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The Comparison of Segmental Phonological Structure of Words in Arabic of Egypt and Syria

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***Abstract*—The main focus of this study is to describe the order of sound in two variation of Arabic language namely Egypt and Syria. The segmental phonological structure of words in these two languages is represented as language specific phonotactic templates especially the syllable structure in words.** The aims of this study are**: (1) to describe the similarities and differences of the order of sound into words pattern; (2) to describe the relationship between Egypt language and Syria from linguistic behavior process; (3) to describe consonant or vowel substitutions that enlarged by the processes of assimilation and syncope linguistic feature. The data used in this research was taken through interviews with Egyptian and Syrian Arabic speakers who studied at the Faculty of Adab and Humanities UIN Jakarta. This research conducted with the method and framework of diachronic linguistics theory that applies quantitative and qualitative approaches. Both methods were used to find evidence and the segmental phonological structure of words between the two languages are studied. Based on lexicostatistical technique, it is known that the similarity percentage of the Egypt and Syria Arabic languages are 28,5 % and the difference are 71, 5%. A number of finding that explain the characteristics of those languages in the rules of six pattern of segmental phonological structure, assimilation of sound which is occurred in the middle of the words, and syncope.**

Keywords—similarities, differences, syncope, assimilation

I. INTRODUCTION

The language of a people is their identity as it supports them in a view of realization. This essay observes two varieties of regional Arabic: Egypt and Syria. This study discusses language variations at the word level, especially pronunciation of Egypt and Syria. The purpose of this paper is to present the real expression of similarities and differences of pronunciation at the word level. The Egyptian and Syrian words that have same meaning but may be pronounced similar or different are considered to be a unit of language. Furthermore, the words are examined to have a certain character that can be used to look at various aspects such as: disparity of language sounds, and social innovation. Syria as a country is an inland for several ethnic groups which means they may speak in different language. The conflict and civil war have dramatically altered relations between the country's many ethnics and sectarian communities [1, p.5].

This research uses a dialectological point of view. The object of the research is the Arabic spoken language (colloquial Arab) which is spoken in Egypt and Syria. In Egypt there are four dominant languages spoken, namely: 1) Classical Arabic (henceforth CA), 2) Egyptian Arabic (EA), 3) Modern Standard Arabic (MSA), and 4) English [2, p.3]. EA, or *al-'amiyyah* "the common" is the mother tongue used for every-day communication in Egypt and serves as a marker of Egyptian identity and national culture [3, p.37]. EA is used as mainly means of everyday communication, EA is considered a language which plenty vocabularies are borrowed from Coptic, Turkish, Persian, Greek, Italian, French, and English. According to that reason EA is regarded as "Permissive", "promiscuous" or "weak" as mentioned by [2, p.38].

On the other hand, in Syria Arabic is the official language. In addition there are four dialects of Arabic: Turkish, Kurdish, Armenian and Aramaic. At present, these four languages are spoken in everyday life [4, p.1]. Generally, Syria and Egypt accept those languages which are belong to variety of Arabic. Both of them are absolutely same, it is mentioned by following data:

TABLE 1 THE SIMILARITY OF WORD'S SOUND AND MEANING

Egypt	Syria
ابن	ابن
ولد	ولد
هوا	هوا
كلب	كلب
نار	نار
فرك	فرك

A few, indeed, t could be mentioned that Egypt stands as a language disparate from Syria. More recent, in this study, the terminology 'isolect' was used for the neutral or indifferent term between language and dialect for example:

TABLE 2 THE DIFFERENCE OF WORD'S SOUND AND MEANING

Gloss	Egypt	Syria
'saliva'	لعاب	بِزاقْ
'straight'	على طول	دُغْرِيْ
'hot'	سخن	حَامِيْ

The central point of this work is Arabic of Egypt and Syria as a local Arabic variation in linguistic phenomena. This study

investigate whether they are actually the same language viewed from the perspective of dialectometric calculations.

II. METHOD

This study employed qualitative method. The data are taken from some informants who were students in the magister program of Adab and Humanity faculty, Syarif Hidayatullah Jakarta. These informants were asked to say plenty of words which are targeted in their isolect. There are 200 words which are used as the instrument in this study, covering 200 words of Swadesh list, 52 words of body parts and 98 words of verbs and 50 words consist of noun and adjective. Every word in was transcribed using International Phonetic Alphabet transcription. The concept of dialectometric calculation refers to Seguy as cited by [5, p.122]. Dialectometry is the quantification of geolinguistic variables used to calculate the unit of language that has the inequality of items compared in the two regions. The unequal elements of language are then converted into percentages or index scores to show linguistic distance between two points of observation, as done by [6]. The following is Seguy's dialectometric formula as quoted by [7, p.96].

The use of the concept range of dialectometry is suggested by Lauder [8] and Ayatrohaedi [9] were employed. The formula are such as follow: 1) If the score for **d** is above 70%, means that two areas are different in language, 2) if the score is in range = 51-70%, means different in dialect, 3) if the score is in range = 41-50% means different in subdialect, 4) if the score is in range = 31-40% means different in speech, and 5) if the score in range below 30% means two areas are not different in language. Using this formula, lexical differences between Egypt and Syria will be counted. The result is used to determine in which level of differences that they are clustered. The second is classifying the similar vocabularies and drawing the patterns of sound. This includes finding sound correspondences and variation based on language change.

Many experts have investigated the Arabic through dialectology stand point. First, Theodoropoulou and Tyler [10] investigated the perception of Arabian dialect variations in the Arab world. This study reveals the perception of maps illustrated by the dialeg of Arabic known by the students. The result of correlation analysis between language barrier and student perception shows that the participants divided Arabic dialects into five main dialect groups: Maghreb, Egypt and Sudan, Levant, Gulf and Somalia [10, pp. 21-41].

Second, Ismail investigates the dialect of Damascus using the sociolinguistic analysis of the old linguistic variables. He uses statistical analysis that shows the form [h-ful] and the form of zero [11. Pp. 249-270]. The results of the study reveal two conclusions: (i) in the dialect of Damascus, there is a form of zero suffix as the main characteristic; (ii) The geographic distribution of this feature combined with statistical information indicates that the [h-less] form is characteristic of the dialect spoken by communities along the coast; features spread to inland locations as innovation. It corresponds to the map described by Behnstedt that the variation between [h] and Ø is present in Damascus. This occurs as a direct result of the geographical location of urban areas adjacent to h-less and [h-ful] dialects, and or mixtures in the background of people using different dialects. Based on the results of literature search conducted by this researcher, has not found a study related to the topic that became object in this article. Here is a description of comparing Egypt and Syria in level of word.

III. DISCUSSION

The following table indicated the dialectometric score in one **n.** It is **n** = 200 (Swadesh words). Observed are the same features of the word-forming segment phonological structure, as follows:

$$\frac{s \times 100}{n} = d\ \%$$

From data analysis, it is shown that the result of dialectometry with **n** of all words between AE and ASy is 28,5 %. Based on the range, AE and ASy was just similar in speech. By using **n** of Swadesh words, the result of dialectometry between the two dialects is 28,5 %, which means there is no different between them.

In its website, Ethnologue [12] clustered AE is different with ASy. The different features are: 1) in AE there are three kinds of segmental phonological structure such as: (a)Eastern Egyptian Bedawi spoken Arabic with suffix segmental phonological structure [avl]; (b) Egyptian spoken Arabic with [arz] and (c) Saudi spoken Arabic [aec]; 2) North Laventive spoken Arabic [apc] Syria, [12, p.1]. It means that the result of segmental structure e that both of the results show that AE and ASy are actually different dialect.

Comparing Egyptian and Syrian pronunciation, there are six patterns found in the tested lexicons namely: 1) Egyptian lexical pronunciation has some similarities with Syrian is indicated as the first pattern; 2) Egyptian has lexically different in one phoneme level with Syria is referred as the second pattern; 3) Egyptian has lexically different in a word level with Syrian is indicate as the third pattern; 4) Egyptian has lexical with suffix [-ah] however Syrian has zero [θ]; 5) Egyptian has different in a word such a word preceded by [b] is indicated as pattern fifth; 6) a word that has the same meaning in Egyptian, however two or three form of word in Syrian. The examples are illustrated in the following table.

TABLE 3. SOUND CORRESPONDENCE 1, PATTERN 1 EGYPTIAN LEXICAL PRONUNCIATION

Gloss	Egypt	Syria
'smoke'	دخان	دُخَانٌ
'father'	اب	اب
'father'	والد	والد
'father	بابا	بَابَا
'moon'	قمر	قَمَرْ
'tooth'	سنان	سنان

Lexical pronunciation similarities in table 3 illustrates the pattern in two points of consideration i.e. sound correspondences and it doesn't indicate a model of language

changes. This sound correspondence is found in 57 glosses. The following data in table 4 shows that the vowel sound [e] in Egypt corresponds to vowel sounds [a] in Syria. As can be seen in gloss 'to float', Arabic of Egypt (henceforth AE) has /يطف/ /jetˁfu/ , in the meantime Arabic of Syria (henceforth ASy) has /يطفو/ /jatˁfu/ . This sound correspondence is found in 12 glosses i.e. 'new'; 'to burn', black' and 'to walk', etc. From the table, it can also be said that AE is exactly same as ASy. Another vowel sound correspondence was also found in this study. The vowel sound [i] in AE corresponds to vowel sound [ə] in ASy. This sound correspondence is found in 24 glosses.

TABLE 4. SOUND CORRESPONDENCE 2, PATTERN 2 EGYPT HAS LEXICALLY DIFFERENT IN ONE PHONEME LEVEL WITH SYRIA

Gloss	Egypt	Syria
'to float'	يطفو	يطفو
'to float'	يعوم	يعوم
'new'	جديد	جَدِيْدْ
'to burn'	يَحرَقْ	يَحرَقْ
'black'	أَسْوَدْ	أَسْوَدْ
'to walk'	مَشْيْ	مَشْيْ

According to the table 4, the sound correspondence mostly occurred in two-syllable words and in the first syllable. For example, in the gloss no. 8 to float', AE used / جديد / /dʒedi:d/, meanwhile ASy has /dʒadi:d/. Another example is the gloss 'black' / أَسْوِدْ / which is expressed with /ʔaswed/ in EA and /ʔaswed/ in ASy.

TABLE 5. SOUND CORRESPONDENCE 3 PATTERN 3: EGYPT HAS LEXICALLY DIFFERENT IN WORD LEVEL

Gloss	Egypt	Syria
'seed'	ثقاوي	حُبُوْبْ
'to swim'	يعوم	-
	سباحة	سِبَاحَةْ
'to give'	يدي	يَعْطِي
	-	يُكْرِم

In table 5 shows that both AE and ASy have segmental phonological structure of different vocabulary to refer the same object and the same meaning. The surface structure of these vocabularies are found in 10 glosses.

TABLE 6 ZEROIZATION. PATTERN 4: EGYPT HAS LEXICAL WITH SUFFIX [-AH] HOWEVER SYRIA HAS ZERO [Θ]

Gloss	Egypt	Syria
'star'	نجمة	نَجْمْ
'meat'	لحمة	لَحْمْ
'dust'	عفرة	غبَارْ
'tooth'	سنة	سِنّ
'bird feathers'	ريشة	رِيْشْ

In table 6 shows that AE has lexical with suffix [-ah], however ASy has zero [θ]. Zeroization is the elimination of phonemic sounds as a result of economizing of pronunciation [13]. Based on this concept zeroization is the phonemic elimination of sound as a result of formality of pronunciation. This event continues because it has been secretly supported and approved by the community of its speakers. The surface structure of these zeroization vocabularies are found in 5 glosses.

TABLE 7 PROTHESIS. PATTERN 5: ASY HAS LEXICAL WITH PREFIX [B] HOWEVER EGYPT HAS ZERO [Θ]

Gloss	Egypt	Syria
makan	ياكل	بِيَاكُلْ
main	يلعب	بِيِلْعِبْ
pegang	يمسك	بِيِمْسِكْ
tertawa	يضحك	بِيِضْحَكْ
tiup	ينفخ	بِيِنْفُخْ
nyanyi	يغني	بِغَنِّيْ
takut	يخاف	بِخَافْ

In table 7 shows that AE has lexical with suffix [θ], however ASy has has lexical with prefix [b]. Data in table 7 indicates that addition prefix [b] in those words are classified as anaphticsis. It is a sound change by adding a vowel between two consonants. The usual sound is a weak sound. Due to the addition of vowel between the two consonants, it affects the addition of syllables of word itself. Anaphticsis is classified into three types of: 1) prothesis, 2) epenthesis, and 3) paragogue [13, p.44]. The following data explain about: 1) prothesis is the process of adding sound at the beginning of a word, for example: in AE / ياكل / is pronounced by /ya:ko:l/, however, a word / بِيَاكُلْ / in Asy is pronounced by /bija:kul/. The surface structure of vocabularies AE and ASy are identified as prothesis are found in 7 glosses. Furthermore, in this data, epenthesis and paragogue aren't found.

TABLE 8 PATTERN 6: AE ONLY HAS ONE FORM

Gloss	Egypt	Syria
'dust'	رماد	رَمَاد
	-	صَفُوَةْ
'to burn'	يَحرَقْ	يَحْرق
	-	يَشْعِلْ
'wet'	مبلول	مبلول
	-	رَطِبْ

The data in Table 8 shows that the vocabulary in ASy is more varied than AE. This is shown by the fact that one word in AE has two words in ASy with the same meaning and the same referent, for instance: the gloss / يضحك / which is pronounced by /jedˁhak/ in AE will appear / بِيِضْحَكْ / that is pronounce by /bijidˁhak/ or / عَمْ يَضْحَكْ / which sound like /ʕamjadˁhak/. The surface structure of vocabularies which AE only has one form of segmental phonological structure, anyhow Syria has two form segmental phonological structure. There are five vocabularies in AE will emerge two gloss in ASy. It means that Syrian is more creative to grow their vocabularies than Egyptian.

TABLE 9 ASSIMILATION

Gloss	Egypt	Syria
'wife'	مَرَأَةْ	مَرَةْ
'wet'	مبللول	مَبْلُوْلْ
'to give'	يدي	يَعْطِي

Besides sound **correspondence,** there were also variations based on language change analogy. The first one is

assimilation, the sound changes where two phonemes in proto languages change to be one phoneme in current language [14, p.85]. At present study, assimilation of the sound variation is actually not in phoneme as it doesn't change the meaning. The assimilation occurred between AE and ASy and was found in 3 glosses. The assimilation occurred in the sound in middle of the word where the certain sound is influenced by nasal sound around. For example, the gloss 'wife' in AE is / مَرَأَةْ /or pronounce as /marʔah/, meanwhile in ASyis / مَرَةْ / or pronounce /marah/. From this example, [r] and [ʔ] are both produced in trill. However, it is produced in different manner. Sound [r] is trill sound meanwhile sound [ʔ] is glotal sound. When assimilation occurred, [ʔ] merged into [r] sound.

TABEL 10 SINCOPE

Gloss	Egypt	Syria
'swollen'	وارم	وَرَمْ
'flower'	زهور	زَهْر
'lake'	بحيرة	بَحْرَة
'hot'	سخن	حَامِيْ

In this work, syncope was also raised. The concept of syncope refers to the loss of sound in the middle part of the word [14, p.91]. This variation occurred in four glosses and occurred in AE and ASy. For example, gloss 'swollen' in AE is / وارم / is spoken by /wa:rim/, then in ASy / وَرَمْ/ is pronounced /warom/. In this context, sound [a:] is deleted and the vowel sound [a:] in the first syllable change into [r]. In gloss 'flower', / زهور / is said /zuhu:r/ syncope occurred when sound [u:] in the second syllable of [zaher] was deleted. After that, the sound [u] in the first syllable changed into vowel sound [a] and [u:] in the second syllable changed into vowel [e] so it became [zaher]. From the those findings, mostly there are more than one sound disappeared and there was also vowel converse. For this reason, it was not full syncope.

IV. CONCLUSION

The Arabic dialect of the Egyptian and Arabic dialects of Syrian has a close relationship as seen in the results of dialectometric calculations and lexical variation patterns in both. Regardless of the linguistic or cultural aspects of the Arabs, this close relationship shows that it is important to explore the elemental properties in every utterance, especially for scientific and practical purposes. Assuming that the Arabic they use to carry out daily activities becomes part of their language and identity. The finding of this study are such as follow: (1) based on 200 word (Swadesh vocabularies), there are six pattern of segmental phonological structure different between AE and ASy look at from similarities and differences as stand point; (2) to describe the relationship between Egypt language and Syria from assimilation as linguistic behavior process; (3) to describe consonant or vowel substitutions that enlarge by the processes of syncope linguistic feature.

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