)*. [Video]. YouTube. https://youtu.be/wOB_M9buT-8?si=8TU2a1WKLpsQ_SVL
- Baker, P. (2010). *Sociolinguistics and corpus linguistics*. Edinburgh: Edinburgh University Press.
- Behnstedt, P. & Woidich, M. (2021). *Wortatlas der arabischen dialekte. Band iv: Funktionswörter, adverbien, phraseologisches: eine Auswahl* [Wordatlas of the Arabic dialects. Vol. IV: Function words, adverbs, phraseological: a selection]. Leiden. Boston: Brill.
- Berkovits, R. (1993). Utterance-final lengthening and the duration of final-stop closures. *Journal of Phonetics*, 21(4): 479-489. doi: 10.1016/S0095-4470(19)30231-1
- Biography.Com Editors. (2023, May 16). *Barbara Walters biography*. <https://www.biography.com/movies-tv/barbara-walters>
- Blake, M. (2024, February 18). *Handwriting returns in California schools*. VOA. <https://learningenglish.voanews.com/a/handwriting-returns-in->

- california-schools/7463872.html
- Boberg, C., Nerbonne, J., & Watt, D. (2018). *The handbook of dialectology* (1st ed.). USA: Wiley Blackwell.
- Bronstein, A. J. (1960). *The pronunciation of American English: An introduction to phonetics*. New York: Appleton-Century-Crofts, Inc.
- Burgess, J. & Green, J. (2009). *YouTube: Online video and participatory culture*. Cambridge, UK: Polity Press.
- Cambridge dictionary of American English*. (2008). (2nd ed.). Cambridge, USA: Cambridge University Press.
- Carr, P. (2008). *A glossary of phonology* (1st ed.). Edinburgh: Edinburgh University Press.
- Cassidy, J. (2002). *Dot.con: The greatest story ever sold*. HarperCollins e-books.
- Chambers, J. K., & Trudgill, P. (2004). *Dialectology* (2nd ed.). Cambridge, UK: Cambridge University Press.
- Chiba, Y. (2010). Media history of modern Egypt: A critical review. *Kyoto Working Papers on Area Studies*, 86 (84), 1-20. Humanosphere. http://humanosphere.cseas.kyoto-u.ac.jp/en/staticpages/index.php/working_papers_en
- Chomsky, N. & Halle, M. (1991). *The sound pattern of English* (1st ed.). Cambridge, Massachusetts: The MIT Press.
- Chris Jones. (2012, April 18). *Southern accent, North Carolina* [Video]. YouTube. <https://youtu.be/gAqm5ls8Ep8?si=laWCsnM2iPtAwbdo>
- Condé Nast Traveler. (2019, June 17). *50 People show us their states' accents | culturally speaking | condé nast traveler* [Video]. YouTube. <https://youtu.be/UcxByX6rh24>
- Condé Nast Traveler. (2020, January 13). *50 People tell us which word their state always mispronounces | culturally speaking* [Video]. YouTube. <https://youtu.be/EzLDFRiOTHY?si=O4gVk73SXL7mLfLy>

- Cordero, M. (n.d.). *New Mexico 1* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive.com/new-mexico-1>
- Danford, K. (2018, May 29). *Washington 5* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive.com/washington-5>
- Eddington, D. & Savage, M. (2012). Where are the moun[ʔə]ns in Utah?. *American Speech*, 87(3): 336-349. doi: 10.1215/00031283-1958345
- Espinosa, M. (2004, October 18). *Michigan 9* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive.com/michigan-9>
- Frye, R. (2000, January 31). *Kentucky 4* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive.com/kentucky-4>
- Graham, J. (2010, November 9). *Utah 3* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive.com/utah-3>
- Grant, T., Clark, U., Reershemius, G., Pollard, D., Hayes, S., and Plappert, G. (2017). *Quantitative research methods for linguists: A questions and answers approach for students*. London, UK: Routledge Taylor & Francis Group.
- Güera's World. (2016, December 10). *The accent tag (Utah edition)* [Video]. YouTube. <https://youtu.be/X0PuhlfvfQw?si=uEFgaskv9YzGao67>
- Hague, D. (2007, December 11). *Alabama 13* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive.com/alabama-13>
- Handbook of the international phonetic association: A guide to the use of the International Phonetic Alphabet*. (1999). Cambridge, UK: Cambridge University Press.

- Hardcastle, W. J., Laver, J. & Gibbon, F. E. (2010). *The handbook of phonetic sciences* (2nd ed.). Malden, USA: Blackwell Publishing.
- Hargrave, R., Southall, A., & Walker, A. (2022). Differences in final /z/ realization in Southwest and Northern Virginia. *American Speech*, 97(3): 311-344. doi: 10.1215/00031283-9308362
- Hayes, B. (2009). *Introductory phonology* (1st ed.). UK: Wiley-Blackwell.
- Hinds, M., & Badawi, E.-S. (1986). *A dictionary of Egyptian Arabic*. Riad Solh Square, Beirut: Librairie Du Liban.
- Hosseinmardi, H., Ghasemian, A., Clauset, A., Mobius, M., Rothschild, D. M., & Watts, D. J. (2021). Examining the consumption of radical content on YouTube. *PNAS*, 118 (32), 1-8.
<https://doi.org/10.1073/pnas.2101967118>
- International Phonetic Association. (2020). *2020 IPA charts and sub-charts in four fonts. IPA Kiel / LS Uni (serif) font*.
https://www.internationalphoneticassociation.org/IPAcharts/IPA_chart_orig/IPA_charts_E.html
- Jensen, J. T. (2004). *Principles of generative phonology: An introduction*. Amsterdam, The Netherlands: John Benjamins Publishing Company.
- Johnson, K. (2008). *Quantitative methods in linguistics*. USA: Blackwell Publishing.
- Katzner, K. (2002). *The languages of the world* (3rd ed.). London and New York: Routledge Taylor & Francis Group.
- Katz, W. F. & Assmann, P. F. (2019). *The Routledge handbook of phonetics* (1st ed.). London and New York: Routledge Taylor & Francis Group.
- Khamis, S. (2011). The transformative Egyptian media landscape: Changes, challenges and comparative perspectives. *International Journal of Communciation*, 5 (2011), 1159-1177. <http://ijoc.org>
- Knight, R.-A., & Setter, J. (2022). *The Cambridge handbook of phonetics*

- (1st ed.) Cambridge, UK: Cambridge University Press.
- Labov, W., Ash, S., & Boberg, C. (2006). *The atlas of North American English: Phonetics, phonology and sound change*. Berlin: Mouton de Gruyter.
- Labov, W. (2006). *The social stratification of English in New York City* (2nd ed.). New York: Cambridge University Press.
- Labov, W. (2010). *Principles of linguistic change. volume 3: Cognitive and cultural factors*. USA: Wiley-Blackwell.
- Llamas, C., Mullany, L., & Stockwell, P. (2007). *The Routledge companion to sociolinguistics*. New York and London: Routledge Taylor & Francis Group.
- Longman dictionary of American English*. (2009). (5th ed.). UK: Pearson Education Limited.
- Maguire, W., & McMahon, A. (2011). *Analysing variation in English* (1st ed.). Cambridge, UK: Cambridge University Press.
- Mahmoud, S. M. (2021). Some segmental features of American English and Upper-Egyptian Arabic: A study in contrastive phonology. *AlMandumah*, 24, 495-530.
<http://search.mandumah.com/Record/1176174>
- Marshall, T. (2015, April 15). *California 9* [Speech audio recording]. Dialects Archive. <https://www.dialectsarchive.com/california-9>
- McNish, D. (2017, May 12). *Colorado 7* [Speech audio recording]. International Dialects of English Archive.
<https://www.dialectsarchive.com/colorado-7>
- Meier, P. (2000, September 30). *Georgia 1* [Speech audio recording]. International Dialects of English Archive.
<https://www.dialectsarchive.com/georgia-1>
- Meier, P. (2022). *IDEA: International dialects of English archive*.
<https://www.dialectsarchive.com/>
- Melchers, G., & Shaw, P. (2011). *World Englishes: An introduction* (2nd ed.).

- UK: Hodder Education, An Hachette UK Company.
- Mesthrie, R. (2001). *Concise encyclopedia of sociolinguistics*. Amsterdam: Elsevier Science Ltd.
- Mojsin, L. (2016). *Mastering the American accent* (2nd ed.). USA: Barron's Educational Series, Inc.
- Moorestyle10. (2012, October 4). *Accent tag: North vs. south* [Video]. YouTube. <https://youtu.be/9SmHX28NY7c>
- Muller, S. (2000, July 23, 4b). *Oklahoma 4* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive.com/oklahoma-4>
- NBC News. (2019, June 28). *Democratic presidential debate – june 27 (full) | NBC news* [Video]. YouTube. <https://www.youtube.com/live/cX7hni-zGD8?si=XU8TzQtvC5Wg4lP8>
- Parker, D. (2005, April 3). *South Carolina 3* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive.com/south-carolina-3>
- Ponce De Leon, C. L. (2015). *That's the way it is: A history of television news in America*. Chicago and London: The University of Chicago Press.
- Rashad, E. B. M. (2017). A sociophonetic study of selected morphophonetic alternations in the Egyptian folk epic Beibers. *Journal of Scientific Research in Arts*, 18, 1-60. https://jssa.journals.ekb.eg/article_10891.html?lang=ar
- Rasinger, S. M. (2013). *Quantitative research in linguistics: An introduction*. (2nd ed.). London: Bloomsbury Publishing Plc.
- Shapiro, M. (1995). A case of distant assimilation: /str/ → /ʃtr/. *American Speech*, 70(1): 101-107. doi: 10.2307/455876
- Sortore, J. (2012, July 6). *Colorado 6* [Speech audio recording]. International Dialects of English Archive. <https://www.dialectsarchive.com/colorado-6>

- Sparky's Joint. (2017, March 15). *Accent tag Washington state* [Video].
YouTube. <https://youtu.be/FiUtG4nN7YQ>
- Spiro, S. (1999). *An Arabic-English dictionary of the colloquial Arabic of Egypt*. Beirut, Lebanon: Librairie du Liban Publishers.
- Stewart, D. J. (1999). Die ägyptisch-arabischen dialekte, vol. 4: Glossar, Arabisch-Deutsch. *Journal of the American Oriental Society*, 2(119), 335-337. <https://doi.org/10.2307/606131>
- TalkInArabic. (2024). *Egyptian Arabic: Get well soon!*
<https://learn.talkinarabic.com/get-well-soon-egyptian-arabic/>
- Tatman, R. (2017). Gender and dialect bias in YouTube's automatic captions. *Association for Computational Linguistics*, 53-59.
<https://aclanthology.org/W17-1606>
- Turner, B. S. (2006). *The Cambridge dictionary of sociology*. Cambridge, UK: Cambridge University Press.
- Tonys Channel. (2013, May 30). *Accent tag Mexican* [Video]. YouTube.
<https://youtu.be/ZkoYwU0Paq4>
- A university course in practical phonetics – students' book 1: Consonants, vowels and diphthongs*. (2001). Cairo, Arab Republic of Egypt: Egyptian International Publishing Company – Longman.
- Versteegh, Kees. (2014). *The Arabic language* (2nd ed.). Edinburgh: Edinburgh University Press.
- Wardhaugh, R. & Fuller, J. M. (2015). *An introduction to sociolinguistics* (7th ed.). USA: Wiley Blackwell.
- Wells, J. C. (2000). *Longman pronunciation dictionary*. Pearson Longman: Pearson Education Limited.
- Woidich, M. (1996). Rural dialect of Egyptian Arabic: An overview. *Égypte/Monde arabe*, 8(7), 325-354.
<https://doi.org/10.4000/ema.1952>
- Woidich, M. (1997). Egyptian Arabic and dialect contact in historical

- perspective. In Afsaruddin, A., & Zahniser, A. H. M. (Eds.), *Humanism, Culture, and Language in the Near East: Studies in Honor of Georg Krotkoff* (pp. 185-197). Winona Lake, Indiana: Eisenbranus.
- Woidich, M. (2007). 'Āxir ittībb innār: Texte zur volksmedizin aus Ilbašandi in der oase Dakhla. In Vrolijk, A., & Hogendijk, J. P. (Eds.), *O ye Gentlemen: Arabic Studies on Science and Literary Culture. In Honour of Remke Kruk* (pp. 143-170). Leiden/Boston: Brill.
- Woidich, M. (2020). The Dialect of Farafra Oasis in the Western Desert of Egypt. In Taha, Z. A. (Ed.). *Revisiting levels of contemporary Arabic in Egypt: Essays on Arabic varieties in memory of El-Said Badawi* (pp. 19- 41). Cairo: The American University in Cairo Press.
- Wolfram, W. & Johnson, R. (1982). *Phonological analysis: Focus on American English*. USA: Center for Applied linguistics.
- Wolfram, W. & Schilling, N. (2016). *American English: Dialects and variation* (3rd ed.). UK: Wiley Blackwell.
- Yip, M. (2002). *Tone* (1st ed.). Cambridge: Cambridge University Press.

المراجع العربية:

- Bēt Al Mashāwy Al Turkey اللهجة العرايشية في (2020, June 11). بيت المشاوي التركي [Learn Al Arēshi dialect in a quarter of an hour] [Video].
 ربيع ساعة
 YouTube. <https://youtu.be/nGjelXRiD5Y>
- Garēdat Al Badēl السبيل تكشف عن فقر ومعاناة أهالي (2014, March 12). جريدة البديل [The floods reveal the poverty and suffering of the people of
 سوهاج
 Suhag] [Video]. YouTube. <https://youtu.be/K5Wy2rfF3c4>
- Al Hayah TV Network. (2015, October 22). الحياة الآن – يعاني أهالي مدينة طما بسوهاج [Life Now – The people of Tuma,
 العديد من المشاكل و نقص الخدمات الأساسية.
 Suhag, have many problems and lack of basic services] [Video].
 YouTube. <https://youtu.be/DpuSZeuNpkl>

- Al Hayah TV Network. (2016, February 25). *الحياة حلوة – النجم أحمد رزق ... يعلم*. [Life is Pleasant – The star Ahmed Rizq teaches the star Razān Maghraby the dialect of Alexandria] [Video]. YouTube. <https://youtu.be/agtBbXJIxXw>
- Hya TV – المنسي مع أنجي هشام مع الفنانة فاطمة عيد | الحلقة (2023, April 18). *قناة هي – الكاملة* [The Forgotten presented by Engy Heshām with the artist Fatma ‘Īd | The full episode] [Video]. YouTube. <https://youtu.be/O-fMp0fVsMk?si=vq8j2c0wjTQFTkE>
- Kassem, M. (2024). *تمثيل – فاطمة عيد – تعديل بيانات* [Data modification – Fatma ‘Īd – acting]. elcinema.com. <https://elcinema.com/person/1098237/enrich>
- Mahmoud Nagy. (2019, September 1). *اهالي المنطقة القديمة - Quseir city - مدينة القصير*. [People of the ancient region - Quseir city - Skateholder review 2019] [Video]. YouTube. <https://youtu.be/xnPzrRhn3A?si=WkaU-Qg5BylY665j>
- Monawa‘āt Maṣriya *الفرق بين اللهجة الاسكندرانية و*. (2018, January 24). *منوعات مصرية – القهراوية* [The difference between the Alexandrian and the Cairene dialects] [Video]. YouTube. https://youtu.be/i_u3DTtw7N8?si=MJGO5OORw-vbB6uq
- Muḥammad El Mat‘ny *لجنة مبادرة حياة كريمه*. (2021, January 2021). *محمد المطعني 2* [The committee of the decent life initiative touring the Caiman village center in Esna, Luxor] [Video]. YouTube. <https://youtu.be/9d-2ZvMlsNQ>
- Mustafa Al Rasekh *شاهد تقرير يظهر منزل محمد*. (2019, January 30). *مصطفى الراسخ* [Watch a report about Muhammed Salah’s house in his hometown in Nagreg village, and also, his relationship to jasmine farming] [Video]. YouTube. https://youtu.be/-_3JrelA3Fg
- Al Nag‘aweya *النجاوية | قصب قنا .. تعرف علي طرق*. (2019, October 10). *النجاوية المستوردة* [The people of Nag‘ | Qena’s sugar cane]

- .. Find out the routes of transport and export, and the major importing countries] [Video]. YouTube. https://youtu.be/cga2gcG_0CU
- Al Nahar TV. (2018a, April 15). باب الخلق | تقرير عن الست ام محمد: لما باجوع العيش .. نعمة ورضا [The People's Gate | A report about Muḥammad's mother: When I am hungry, the bread is right here .. It's a blessing] [Video]. YouTube. <https://youtu.be/WSDIWZcomWI>
- Al Nahar TV. (2018b, July 22). باب الخلق | محمود سعد في متحف السمسمية ببورسعيد [The People's Gate | Mahmoud Saad in the museum of El Semsemiya instrument in Port Said] [Video]. YouTube. https://youtu.be/7g53EyqRN3U?si=CxylPOkkW_Cy_ITE
- Al Nahar TV. (2018c, August 17). باب الخلق | طبعاً عارفين ان دمياط بلد المشبك .. [The People's Gate | Of course you all know that Damietta is the country of el meshabek sweets .. Watch how el meshabek is manufactured] [Video]. YouTube. <https://youtu.be/tXSQi44hztw>
- Al Nahar TV. (2018d, November 25). باب الخلق | محمود سعد مع الحاج أحمد في الفيوم يكشف أسرار صناعات الليف [The People's Gate | Mahmoud Saad interviews Mr. Ahmed in El Fayoum who reveals the secrets of loofah industries] [Video]. YouTube. <https://youtu.be/R4Z79Lxae-8?si=sYHi1bv-9CT1X40C>
- Al Nahar TV. (2019, October 25). بيت المساجيري عمره 300 سنة بيت المساجيري عمره 300 سنة من من اقدم الجدران الموجودة ف مدينة السويس [House of El Masagēry is of 300 years of age | From the oldest houses in Suez city] [Video]. YouTube. <https://youtu.be/9lBjjqZ5PGg?si=xk5lcjSx2-FhlIUv>
- Al Nahar TV. (2021a, January 18). باب الخلق | أسرار وحكايات من "سيدي براني" المنطقة المنسية لكن مازالت قوية [The People's Gate | Secrets and stories about "Sēdi Brāni" the forgotten place yet still strong] [Video]. YouTube. <https://youtu.be/ydpx0tA9UOo?si=APuhczeOdJ9N-u3K>

- Al Nahar TV. (2021b, March 15). *باب الخلق | سيدي براني و محاكاة بين البشر و الطبيعة في* [The People's Gate | Sēdi Brāni and simulation between people and nature in the desert] [Video]. YouTube.
<https://youtu.be/skaTb67r4Lg?si=RSpdbokVrc518SY4>
- Al Qanāh Al Thāmena. Al Telefezyōn Al Masri *القناة الثامنة. التلفزيون المصري* [The demands of the people of El Bayadiya city in Luxor] [Video]. YouTube.
<https://youtu.be/gi-lhdR65Yk>
- Sameh Mohamed. (2021, March 20). *عرايشي في الإسماعيلية | الجزء الاول ... vlog#* [A man from Al Arēsh in Al Ismailia | Part 1 ... vlog#] [Video]. YouTube. https://youtu.be/X6RF_9pOpNg
- Solimān, A. *اللهجة المصرية بين التراث و المعاصرة*. (2016). عطية سليمان. [The Egyptian dialect between the heritage and the present]. Cairo: General Egyptian Book Organization.
- VideoYoun7 | *تعرف طقوس و عادات بدو مطروح في* (2017, June 2). *قناة اليوم السابع* [Become acquainted with the rituals and customs of Matruh's Bedouins in The Holy Month of Ramadan .. Their main dish is in forenoon] [Video]. YouTube.
<https://youtu.be/R5El6pMsZfQ?si=NAOEMBytOY1XhPK>
- VideoYoun7 | *مبادرة حياة كريمة تحول قرية* (2021, February 27). *قناة اليوم السابع* [The decent life initiative turns 'Al Ashrāf village in Aswan into paradise on earth] [Video]. YouTube.
<https://WTJPP7WtSjA>
- M Yawmeyāt maruoma M maruoma *يوميات* (2020, October 29). *احتفال أهل الاسكندرية. بمولد النبوي الشريف مشروب الشرابات بالموز. كل عام وانتم بخير.* [The people of Alexandria celebrate the memorial of the Prophet Muḥammad's birthday (PBUH). A banana syrup beverage. May you be well every year.] [Video]. YouTube. https://youtu.be/_IPR4g0NYMM

Appendices

Appendix A

Consonants of International Phonetic Alphabet (IPA) revised to 2020

CONSONANTS (PULMONIC)

© 2020 IPA

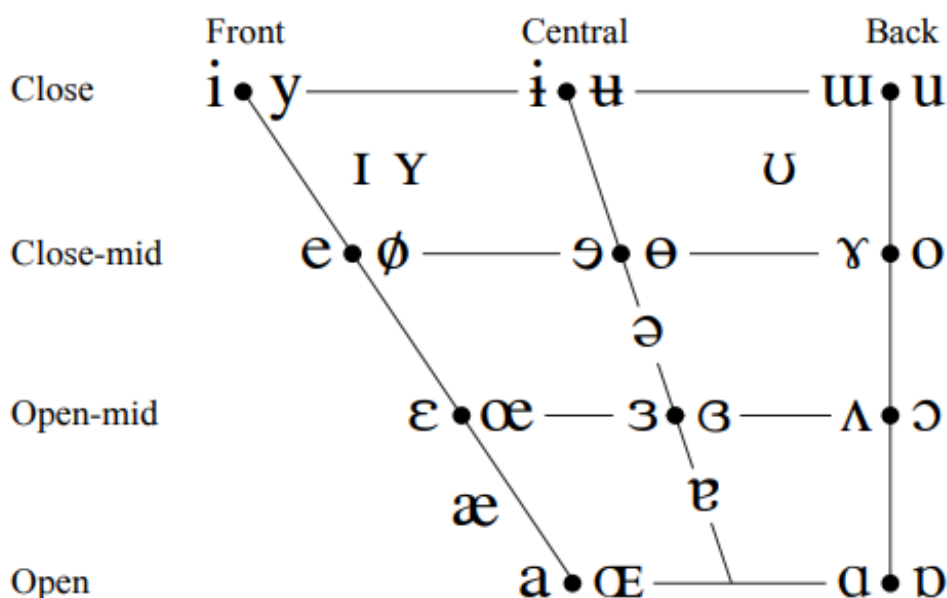
	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

Appendix B

Vowels of International Phonetic Alphabet (IPA) revised to 2020

VOWELS



Appendix C

List of American English (AE) Diphthongs

Phonological Description	Diphthong	Examples
Front Close	<u>/eɪ/</u>	e.g., /'deɪ/ <i>day</i>
Back Close	<u>/aɪ/</u>	e.g., /'taɪm/ <i>time</i>
Back Close	<u>/aʊ/</u>	e.g., /'taʊn/ <i>town</i>
Back Front Close	<u>/ɔɪ/</u>	e.g., /'ɔɪl/ <i>oil</i>
Back Close	<u>/oʊ/</u>	e.g., /'gəʊt/ <i>goat</i>

Note. Adapted from *Handbook of the International Phonetic Association*, 1999, p. 180, J. C. Wells, 2000, p. inside front cover, *A university course in practical phonetics*, 2001, p. 118, L. Mojsin, 2016, p. 3, W. Wolfram, and N. Schilling, 2016, p. xvii.

Appendix D

List of Abbreviations

List	Full Form
AAVE	African American Vernacular English
ABC	American Broadcasting Company
AE	American English
ANAE	Atlas of North American English
CA	Classical Arabic
CBS	Columbia Broadcasting System
CD	Central Delta
CNN	Cable News Network
DFs	Distinctive Features
DuMont	DuMont Television Network
EA	Egyptian Arabic (colloquial)
GP	Generative Phonology
IDEA	International Dialects of English Archive
IPA	International Phonetic Alphabet
ME	Middle Egypt
NBC	National Broadcasting Company
NCS	Northern Cities Shift
NYC	New York City
SPE	Sound Pattern of English
UE	Upper Egypt
U.S.	United States
VOA	Voice of America
WDO	Western Desert Oases

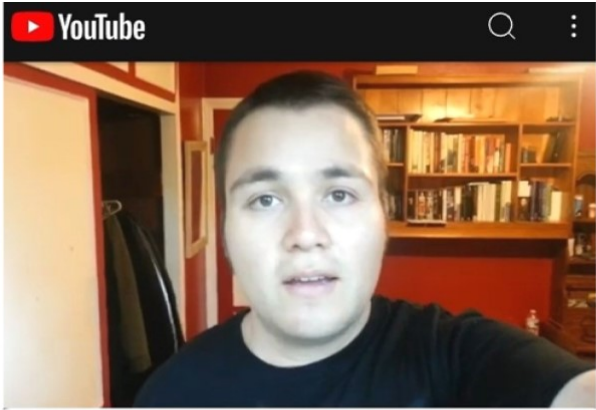
Appendix E

List of Diacritics of Generative Phonology (GP)

List	Full Form
[]	Display the phonetic properties of DFs
+	Present feature
–	Absent feature
→	Change to
/	In the environment
—	The environment
∅	Empty Phoneme


Appendix F

The Researcher's Questions and the Participant's Response on his YouTube Channel




Description

Accent Tag Mexican

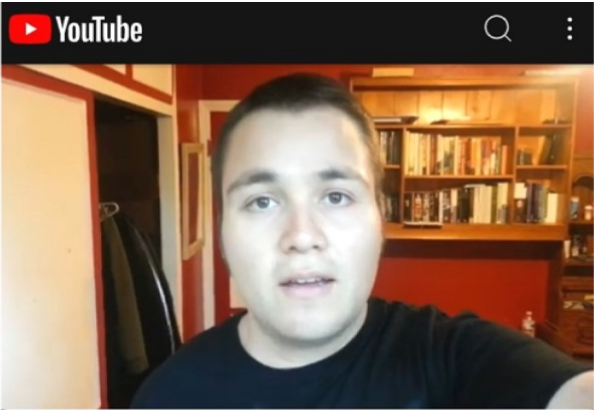
 Tonys Channel

30	2,732	2013
Likes	Views	30 May


Here I did an accent tag video for my Mexican accent. Feel free to let me know what accent you heard or anything you want to say about it.





 **Tonys Channel**
117 subscribers


[Videos](#) [About](#)







Comments 14




 @pinkparadise-17 1 year ago
Thanks for the video ..
I would like to ask you : which US state are you from ? and when did you move to the US ? Was it when you were a child ? At what age ?

 1   2 

 @tonyschannel2281 1 year ago
I am from California. I moved to the US when I was a child, I was 4 years old.

 1  

 @pinkparadise-17 1 year ago (edited)
@tonyschannel2281 Thanks a lot for responding

التنوع الصوتي للمقطع في اللهجات المصرية والأمريكية: دراسة في علم الصوتيات الاجتماعية

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دكتوراه - قسم اللغة الإنجليزية و آدابها

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المستخلص

تتناول هذه الدراسة التنوع الصوتي للمقطع لبعض اللهجات المصرية والأمريكية المختارة في العصر الحالي. ولذا فإنها تتبنى دراسة مقارنة آنية في تحليل البيانات في محاولة لمقارنة اللهجات المصرية والأمريكية المختارة من خلال المحادثات اليومية. وتعتزم هذه المقارنة أن تزيل الالتباسات المختلفة في المحادثات العامة بواسطة تلك اللهجات عن طريق عرض التشابهات والاختلافات لتغير المقطع الصوتي بين بعض اللهجات المصرية والأمريكية. وتقوم هذه الأطروحة بفحص عشرون كلمة في كلاً من اللهجات المصرية والأمريكية والتي تمت ملاحظتهم بعناية، وجمعهم، وتحليلهم. وتم اختيار تلك المصطلحات من منصة اليوتيوب ومن موقع الأرشيف الإنجليزي للهجات الدولية. ويتضمن التنوع الصوتي للمقاطع المختارة إثني عشر عملية صوتية بين اللهجات المصرية والأمريكية: التقديم، الإرتجائية، التقصير، الإطالة، التضعيف، التشديد، مماثله رجعيه، الإقحام، التسنين، TH- توقيف، /hæ/- إقحام، و/h/- إسقاط. وسوف يتم إجراء هذه الدراسة المقارنة بداخل نظرية علم وظائف الأصوات التوليدي والتي قُدمت بواسطة ناعوم تشومسكي وموريس هالي (1968)، بداخل الإطار الأشمل وهو علم الصوتيات الاجتماعية والذي قُدم بواسطة مانفرد فيديتش (1952) وويليام لابوف (1991). وتوافق نتائج البحث علي فرضية الدراسة المقارنة. إن النتيجة الأساسية لهذه الدراسة هي أن التنوع الصوتي للهجات المصرية والأمريكية له طريقتة الخاصة في النطق، وتلك الطرق تساعد علي إحراز نطقاً أكثر تبسيطاً وإسترسالاً. وإلي حد كبير، توصي هذه الدراسة بأنه يجب أن يقوم اللغويون والمتخصصون بعلم اللهجات المصريون بإنشاء موقع إلكتروني رسمي في مصر والذي يقوم بعرض ملفات صوتية ومرئية للهجات المصرية علي قاعدة بيانات مجانية علي شبكة الإنترنت، بعبارة أخرى موقع أرشيف اللهجات المصرية.

الكلمات المفتاحية: التنوع الصوتي، عملية صوتية، اللغة العربية المصرية، اللغة الإنجليزية الأمريكية، اللهجة، نظرية علم وظائف الأصوات التوليدي