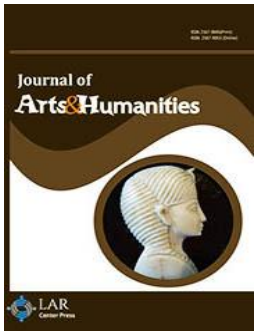

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Variation and Variables in some Arabic Varieties

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ABSTRACT

The main purpose of this paper is to describe some phonological characteristics of three varieties of Arabic; Syrian, Kuwaiti and Sudanese. This is done to understand and predict the differences which occurred in the development of these languages and their relation to the common base of the Standard Arabic language. A descriptive analytic account of phonological features of the three dialects will be given to show how some essential patterns of Arabic phonology and the whole vowel and consonant systems have been affected by processes like deletion, metathesis, and substitution. Therefore, dialectal variation could highlight some important phonological differences between the standard form of Arabic and other modern varieties.

Key words: Phonology, Dialectology, Phonological processes.
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1. Introduction

All living languages are in a continuous state of change and development and Arabic is no exception. Between the fifth and the twenty-first centuries it has undergone drastic changes and diverged into numerous geographical dialects that came to take their special distinct shapes in the present time. Any mention of the old forms of Arabic words or features of pronunciation points out one unified dialect of the language at one particular stage of its development in a generalized way. It is not historically clear when it was possible to recognize several distinct dialects of Arabic since historical studies in these areas are very much lacking. The spoken varieties were not recorded and thus left no trace of their existence. The linguistic development of the vernacular forms of Arabic are controversial. One theory might be that Arabic started to change and develop spoken dialects early in its history as a result of the normal passage of time and of subsequent regional differences and geographical and regional indigenous influences (Beaston, 1967). During this long period of development, some important changes took place in the phonology of the various varieties of Arabic. They gradually made

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their pronunciation increasingly different from the varieties of the early Arabic. Sound change refers to change in pronunciation of words and phonemes overtime when these changes seem to be attributed to phonetic and phonological causes, Trask (1996) indicates that: "All types of changes in pronunciation are collectively known as phonological change, or, using a more traditional term, as sound change". In fact pronunciation change usually involves factors like analogical leveling, expressive change due to sound symbolism, spelling pronunciation, language contract and so on. This study falls within the field of structural dialectology which is defined as "the study of dialects". Dialects are intended as varieties of language differing in pronunciation, grammar or vocabulary, but are not so different as to cause misunderstanding. Dialectology is concerned with concerned with analyzing and describing related language varieties, with reference to their prominent differences and similarities. It is also involved in developing theoretical frameworks for such analysis and description, and fro arriving at generalizations and explanatory hypotheses about the nature of linguistic distinctions and variation (Malmkjar, 1991). Dialectology as a discipline began in the 19th century with the development in Western Europe of dictionaries and grammars of regional dialects. Variation in languages most commonly occurs as a result of relative geographic or social isolation and may affect vocabulary or features of grammar or pronunciation or both (Encyclopedia Britannica). Variation is found in all parts of the language; in lexicon, the phonology, the grammar and the semantics. Variation can be looked at from different angles and using different variables. Variables refer to "the units in a language which are most subject to social or stylistic variation, and thus more susceptible to change in the long term" (Crystal, 1997). Hence, variables can be phonological, grammatical, and lexical. This study will deal with phonological variables only which will illustrate the amount of variation found in the three dialects of Arabic under study in comparison with MSA. The study, then, may also be considered a historical comparative account of four Arabic varieties, taking the phonological variables in mind. The first in the MSA (MSA) which is the basis for comparison and the second is the Syrian dialect of Arabic (SA), Kuwaiti dialect (KA), and Sudanese dialect (SA) which are all spoken varieties which exhibits different types of linguistic variation. The importance of the study lies in the fact it provides a descriptive account of phonological diversity among different Arabic varieties to examine the universality of language change. The main objectives of this study is to attempt an approximate descriptive account of phonological variation in the speech of Syrian, Kuwaiti and Sudanese dialects in comparison to MSA. It intends to answer the question; "could linguistic change result in phonological diversity of speech among the three Arabic varieties?" The researcher adopts the approach developed by Labove (1972 b) in his discussion of language change and his revelation that linguistic diversity is typically the vehicle of language change. As tested by Labov (57): "while change in patterns of communication cannot be directly observed, i.e. in real time, it can be observed in apparent time, i.e. through comparison of the communication patterns of two generations. If systematic difference between the communication patterns of the two patterns of the two generations were observed, then we have a change in progress, if not, then no such change exists".

2. Review of literature

Arabic is a Semitic language of the Arabo-Canaanite subgroup (Ruhlen, 1987). It belongs to the Afro-Asiatic family of languages- the bulk of which are spoken in Africa- which has several major branches: Semitic (including languages such as Arabic); Berber; Chadic (including languages such as Hausa); Cushitic (including languages such as Somali); and Ancient Egyptian, whose modern descendent is Coptic. Arabic and Canaanite- which includes Hebrew, Phoenician, and several extinct languages- are distantly related to Aramaic. Arabic itself is commonly subclassified as Eastern, Arabic is the variant spoken colloquially in a large region encompassing North Africa (Egypt and Sudan), the Middle East (Syria, Iraq, and the Arabian Penninsula), and Arabic countries in Asia with Levantine Arabic being part of Eastern Arabic. Grimes (1992) gives a complementary breakdown of Eastern Arabic and uses the label, Northwest-Arabian Colloquial Arabic, for Levantine Arabic. Egyptian Arabic and Levantine dialects are very similar, but morphophonemic and morphological differences cause some lack of intelligibility with Saudi Arabian dialects. Western Arabic, on the other hand, includes the dialects of Western Libya to morocco and adjacent African countries of northern Africa (Beaston 1967).

Ingham (1982) attempted a classification of Arabic dialects in Saudi Arabia. They categorized four dialectal groups. First, the North-west dialect, second, the South-west Arabian dialects, third, the Hijazi dialects, and finally, the North-East dialects are spoken by large tribes in Najd. The Anazi dialects includes dialects of the Gulf counties and some of the north Bedouin dialects. Levantine Arabic has several dialects: 1) Lebanese – Central Syrian, 2) North Syrian, and 3) Palestinian- Jordanian. Dialect areas tend to be identified with urban centers such as Damascus, Amman, and Beirut. Other differences in speech are created by Urban / rural distinctions that are seen elsewhere in Arabic-speaking countries.

A modernized form of Classical Arabic exists and is referred to as MSA (MSA). MSA is the official language. It is used in education, for official purposes, and for written communication, in books, newspapers, on television and radio, in the mosques, and in conversations between educated Arabs from different countries. In contrast, Levantine colloquial Arabic is the language of spoken communication and is used in domestic, intimate and informal settings, for example, in the home, work place and market among friends and common acquaintances. This sociolinguistic situation is called "diglossia", which arises when variants of the same language exist side by side in the side in the same linguistic community but are used for different purposes. MSA has a grammatical system known as the "root and pattern system". Words typically are made up of roots which consist of three consonants, though few have four or five, the roots un pronounceable as such, are associated with a general meaning, thus the sequence /ktb/ has an association with the meaning "writing". Patterns of vowel sequences, which can be thought of as templates, (sometimes as prefixes and suffixes, and sometimes with additional consonants) are then added to, or within, roots following general, well-defined models. These patterns then generate various nominal and verbal stems which have variety of functions.

Generally speaking, the colloquial dialects have a simpler inflectional system than Classical or Modern Arabic. They usually have less distinctions involving gender in the verb. Phonologically, language, in all of its variants, has a set of emphatic consonant contrasting with a plain set. This gives Arabic its own particular, distinctive sound. Colloquial Arabic tends to have less consonants than MSA but with more complexity in the vowel inventory and syllable structure. The view of linguistic diversity in speech communities was regarded by most linguistics as a troublesome area of research due to the hard and time-consuming nature of such works. Moreover, historical linguistics has not taken very much account of social factors in attempting to explain linguistic diversity, but rather concentrated on the effect of the structure of a language on the issue of linguistic diversity (Labov, 1972a). yet it seems that the cases of diversity are not to be found basically in the structure of languages but in the behavior of speakers. Speakers for example, in speech community manifestly attach great social importance to quite small differences in pronunciation which are arbitrary in linguistic terms i.e., one sound is just as good as another.

The impetus for studying linguistic diversity in different speech communities springs from the fact that dialects are an invaluable source of information about popular cultures. Yet, it is surprising that the thrust toward studying dialects begins only in the later half of the 19th century. Dialectology, at that time, had scored its main successes in studies of regional differentiation. Researchers had certainly been aware of linguistic distinction of social nature within a region, but had not developed systematic ways of describing them (Champers, 1995).

Earlier explanations of non-regional variation fell into one of two categories: Dialect mixture and free variation. Both views relegate variation to an extra linguistic domain, and mistakenly identify structure with homogeneity, according to Labov Wolfarm (1969) was the initiator of an elaborate body of work which broke new ground in understanding language in its social context, accounting fro change, and broadening the goals of linguistic theory. He was the first to point to interplay between social and linguistic determinants of certain linguistic alternations (Sarah, 2001). Since 1960s, linguistic diversity has become a central subject of investigation in linguistics. Indeed, Labov's studies in different speech communities have revolutionized our understanding by showing the relevance of various non-linguistic factors to the theme of linguistic diversity (Wolfarm 1969; Milroy 1987, 1992; Trudgill 1986; Labov 1994, 2001; Sarah 2001).

Many linguists and sociolinguists have elaborated on the issue of language change and language diversity (Gumberz, 1972; Labov 1965, Wolfram 1969; Milroy 1985, 1987, Trudgell 1986, 1995). One of the greatest controversies arises over how and why sound change takes place. Although

speculation about sound change can be found as early as Plato's Cratylus and was very common throughout the 18th century, it was not until the pioneering work of philologists such as Samuel Gyarmath, Rasmus Rask and Jacob Grimm, that a rigorous, systematic study of sound correspondences between cognate words of different language was undertaken, what has come to known as Grimm's Law (Grimm, 1822) documented a fairly regular correspondence between Greek voiceless stops and Germanic voiceless fricatives, " this led to the belief that sound change occurs so gradually to be virtually undetectable" (Grimm, 1822:434). The second belief arose when Hermann Grassmann and Karl Verner, discovered in the 1860s and 1870s rules from two major classes of exceptions to Grimm's Law, counter to Grimm's revelation that "sound change whatever it causes, showed the same messiness in application as other aspects of human behavior". (Grimm, 1822: 435). Grassmann and Verner showed that even the exceptions could be accounted for by general rule, they come to believe that sound change operated mechanically and without exception "unless dialect borrowing and analogy interfered with the regular pattern." (Grimm, 1822:435). As a consequence of sound change applying mechanically and without exception that is, that all eligible words were affected by it- it was supposed that sound change must progress in a phonetically gradual way. In opposition to the Neogrammarian and their view that sound change applied mechanically and without exception were the traditional philologists who insisted that "each word has its own history". (Grimm, 2001:9) In the 20th century, many linguists decedents of the Neogrammarians, acknowledge that sound change does not apply without exception, but still adhere to the notion that it is phonetically gradual, i.e., some or all of the gradualness of sound change comes about because a given sound change moves gradually through the lexicon affect first a few words then more, and then, possibly most or all eligible words. This is known as "lexical diffusion" (Wang, 1977:9). Furthermore, a sound change can create pronunciation variants which cannot social class membership, such that two or more alternate pronunciation are available to a speaker, for example, /flə/ or /flər/. Speakers might then fluctuate between one form and another depending on what sort of social impression they would like to convey. A change in social valence of one variant could allow it to spread gradually at the expense of the other (Labove, 1972). In a pivotal work, Weinreich (1968) advocated that a strict distinction be made between how a new pronunciation norm starts versus how it spreads "from word to word, speaker to speaker, from one socially marked style of speech to another". In fact, there have been many theories regarding why sound change takes place. Among the many early speculations on the matter were that the speech orange evolved to necessitate the change, that migrations to different climates (hot regions, seaside regions) caused a change in speaking habits. Once theory thought that sound change improves a language in some way. Many purposes have been posited behind phonological change, most of them operating unconsciously. In this connection (Labov 1994:11) summarized that speakers change their pronunciation to make the act of speaking easier (i.e., to reduce energy expenditure), to make speech clearer for the hearer, to optimize the structure of the language (the grammar) in a variety of ways, and therefore to make it easier to learn, to process, and to remember.

According to Campbell (1998) sound changes are classified as regular or sporadic. Regular changes are systematic in that it affect all the words of the dialect whereas sporadic changes affect only one or few words and does not apply basically throughout the dialectal system. Sporadic change implies that the conditioning factors is not known, since it is difficult to conceive of a change that has no stimulus, no motivating factor behind it. The conditioning factors may be related to structural, psychological considerations not yet understood (Anderson, 1973:103). Linguists concentrates on regular types of changes as they are more common and take place whenever the same phonetic environments are encountered. Moreover, regularity of sound change is the basis for their theories of language change.

Moreover, sound change are classified according to phonetically conditioned bases into conditioned or unconditioned changes. Conditioned change is one which applies to a particular segment only in certain phonetic environment. An unconditioned change, in contrast, is the one where sounds are, modified in all environments un hampered by distributional relationships in a word or its neighboring segments. On the analytical level, linguists acknowledge two distinct levels of phonological analysis: the phonetic level and the phonemic level. Thus, the distinction is formed between phonemic and non-phonemic changes. Non-phonemic changes are not considered to be as important as phonemic changes, as they do not alter the number of phonemes in the language.

2.1 Syrian, Sudanese and Kuwait Arabic

Dialects of Arabic form a roughly continuous spectrum of variation, with the dialects spoken in the eastern and Western extremes of the Arab speaking world being mutually unintelligible. In the basis of certain linguistic features, Arabic dialects can be divided into two major geographical groups: the first comprises dialects spoken east of a line running from Salum in the north to roughly the Sudan-Chad border in the south; the second comprises the Maghribi dialects spoken to the West of this line (Watson, 2002). The main phonological features which distinguish the Western dialect group from the Eastern include the typical reduction of the triangular system of short vowels, a, I, u, which is found in Eastern dialects in two-vowel system and a contrast between an iambic word-stress system in the Western group and a trochaic word-stress system in the Eastern group. The beginning of Arab Muslim rule in A.D. 636 provided the two major themes of Syrian history: the Islamic religion and the world community of Arabs. According to traditionalist Muslims, the greatest period of Islamic history was the time of the brief rule of Mohammad (PBUH) and the time of the first four caliphs. Syria suffered from French rule which was oppressive. But the Syrians objected to French reluctance and foreign interference. The Sudanese nation is closely associated to the Arabic nation. Their traditions, proverbs and even their superstitions are found in Arab literature. Albajja is a country between the Red sea and the Nile. It has been governed by Abdulla Bin Abi Sarh. It has been inhahabited by Arabic people (Bani Adnan). In the Abbasian age, Albajja has been subjected to Baghdad in its internal affairs. It has been also said that the Arabs have invaded Al Nouba and they had their own trade there. This has been followed by the coming of over thirty Arab tribes, and it its well noticed that a lot of the Sudanese tribes are still keeping the names of the Arab tribes like Kunana, Sulaim, Juhaina, and AlAnsar. Thus, as far as the Sudanese dialect is concerned, may studies have shown that this dialect has been heavily affected by the Arabic classical language. This is clear on lexical and grammatical levels. This research intends to testify the relationship between Modern Standard Arabic and the three dialects; Syrian, Sudanese and Kuwaiti to pinpoint how far they are close to each other on the phonological level.

3. Data and analytic approach

The present study focuses on variation on the phonological level. The data is chosen from different heterogeneous areas of Arab world as the variations investigated are Modern Standard Arabic, Syrian, Kuwait and Sudanese. The data of the study will be collected by using direct and indirect methods. The direct method is achieved by tape recording formal speech of Syrian, Kuwaiti and Sudanese informants as they are asked to read from books written in colloquial Sudanese and the indirect method is achieved by tape recording natural speech of Syrian, Kuwaiti and Sudanese informants. The informants' age ranges between 40 and 60 and they belong to middle class. This study is a descriptive and comparative one. Moreover, the taken speech of informants is transcribed. The three dialects are compared to Standard Arabic to examine how these forms of Arabic vary and thus how far they are close to the Modern Standard Arabic. This will be evidence of the existence of both diachronic and synchronic change.

4. Analysis

Generally speaking, the causes of language change are: articulatory simplification, spelling pronunciation, analogy, reanalysis and language contact. Sound change usually involves articulatory simplification and spelling pronunciation. Variation and change are particularly noticeable in phonology of a language. This section is concerned studying the aspects of phonological variation between Syrian, Kuwaiti and Sudanese dialects of Arabic compared to Modern Standard Arabic.

Table 1.

Consonantal phonemes of SA, KA, SA and MSA.

			Manner		Of		Articulation
Place of articulation	plosive	fricative	affricate	liquid	nasal	lateral	approximant
			Standard Arabic				
Labial	/b/	/w/			/m/		

Labiodental		/f/			
Dental-palin-emphatic	/t/ /d/	/s/ /z/			
	/T/ /D/	/S/ /Z/			
Interdental-plain-emphatic		(θ) (ð) (ž)			
alveolar		/ʃ/	/j/	/r/	/n/
palatal		/y/			
velar	/k/	/x/ /G/			
uvular	(q)				
pharyngeal		/H/ /c/			
glottal	/ʔ/	/h/			
			Syrian Arabic		
Labial	/b/	/w/			/m/
Labiodental		/f/			
Dental-palin-emphatic	/t/ /d/	/s/ /z/			
	/T/ /D/	/S/ /Z/			
Interdental-plain-emphatic		----------			
alveolar		/ʃ/	/j/	/r/	/n/
palatal		/y/			
velar	/k/	/x/ /G/			
uvular	----------				
pharyngeal		/H/ /c/			
glottal	/ʔ/	/h/			
			Kuwaiti Arabic		
Labial	/b/	/w/			/m/
Labiodental		/f/			
Dental-palin-emphatic	/t/ /d/	/s/ /z/			
	/T/ /D/	/S/ /Z/			
Interdental-plain-emphatic		(θ) (ð) (ð̲)			
alveolar		/ʃ/	/j/	/r/	/n/
palatal		/y/			
velar	/k/	/x/ /G/			
uvular	(q)				
pharyngeal		/H/ /c/			
glottal	/ʔ/	/h/			
			Kuwaiti Arabic		
Labial	/b/	/w/			/m/
Labiodental		/f/			
Dental-palin-emphatic	/t/ /d/	/s/ /z/			
	/T/ /D/	/S/ /Z/			
Interdental-plain-emphatic		(θ) (ð) (ž)			
alveolar		/ʃ/	/j/	/r/	/n/
palatal		/y/			

velar	/k/ /g/	/x/ /G/			
uvular	(q)				
pharyngeal		/H/ /c/			
glottal	/?/	/h/			
			Sudanese Arabic		
Labial	/b/ /p/	/w/			/m/
Labiodental		/f/			
Dental-palin-emphatic	/t/ /d/	/s/ /z/			
	/T/ /D/	/S/ /Z/			
Interdental-plain-emphatic		(θ) (δ) ---			
alveolar		/ʃ/	/j/	/r/	/n/
palatal		/y/			
velar	/k/ /g/	/x/ /G/			
uvular	-----				
pharyngeal		/H/ /c/			
glottal	/?/	/h/			

Table 2.
The vowel systems of SA, KA, SA and MSA

Type of	vowel	Front	Central	Back
		Standard Arabic		
High	Long	i:		u:
	Short	i		u
Mid	Long	e:		o:
	Short			
Low	Long		a:	
	short		a	
Type of vowel		Front	central	back
		Syrian Arabic		
High	Long	i:		u:
	Short	i		u
Mid	Long	ay		o:
	Short			
Low	Long		a:	
	short		a	
Type of vowel		front	central	back
		Sudanese Arabic		
High	Long	i:		u:
	Short	i		u
Mid	Long	e:		o:
	Short			
Low	Long		a:	
	short		a	
Type of vowel		front	central	back
		Kuwaiti Arabic		
High	Long	i:		u:
	Short	i		u
Mid	Long	e:		o:
	Short			

Low	Long	a:
	short	a

According to Cambell (1998), sound changes are classified as regular an sporadic. Regular changes are systematic and affect the system of language whereas sporadic changes affect only one or few words. Generally, regular changes occur frequently and take place whenever the same phonetic environments are encountered. Linguists give more attention to regular sound changes are they are considered to be important to the foundations of theories and methodologies of language change. Sound changes are classified according to phonetically conditioned bases. Thus sound changes are either conditioned or unconditioned changes. An unconditioned change is one which applies to every single occurrence of a particular segment in the language, regardless of its position in a word or its neighboring segments. In contrast, a conditioned change is one which applies to a particular segment only in certain phonetic circumstances. On analytical bases, linguist recognize two different levels of phonological analysis: the phonetic level and the phonemic level (Roach, 1993). Accordingly, the distinction is formed between phonemic and non-phonemic changes. Non-phonemic changes are not counted to be as important as phonemic ones. Some linguists called a non-phonemic change allophonic change, as it does not change the number of phonemes in the language. Others called it phonological shift (Roach, 1993). A traditional view of sound change regards it as a gradual process as speakers seem to be unaware of ongoing sound changes (Hocket,, 1965). Passy (1890) states that sound change occurs as a result of imperfectly trying to master the SL. In the present study, the prediction of sound change by the subject is done through tracing the changes in pronunciation of Syrian, Sudanese and Kuwaiti words either in the conversational interactions or the formal speech. Each sound is examined in different distributions; initially, medially and finally. Trask (1996) states that : " All types of change in pronunciation are collectively known as phonological change, or, using a more traditional term, as sound change". The important difference between vowels and consonants is not the way they are made, but there different distributions. Thus, it is the interest of the study to look at the different contexts and positions in which particular sounds can occur. In other words the study of distribution. The following charts show Syrian, Kuwaiti and Sudanese compared to MSA consonant and vowel phonemes.

Table 3.

Distributional realizations of phonemes in Syrian Arabic

MSA phonemes	SA realizations	Initially	Medially	Finally
/b/	/b/	/b/ "/barid/" "cold	/b/ "/?abil/" "before"	/b/ "?ilba:b" " the door"
/t/	/t/	/t/ " ti?birni:"	/t/ " yati:mi:" "orphin"	/t/ " daHaʃt" " cramed"
/θ/	/t/ - /s/	/s/ "/si?a:/ "trust"	/t/ "/matal/" "example"	/t/ "/baHs/ "research"
/ʒ/	/ʒj/	/j/"/ʒiddak/" "your grandfather"	/j/ "/?i3i:t/" "I came"	/d3/ "/tfarra3/" "watch"
/H/	/H/	/H/ "/Hilim/	/H/ "/bra:Htak/" "as you like"	/H/ "/ru:H/" "go"
/x/	/x/	/x/ "/xara3/ "went out"	/x/ "/daxi:lak/ "I beg you"	/x/ "/?il?ax/" "the brother "
/d/	/d/	/d/ "/da:ya/" " "	/d/ " baddi/" "I want"	/d/ "/can jadd/" " really"
/ð/	/z/ /d/	/d/ "/dahab/" "gold" /z/"/zzakarit/" "I remembered"	/d/ "/nada:li/" "betrayal" "/bel?izin/" "excuse me"	/d/ "/ya:xud/" "takes" /razaz/ "splash"
/r/	/r/ light	/r/ "/ru:?/" "calm down"	/r/ "/mrattabi/" "neat"	/r/ "/ kasar/" "break"

/z/	/z/	/z/ "/zattu:ni/" "olive"	/z/ /"mizwi?/" "kind"	/z/ "/ju:z/" "husband"
/s/	/s/	/s/ "/si:ri:/" "story"	/s/ "/ msek/" "hold"	/s/ "/ habis/" "jail"
/ʃ/	/ʃ/	/ʃ/ "/ ʃu:/ "what"	/ʃ/ "/meʃa:nak/" "for you"	/ʃ/ "/?ma:ʃ/" "cloth"
/S/	/S/	/S/ "/Sa:rit/" "became"	/S/ "/?iSibiH/" "morning"	/S/ "/HummuS/" " "
/D/	/D/	/D/ "/Damiri:/" "my conscious"	/D/ "/raDya:n/" "content"	/D/ "/?il?ariD/" "the floor"
/T/	/T/	/T/ "/Tu:l/" "length"	/T/ "/maTraHkun/" "your place"	/T/ "/mazbu:T/" "correct"
/ð/	/Z/	/Z/ "/za:fir/" "winner"	/Z/ "/?ilcaZi:m/" "the glorious"	/Z/ "?iHefeZ/" "memorization"
/c/	/c/	/c/ "/cyu:ni/" "my eyes"	/c/ "/?acdi:/" "sitting"	/c/ "/beTTallac/" "looking"
/G/	/G/	/G/ /Gabi/ "stupid"	/G/ "/burGul/" " "	/G/ /mablaG/ "price"
/f/	/f/	/f/ "/fal?a:/" "extreme"	/f/ "/ʃuftu:/" "I saw it"	/f/ "/ʃarrif/" "honor"
/q/	/?/	/?/ "/?ib?a:b/" "slipper"	/?/ "/ma?Tu:c/ "cut"	/?/ "/?ilxali?/" "people"
/k/	/k/	/k/ /kat:r/ "a lot"	/k/ Hak3:t/ "told"	/?albak/ "your heart"
/l/	/l/	/l/ "/lissa:tu/" "not yet"	/l/ "/?iʃʃaGli/" "the job"	/l/ "/baddil/" "exchange"
/m/	/m/	/m/ "/masru:?a/ "stolen"	/m/ "/fahama:n/" "understanding"	/m/ "/?u:m/" "get up"
/n/	/n/	/n/ "/umru?/" "we get out"	/n/ "/?afandi/" "mester"	/n/ "/killun/" "all of them"
/h/	/h/-/Ø/	/h/ "halla?/" "now"	/h/ "/ʃahair/" "month"	/ Ø/ /xidu:/
/w/	/w/	/w/ "/wardi/" "flower"	/w/ "/ʃway/" "little"	----------
/y/	/y/	/y/ "/ yu:m/" "day"	/y/ "/niyya1ak/" "your lucky"	----------

The above table shows the percentages of similar and different sounds in Syrian compared to MSA. We notice that similar sounds are more than the different sounds, and this shows that Sudanese is close to Standard Modern Arabic. Different sounds are divided into two group; sounds that a considered to be totally different in that they stand in the place of other sounds found in Standard Arabic. These are representative of /θ/, /ð/, /q/, /ð/, , for /θ/ is pronounced /s/ initially and only /t/ medially and finally. /ð/ is pronounced /Z/ in all positions. /q/ is pronounced /?/ in all positions. /ð/ is pronounced /z/ and /d/ initially, medially and finally. The rest of sounds are pronounced similarly as found in Standard Arabic in all positions. /y/ and /w/ exist only in initial and medial positions unlike the rest of the phonemes that exist in all positions.

Table 4.

Percentages of similar and dissimilar sounds in Syrian and Standard Arabic:

Total no. of sounds in Standard Arabic	Percentages of similar sound in all positions
28	25 %

Above table shows the percentages of similar and different sounds in Syrian compared to Standard Arabic.

Table 5.
Distributional realizations of phonemes in Kuwaiti Arabic

MSA phonemes	SA realizations	Initially	Medially	Finally
/b/	/b/	/b/ "/bacad/" "after"	/b/ "/qabil/" "before"	/b/ "?ilba:b" " the door"
/t/	/t/	/t/ " tixaTib" " propose to "	/t/ "/ yeʃteGil/" "works"	/t/ "/ ja:t/" " she came "
/θ/	/θ/	/θ/ "/θ a:ni:/ "again-second"	/t/ "/?inθibir/" "beat it"	/t/ "/baHθ/ "research"
/j/	/j/	/y/"/yaddak/" "your grandfather"	/j/ "/?aljawa:b/" "the answer"	/y/ "/diya:y/" "chiken"
/H/	/H/	/H/ "/Ha:Dir/ "ok"	/H/ "/?ilHi:n/" "now"	/H/ "/ru:H/" "go"
/x/	/x/	/x/ "/xawa:ti:/ "went out"	/x/ "/?ixriTi:/ "I beg you"	/x/ "/?ax/" " brother "
/d/	/d/	/d/ "/da:yim/" "always"	/d/ " nigdar/" "we can"	/d/ "/walad/" " boy"
/ð/	/ð/	/ð/ "/ðamb/" "sin"	/ð/" /ha: ð a/" "this"	/d/ "/xi ð /" "take"
/r/	/r/ dark	/r/ "/ra:Haw/" "they went"	/r/ "/maraD/" "illness" /r/ light /yeri:du:n/	/r/ "/ mar/" "pass"
/z/	/z/	/z/ "/zama:n/" "long time ago"	/z/ /"maza:j/" "mood"	/z/ "/cayu:z/" "old"
/s/	/s/	/s/ "/sitʃatʃi:n/" "knives"	/s/ "/ ?smitʃa/" "a fish"	/s/ "/ na:s/" "jail"
/ʃ/	/ʃ/	/ʃ/ "/ ʃu:fay/ "look"	/ʃ/ "/meʃ3:t/" "I walked"	/ʃ/ /legma:ʃ/ "the cloth"
/S/	/S/	/S/ "/Sa:rat/" "became"	/S/ "/?iSbir/" "be patient"	/S/ "/ba:S/" " bus "
/D/	/D/-/ ð/	/ ð / "/ ð iDDi:/" "against me"	/D/ "/mari:Da/" "sick" / ð/ /ter ð:n/	/D/ "/?il?arD/" "the floor"
/T/	/T/	/T/ "/Ta:l/" "flew"	/T/ "/caTni:/" "give me"	/T/ "/HaTT/" "put"
/ð/	/ð/	/ ð / "/ða:her/ "apparently"	/ ð / "/ Haði:/ "my luck"	/ "?ilHefe ð /" "memorization"
/ c /	/c/	/c/ "/cayya/" "refused"	/ c / "/?igcid/" " sit "	/c/ "/yeTa:lec/" "looking"
/G/	/G/-/q/	/G/ /Ginwita/ "his song" /q/ /qaʃi:m/	/G/ /teGsil/ "washes"	/G/ /mablaG/ "price"
/f/	/f/	/f/ /fa:Di:/	/f/ "/?acarfitʃ/" "I know you"	/f/ "/ʃu:f/" "look"
/q/	/q/-/g/-/j/	/q /qarrar/ "decided"	/g/ /?itgu:l/ "she says"	/j/ /Tiri:jhum/ "their way"
/k/	/k/-/tʃ/	/k/ /ka:hu/ "there he is"	/k/ /?aku:/ "there is"	/tʃ/ /sematʃ/ "fish"
/l/	/l/	/l/ "/l3:/" "why"	/l/ "/mu:liyya/" "never"	/l/ "/gu:l/" "say"
/m/	/m/	/m/ "/minu:/ "who"	/m/ "/?afandi/" "mester"	/m/ /?ilmuhim/ "the important thing"

/n/	/n/	/n/ "/no:Sal/" "we arrive"	/n/ /di:na:r/" "dinar"	/n/ "/killun/" "all of them"
/h/	/h/-/Ø/	/h/ "haw/" "oh"	/h/ "/?intifa:ham/" "we get along"	/ h/ /?imyah/ "a hundred"
/w/	/w/	/w/ "/wa:Hid/" "one"	/w/ /?wwal/ "first"	/w/ /law/ "if"
/y/	/y/	/y/ "/ yabi:/" "he wants"	/y/ "/?imyah/" "a hundred"	/y/ /ra:y/ "opinion"

Table 6.
Percentages of similar and dissimilar sounds in Kuwaiti and Standard Arabic:

Total no. of sounds in Standard Arabic	Percentages of similar sound in all positions
28 %	24 %

The above table shows the percentages of similar and different sounds in Kuwaiti compared to Standard Arabic. We notice that similar sounds are more than the different sounds, and this shows that Sudanese is close to Standard Modern Arabic. Different sounds are divided into two group; sounds that a considered to be totally different in that they stand in the place of other sounds found in Standard Arabic. These are representative of /D/, /q/, /k/, /G/, for /D/ is pronounced /ð/ initially and /D/ medially and finally. /G/ is pronounced /q/ only initially and /G/ in all positions. /q/ is pronounced /q/ initially /g/ medially and /j/ finally. /k/ is pronounced /k/ initially and medially and pronounced /tʃ/ finally. The rest of sounds are pronounced similarly as found in Standard Arabic in all positions.

Table 7.
Distributional realizations of phonemes in Sudanese Arabic

Sound	SA realizations	Initially	Medially	Finally
/b/	/b/	/b/ "/bit/" "girl"	/b/ "/?aba/" "refused"	/b/ "ba:b" " door"
/t/	/t/	/t/ " /taltala/" "strong	/t/ " /Htutul/" "the last of	/t/ " /raffat/" " movement of
/ɵ/	/t/	movement" /t/ "/ta:ni/"	something"	eye"
	/s/	"second" /s/ "/sa:nyia/	/t/ "/Hutrub/" "dirty water"	/t/ "/tala:t/ "three"
/j/	/dj/	"minute"	/j/ "/maj9u:S/"	/dj/ "/farru:dj/"
	/j/	/dj/ "/djaru/" "popy" "/djafal/"	"arrogant"	"chick"
/H/	/H/	"group" /H/ "/H3:Ta/	/H/ "/baHar/" "sea"	/H/ "/gaH/" "cough"
/x/	/x/	"wall" /x/ "/xara:ba/	/x/ "/?uxut/ "sister"	/x/ "/bazax/" "luxuray"
/d/	/d/	"rubbish" /d/ "/dassa/" "hid"	/d/ "/madi:da/" "food made of corn"	/d/ "/hamad/" " slowed"
/ð/	/D/		/D/ "/kaDa:b/" "lier"	/d/ "/gunfud/" " "
	/d/	/D/ "/Danab/" "tail" "/Dubba:na/"	"/?aDa:n/" "ears"	
/r/	/r/	"fly" /r/ "/rakad/"	/r/ "/sara/" "went"	/r/ "/ ʃar/" "eivel"
/z/	/z/	"still" /z/ "/zar/"	/z/ /"xinzi:r/" "big"	/z/ "/9ukkaz/" "long stick"

/s/	/s/	"to narrow" /s/ "/sa9a/"	/s/ "/ ʔasma9/" "to hear"	/s/ "/ hus/" "be quiet"
/ʃ/	/ʃ/	"watch" /ʃ/ "/ ʃa:y/	/ʃ/ "/9aʃam/" "hope"	/ʃ/ "/ruʃa:ʃ/" "beginning of
/S/	/S/	"tea" /S/ "/Saga9u/"	/S/ "/9uSa:r/" "storm"	rain" /S/ "/ganaS/"
/D/	/D/	"hit the head" /D/ "/DaHi:l/"	/D/ "/maxa:Da/" "root"	"hunt" /D/ "/maxD/"
/T/	/T/	"little" /T/ "/Tawwali/" "starait away"	/T/ "/fiTis/" "died"	"butter of yugert" /T/ "/galfaT/" "to block
/ð/	/z/	/z/ "/za:lim/"	/z/ "/ʔiza/" "if"	wholes" "/mazbu:T/"
/c/	/c/	"/unfair/" /c/ "/catta:l/"	/c/ "/gacad/" "become"	"correct" /z/ "ʃuwa:z/"
/G/	/G/	"holder" /G/ "/Gafa/" "to sleep a	/G/ "/ʔalmaGaS/" "war"	/c/ "/galac/" "remove
/f/	/f/	little while /f/ "/fattaʃ/"	/f/ "/farfar/" "shever"	shyness ---------
/q/	/g/ /G/	"search" /g/ "/giza:za/" "glass" /G/ "/Guraʃi/"	/G/ "/burtuGa:l/ "orange"	/f/ "/gi:f/" "stand up"
/k/	/k/	"from Guraish" /k/ /kallamtu/	/k/ /ʔukli/ "eat"	/g/ "/fo:g/" "up"
/l/	/l/	"I talked to him" /l/ "/laz/" "to push"	/l/ "/mula:waza/" "not straight"	--------
/m/	/m/	/m/ "/mmiliH/ "salt"	/m/ "/gamar/" "moon"	/l/ "/na9al/"
/n/	/n/	/n/ "/nadi:d/" "same"	/n/ "/hna:ya/" "you"	"shoes" /m/ "/gadam/"
/h/	/h/	/h/ "hina/" "here"	/h/ "/hawha/" "bark"	"foot" /n/ "/ʃ3:n/"
/w/	/w/	/w/ "/wad/" "boy"	/w/ "/miʃwa:r/" "long	"ugly" ----------
/y/	/y/	/y/ "/ yo:m/" "day"	distance" /y/ "/rayya1a/" "spit"	/w/ "/hawhaw/" "bark" /y/ "/kay/" "teasing"

Table 8.

Percentages of similar and dissimilar sounds in Sudanese and Standard Arabic:

Total no. of sounds in Standard Arabic	Percentages of similar sound in all positions
28 %	23 %

The above table shows the percentages of similar and different sounds in Sudanese compared to Standard Arabic. We notice that similar sounds are more than the different sounds, and this shows that Sudanese is close to Standard Modern Arabic. Different sounds are divided into two group; sounds that a considered to be totally different in that they stand in the place of other sounds found in

Standard Arabic. These are representative of /θ/, /q/, /ð/, /j/, for /θ/ is pronounced /t/ and /s/ initially and only /t/ medially and finally. /q/ is pronounced /G/ and /g/ initially, /G/ medially and /g/ finally. /ð/ is pronounced /D/ initially and medially and /d/ finally. /j/ is pronounced /dj/ initially and finally and /j/ medially. The rest of sounds are pronounced similarly as found in Standard Arabic in all positions.

Segmental change

The stream of speech could be broken down into its component parts, one of which is sound segments. This section is concerned with the alternations that have an effect on the sound segments or phonemes. In other words, it segmental change operates at the phonemic level. Sound change involves four types of segmental change: segment addition, segment loss, segment movement and segment substitution.

1. Segment addition

This kind of sound change is the most common. It may also be called "epenthesis". It is a phonological process which requires the insertion of an additional sound or segment in some words of the language or dialect. The following tables show this process at work in the three dialects under study; Syrian, Kuwaiti and Sudanese.

Table 9.

Segment addition in Syrian dialect

Standard Arabic	Syrian dialect	Glossary
الزرع /?azzarc/	الزريعة /?i-zzri:ci /	Grass
تربية /tarbiyah/	ترباية /tirba:ya/	Raising
عربة /caraba /	عربانة /caraba:ni/	A chart
خبر /xabar/	خبرية /xabariyyah/	News
ضجر /Dajir /	ضجران /Dajra:n/	Bored
فرح /fariH /	فرفح /farfaH /	Became happy
مخبأة /muxabba?a /	مخباية /mxabba:yi/	Hidden
ضج /Dajj/	ضاج /Da:j /	Made noise
ضجة /Dajjah/	ضوجة /Do:jah/	Noise
عج /cajja/	**عجقة** /caj?a /	Traffic jam

Table 10.

Segment addition in Kuwaiti dialect

Standard Arabic	Kuwaiti dialect	Glossary
نريد /nuri:d/	انريد /?inri:d/	We want
سمك /samaka/	اسمتشة /?ismit ʃ ah/	Fish
تكلم /takallam/	اتكلم /?ittikallam/	He spoke
مباراة /muba:ra:h/	امباراة /?imba:ra:h/	Football match
تعرفون /tacrifu:n/	اتعرفون /?itcarfu:n/	You know
نتفاهم /natafa:ham /	انتفاهم /?intifa:ham /	We agree

مؤدب /tamr/	امؤدب /tamur/	Polite
مائة /ma:?ah/	امية /?imyah /	Hundred
تربى /tarabba:/	اتربى /?ittirabba: /	Grew up
نخطب /naxTub /	**انخطب** /?inxaTib/	Matchmaking

Table 11.
Segment addition in Sudanese dialect

Standard Arabic	Sudanese dialect	Glossary
ملح /melH/	ملح /meleH/	Salt
قمح /qamH/	قمح /gameH/	Wheat
تم /tam/	تم /tamma/	Done
وقت /waqt/	وقت /waget/	Time
يستحم /yastaHim/	يتحم /yetHamma	Bathe
بحر /baHr/	بحر /baHar/	sea
تمر /tamr/	تمر /tamur/	Date
مار /ma:r/	مار /ma:ri/	Passing by
العبد /?al9abd/	العبد /?al9abid/	Slave
رجل /rajul/	**راجل** /ra:jel/	man

Looking at the above table, it is found that segment addition occurs very often in all the three dialects of the study. Generally speaking, Arabic is a syllabic language, and the addition of syllables makes the word pronunciation easier than if no segment addition is there.

2. Segment loss

This process is the second most common process after the first. It affects both vowels and consonants. This loss usually changes the shapes of the words to which it is applied and gives the dialect its special spirit that distinguishes it from other Arabic dialects. Other dialects may involve different kinds of segment addition and deletion which results in different shapes for the same words. Typically, segment loss means the deletion of a word-internal vowel and this case is called syncope. Consonants, on the other hand, can be deleted from word-internal, final or even initial positions as illustrated in the following tables in relation to three dialects under study:

Table 12.
Segment loss in Syrian dialect

Standard Arabic	Syrian dialect	Glossary
أغنية /?uGniah/	غنية /Ginniyyah/	A song
يوجع /yu:jic/	يجع /yijac/	hurts
تعال /taca:l/	تعا /taca:/	Come on
شاب /ʃa:b/	شب / ʃ ab/	A young man
المساء	المسا	The evening

/ʔalmasa:ʔ/	/ʔilmasa:/	
شوية	شوي	A little
/ ʃ wayyah/	/ ʃ way/	
الأولاد	لولاد	The kids
/ʔalʔawla:d/	/lula:d/	
المرأة	المرة	The woman
/ʔalmarʔah/	/ʔilmarah/	
أحد عشر	أد عشر	Eleven
/ʔaHadacaʃar/	/ʔdacʃar/	
زندان	**زند**	An arm
/zanda:n/	/zand/	

Table 13.
Segment loss in Kuwaiti dialect

Standard Arabic	Kuwaiti dialect	Glossary
صلي	صل	Pray
/Salli:/	/Sall /	
ولدي	ولدي	My son
waladi:/ /	/wlidi:/	
أبا	با	Father of
/ʔaba:/	/ba/	
كلمة	كلمة	A word
/kalimah/	/kilma/	
سيدكن	سيدكن	Your lord
/sayyidukun/	/si:dkun/	
هن	هن	them
/hunna/	/hun/	
تخونيني	تخونيني	You betray me
/taxu:ni:nani/	/txu:ni:ni/	
رضي	رضي	To be content
/raDiya/	/riDi/	
قلت	قت	I said
/qult/	/gutta/	
بنت	**بت**	Girl
/bint/	/bit/	

Table 14.
Segment loss in Sudanese dialect

Standard Arabic	Sudanese dialect	Glossary
يستحم	يتحم	Take a bath
/yastaHim/	/yitHamma/	
يجيئ	يجي	Come
/yaji:ʔ/	/yiji/	
أبا	با	Father of
/ʔaba:/	/ba/	
كلمة	كلمة	A word
/kalimah/	/kilma/	
سيدكن	سيدكن	Your lord
/sayyidukun/	/si:dkun/	
هن	هن	them
/hunna/	/hun/	
تخونيني	تخونيني	You betray me
/taxu:ni:nani/	/txu:ni:ni/	
رضي	رضي	To be content
/raDiya/	/riDi/	
قلت	قت	I said

/qult/	/gutta/	
بنت	**بت**	Girl
/bint/	/bit/	

In all the examples above, segment loss seems to operate distinctly in the three dialects of the study. This occurs mostly due to laziness in pronunciation of words. for example, it is easier to say /z/ instead of /ð/ and /s/ instead of /θ/.

3. Segment movement

Segment movement may be identified as a change in the relative positioning of sounds. In other words, sounds may change their places.

Table 15.

Segment movement in Syrian dialect

Standard Arabic	Syrian dialect	Glossary
صاف	صفيان	Remains
/Sa:fin/	/Safya:n/	
باق	بقيان	Remains
/ba:qin/	/ba?ya:n/	
زوج	جوز	A husband
/zawj/	/jo:z/	
عربون	رعبون	A gift
/carbu:n/	/racb:n/	
ابط	باط	Underarm
/?bT/	/ba:T/	
جاء	**اجا**	He came
/ja:?/	/?ija:/	

Table 16.

Segment movement in Kuwaiti dialect

Standard Arabic	Kuwaiti dialect	Glossary
ملعقة	معلجة	A spoon
/milcaqah /	/micaljah/	
ملاعق	معالج	Spoons
/mala:ceq/	/maca:li:j/	
فلينة	فنيلة	Underwear T.shirt
/fal:na/	/fani:la/	
فلاين	فنايل	Underwear T. shirts
/fla:yin/	/fana:yil/	
أوريك	أراويتش	Threatening word
/?awarri:k/	/?ara:wi:tʃ/	
زوج	**جوز**	Husband
/zawj/	/jo:z/	

Table 17.

Segment movement in Sudanese dialect

Standard Arabic	Sudanese dialect	Glossary
دجاج	جداد	chicken
/duja:j/	/jida:d/	
اريد	داير	I want
/?uri:d/	/dayir/	
اعرف	عارف	I know
/?a9rif/	/9a:rif/	
ملعقة	معلقة	A spoon
/mil9aqa/	/mi9laga/	
فلسفة	فلفسة	Philosophy
/falsafa/	/falfasa/	
ينضج	**ينجض**	To be cooked
/yanDj/	/yinjaD/	

Segment movement is the least frequently occurring process in all the three dialects of the study. It occurs due to easiness in pronunciation.

4. Segment substitution

A sound may substitute another sound segment in a particular phonetic environment. Thus, sound changes occur in the absence of any motivation in the phonetic environment. Consequently, the substitution of one sound segment to another occurs without anything to trigger the change. Sometimes substitution is activated without any obvious reason. This process takes place in all the three dialects under study.

Table 18.

Segment substitution in Syrian dialect

Standard Arabic	Syrian dialect	Glossary
ضيع	ضوع	He lost
/Dayyac/	/Dawwac/	
مضيع	مضوع	He lost
/muDayyic/	/ muDawwic/	
يليق	يلبق	Fit
/yali:q/	/yilba?/	
هدأت	هديت	Cool down
/hada?t/	/hidi:t/	
مليح	منيح	Fine
/mali:H/	/mni:H/	
قلع	شلع	Exctract
/qalac/	/ ʃ alac/	
دحس	دحش	Insert
/daHas/	/daHa ʃ /	
ظل	ضل	Remain
/ðall/	/Dall/	
ضرس	درس	A tooth
/Dirs/	/dirs/	
قتل	**أتل**	He killed
/qatal/	?atal/ /	

Table 19.

Segment substitution in Kuwait dialect

Standard Arabic	Kuwaiti dialect	Glossary
فاطمة	فاطنة	Against me
/fa:tma/	/fa:tna/	
فظيع	فزيع	Case
/fa ð i:9/	/fazi:9/	
أخي	أخوي	You accept
/?axi:/	/?axu:y/	
خنفساء	خنفسان	lost
/xunfasa:?/	/xunfusa:n/	
كبير	تشبير	Big
/kabi:r/	/t ʃ ibi:r/	
كان	تشان	Was
/ka:n/	/tʃa:n/	
سمكة	اسمتشة	Fish
/samakah/	/?ismitʃah/	
سكاكين	ستشاتشين	Knives
/saka:ki:n/	/sitʃa:tʃi:n/	
أعرفك	أعرفتش	I know you
/?acrifuk/	/?acarfitʃ/	
صدق	**صدج**	Truth
/Sidq/	/Sidj/	

Table 20.
Segment substitution in Sudanese dialect

Standard Arabic	Sudanese dialect	Glossary
فاطمة	فاطنة	Fatema
/fa:tma/	/fa:tna/	
فظيع	فزيع	Terrible
/fa ð i:9/	/fazi:9/	
أخي	أخوي	My brother
/ʔaxi:/	/ʔaxu:y/	
خنفساء	خنفسان	A bug
/xunfasa:ʔ/	/xunfusa:n/	
مضى	مضي	Lasted
/maDa:/	/midi:/	
تحت	تحت	Under
/taHat/	/tiHit/	
جيش	ديش	Army
/djayʃ/	/dʒ:ʃ /	
وقت	وكت	Time
/waqt/	/wakit/	
سيدكم	سيدكن	You lord
/sayyidukum/	/si:kun/	
رضي	**رضي**	Be content
/raDiya/	/riDi/	

Segment substitution frequently occurs as the above tables show. When examining the data, it is found that most of times informants do it to simplify the pronunciation.

Sequential change and phonological processes

Sequential change is a linguistic label which comprises all the phonological processes related to sound changes that are commonly caused by the syntagmatic arrangements of the language or dialect being discussed. The sequential order of words or sounds instigates them to influence each other in spoken chain. Phonological processes are best understood in reference to the linguistic systems in which they occur (Francis, 1983). This means that not all processes are present in all linguistic systems. Some processes apply to some languages or dialects but not to others. When we say that the sequential order of sounds affect their pronunciation or realization, this means that these changes are brought about by the phonological environment in which the sound occurs. This influence can be realized in a number of different processes which will be enumerated below in relation to the three dialects under study.

1. Assimilation

Assimilatory phonological changes are numerous and recurrent in all languages of the world. An assimilatory alteration usually involves the changes of a sound to become more like a neighboring sound. During assimilation, one sound, which is the target sound, emulates the characteristics or features of another sound which is the source sound. Assimilatory changes signal modification in either manner of articulation or place of articulation or both. Assimilation is an anticipatory change and can operate in either direction; progressively or regressively. It is a regular change in teat the phonological units affected by it are modified in all similar environments. The influence of assimilation can also take place over morpheme boundaries. Trask (1996) states that assimilation is the influence of one sound on an adjacent sound. When speaker go for articulatory ease, they make sound more alike or identical. There are various kinds of assimilation. In all kinds of assimilation, the target sound copies a feature or features of a sound in its environment that is the source sound. Assimilation could be varied in a number of ways:

Table 21.
Assimilation in Syrian dialect

Standard Arabic	Syrian dialect	Glossary
صادق	سادئ	Honest
/Sa:diq/	/s:diʔ/	

فستان	فصتان	A dress
/fusta:n/	/fuSTa:n/	
وجه	وش	Face
/wajh/	/waʃ/	
دجاج	جاج	Chickens
/daja:j/	/jja:j/	
صغيرة	زغيرة	Young
/SaGi:rah/	/zGi:ri:/	
قصدير	أزدير	Foil
/qaSdi:r/	/ʔazdi:r/	
ألماس	ألماظ	Diamond
/ʔalma:s/	/ʔalma:Z/	
العظم	العضم	The bone
/ʔalcaðm /	/ʔalcaDum/	
ظهري	ضهري	My back
/ðahri:/	/Dahri:/	
الظفر	**الضفر**	The nail
/ʔað-ðufur /	/ʔiD-Dufur/	

Table 22.
Assimilation in Kuwaiti dialect

Standard Arabic	Kuwaiti dialect	Glossary
الجهال	اليهال	The children
/ʔaljuhha:l/	/ʔalyahha:l/	
يأتي	ييي	He comes
/yaʔti:/	/yeyi:/	
ماء	ماي	Water
/ma:ʔ/	/ma:y/	
حلقك	حلجك	Your throat
/Halqak/	/haljak/	
جنب	ينب	Besides
/janb	/yamb/	
عرجاء	عريا	Crippled
/carja:ʔ/	/carya/	
غشيم	قشيم	Unaware
/Ga ʃ i:m/	/qaʃi:m/	
سار	صار	Became
/sa:r/	/Sa:r/	
ضدي	ظدي	Against me
/Didi/	ðidi://	
راجل	**رايل**	A man
/ra:jil/	/ra:yil/	

Table 23.
Assimilation in Sudanese dialect

Standard Arabic	Kuwaiti dialect	Glossary
املئيه	امليه	Fill it
/ʔimlaʔi:h/	/ʔamli:hu/	
بللت	بليت	Made wet
/balalt/	/ballɜ:t/	
وجه	وش	Face
/wajh/	/waʃ/	
شجرة	شدرة	A tree
/ʃajara/	/ʃadara/	

اثنين /ʔiθnayn/	اتنين /ʔitnɜ:n/	Two
جذبت /jaðabat/	جزبت /jazabat/	She pulled
خنفساء /xunfusaʔ/	خنفسان /xunfusan/	A bug
شمس /ʃams/	شمش /ʃamʃ/	A sun
رأسي /ra:si/	راصي Ra:Si://	My head
جيش /jayʃ/	**ديش** /dɜ:ʃ/	Army

2. Metathesis

Metathesis is a process that reorders a sequence of sound segments. It occurs in phonology causing difference in nature from most other phonological processes that are defined in terms of source and target sounds. The target sound is the one that is submitted to change. Thus, a single sound a change occurs within a single sound under the influence of its adjacent sounds (Wanner, 1989). This phenomenon is concerned with the variation in the arrangement of sound segments. In this process, no sounds are being added or deleted and no assimilation takes place between sounds. To be more precise, metathesis is a process of inversion or switch in the position of sounds which occurs without any apparent reason. Even though there are relatively few examples which illustrate this process, yet, it plays a significant role in the role in the phonological change of any language or dialect in general.

Table 24.

Metathesis in Syrian dialect

Standard Arabic	Kuwaiti dialect	Glossary
صاف /Sa:fin/	صفيان /Safya:n/	The outcome after deductions
زغرد /zaGrad/	زلغط /dayir/	A sound produced in happy
زوج /zawj/	جوز /jo:z	Husband
ملعقة /mil9aqa/	معلقة /mi9laga/	A spoon
رجل /rijl/	اجر /ʔijir /	A leg
يدين / yadayn /	**ديات** /diyyat/	Two hands

Table 25.

Metathesis in Kuwaiti dialect

Standard Arabic	Kuwaiti dialect	Glossary
أوريك /ʔawarri:k/	أراويتش /ʔara:wi:tʃ/	A threatening word
خسف /xasf/	خفس /xafs/	To lower something
تلخبط /tlaxbaT/	تخلبط /txalbaT/	To mix things up
ملعقة /mil9aqa/	معلقة /mi9laga/	A spoon
صاعقة /Sa:ciqah/	صاقعة /Sa:gcah/	Thunder
زنجبيل /zanjabi:l/	**جنزبيل** /janzabi:l/	Ginger

Table 26.
Metathesis in Sudanese dialect

Standard Arabic	Kuwaiti dialect	Glossary
دجاج /duja:j/	جداد /jida:d/	chicken
اريد /ʔuri:d/	داير /dayir/	I want
اعرف /ʔaɢrif/	عارف /ɢa:rif/	I know
ملعقة /milɢaqa/	معلقة /miɢlaga/	A spoon
فلسفة /falsafa/	فلفسة /falfasa/	Philosophy
ينضج /yanDuj/	**ينجض** /yinjaD/	To be cooked

3. Deletion

Campbell (1998) states that the loss of a sound is a very common sound change. Both vowels and consonants are open to change. The deletion of a word-final vowel is called apocope, while the loss of a word-internal vowel is called syncope.

Table 27.
Deletion of word-initial and middle in Syrian dialect

Standard Arabic	Kuwaiti dialect	Glossary
اشرب /ʔi ʃ rab/	شراب /ʃra:b/	Drink
اسمع /ʔsmac/	سماع /sma:c /	Listen
أصرخ /ʔuSrux/	صرخ /Sra:x /	Shout
اطلعي /ʔiTlaci: /	طلعي /Tlaci:/	Go up
انسى /ʔinsa:/	نسى /nsa:/	Forget
أجاوب /ʔuja:wib /	جاوب /ja:wib/	Answer
أرز /ʔaruz/	رز /riz/	Rice
أعطيني /ʔacTi:ni/	عطيني /caTi:ni:/	Give me
أطعمته /ʔaTcamtuhu/	طعميته /Tacmaytu/	I fed him
أب /ʔab/	**بي** /bayy/	Father

Table 28.
Deletion of word-final consonant in Syrian dialect

Standard Arabic	Kuwaiti dialect	Glossary
تعال /taca:l/	تعا /taca:/	Come
تعالو /taca:law/	تعوا /tacu: /	Come
هذا /ha:ðа/	**ها** /ha/	This

Table 29.
Deletion of word-initial and middle in Kuwaiti dialect

Standard Arabic	Kuwaiti dialect	Glossary
صفخ	صخ	Slap
/Safax /	/Saxx/	
بطاطس	بطاط	Potato
/baTa:Tis	/buTa:T/	
طماطم	طماط	Tomato
/Tama:Tim /	/Tuma:T/	
نصف	نص	Half
/niSf/	/nuSS/	
أحمر	حمر	Red
/?aHmar/	/Hamar/	
ولد	ود	Boy
/walad/	/wad/	
أخضر	خضر	I said
/?axaðar /	/xaDar/	
مرأة	مرة	Woman
/mar?ah/	/mara/	
يبغى	يبي	Most of them
/yibGa: /	/yabi:/	
اشترى	**شرى**	He bought
/?iʃtara/	/ʃara/	

Table 30.
Deletion of word-final consonant in Sudanese dialect

Standard Arabic	Kuwaiti dialect	Glossary
عشاء	عشا	Dinner
/9aʃa:?/	/9aʃa/	
دواء	دوا	Medicine
/dawa:?/	/dawa/	
يجيء	**يجي**	Comes
/yaji:?/	/yiji/	

Table 31.
Deletion of word-initial and middle in Sudanese dialect

Standard Arabic	Kuwaiti dialect	Glossary
يستحم	يتحم	Take a bath
/yastaHim/	/yitHamma/	
أبا	با	Father of
/?aba/	/ba/	
تخونيني	تخونيني	You betray me
/taxu:ni:nani:/	/txu:ni:ni/	
يصاحبونك	يصاحبوك	Accompany you
/yuSa:Hibu:nak/	/yiSaHbu:k/	
بنت	بت	Girl
/bint/	/bit/	
ولد	ود	Boy
/walad/	/wad/	
قلت	قت	I said
/qult/	/guta/	
مرأة	مرة	Woman
/mar?ah/	/mara/	
أكثرهن	أكترن	Most of them
/?aktarun/	/?aktarun/	
اشترى	**شرى**	He bought
/?iʃtara/	/ʃara/	

Table 32.
Deletion of word-final consonant in Sudanese dialect

Standard Arabic	Kuwaiti dialect	Glossary
عشاء	عشا	Dinner
/9aʃa:ʔ/	/9aʃa/	
جزاء	جزا	Reward
/jaza:ʔa/	/jaza/	
يجيء	**يجي**	Comes
/yaji:ʔ/	/tiji/	

Arabic dialects differ from Standard Arabic in that the rules of syllable structure and accentuation are different. Examining both MSA and Syrian Arabic to reveal the similarities and differences between them at the phonological level, it becomes clear that variation exists in the number and type of consonants and vowels between the two varieties. Most of the sounds in MSA are also present in SA except for the following phonemes: /ð/, /θ/, /ð/ which are dental phonemes and /q / which is a uvular consonant. In contrast, the consonant /Z/ has been introduced in SA whereas it does not exist in MSA. Accordingly, there is no dental consonants in SA. These consonants have been replaced by other existing consonants which are /z/, /s/, /Z/, /ʔ/ respectively. There is a degree of variation in the realization of these sounds in different phonological environments. The phoneme /Z/ is an alveolar emphatic fricative replaces the standard from /ð/. The /r/ sound is no longer a flap. It is rather pronounced in a light manner. So the manner of articulation is a trill as in the word /zirr/. By comparing the vowels and diphthongs of MSA with those of Syrian Arabic, it becomes evident that a change also occurred in this system. The diphthong /aw/ disappeared and another long vowel was introduced into the system as a replacement fro the missing vowel. The new vowel, /o:/, contrasts with the diphthong /aw/. The diphthong /aw/ which disappeared from the Syrian dialect is preserved in the Lebanese dialect and forms one of the major contrasts or distinctive features which make these two dialects differ. A close analysis of Kuwaiti Arabic indicates that the phonological systems of MSA and Kuwaiti dialect are similar except for some variation in relation to certain phonemes. The greatest difference between MSA and Kuwaiti dialect is in relation to stops. The voiceless dental stop /t/ occurs in some cases as /t/ and in other cases as voiceless glottal stop /ʔ/ in Kuwaiti dialect but not in standard Arabic. The voiced dental valorization stop /D/ is changed to voiced velarized inter-dental fricative /D/ before long vowels in Kuwaiti dialect but not is standard Arabic. The voiceless velar stop /k/ is replaced by the voiceless affricate /ʃ/ in most words in Kuwaiti dialect but not in SMA.. The voiceless pharyngeal stop /q/ is presented sometimes as the voiced velar stop /g/ and sometimes as the voiced affricate /y/ in Kuwaiti dialect but not in MSA. Affricates are similar in MSA and KA except for the /j/. The /j/ sound occurs in some cases as /j/ and in other cases as /y/ but not in MSA. No differences are detected in the phonological system of Kuwaiti dialect in comparison to MSA as far as fricatives are concerned except for /ʃ/ and in other cases as voiceless affricate /tʃ/ in Kuwaiti dialect but not in MSA. The voiced velar fricative /G/ occurs in some cases as /G/ and in other cases as voiceless pharyngeal stop /q/ instead of /G/ as in MSA. For the nasals, no differences are detected in the phonological system of Kuwaiti dialect in comparison to MSA as far as laterals are concerned. Also, no differences are detected in the phonological system of KA in comparison to MSA. Moreover, the voiced non-syllabic palatal continuant semi-vowel /y/ occurs in some cases as /y/ and in other cases as a voiceless glottal stop /ʔ/ in KA but not in MSA. However, concerning the vocalic system of MSA and KA they are found to be similar. The study of the sounds found at Sudanese dialect and Standard Arabic words shows that two groups of sounds are with almost quite similar patterns of distribution, and these two groups are those of vowel and consonant. The only sounds that is added to the Sudanese phonemic system is the velar /g/ and /G/. This sound form an allophone of the sound /q/ present in Standard Arabic. Also /ɵ/ is pronounced /s/ or /t/. /ð/ is pronounced /z/, /d/ and /D/. However, the vowel systems of Standard Arabic and Sudanese dialect are typically the same. Segment addition occurs very often in all the three dialects of the study. Generally speaking, Arabic is a syllabic language, and the addition of syllables makes the word pronunciation easier than if no segment addition is there. As far as segment addition is concerned: Kuwaiti adds initially, Syrian adds finally and Sudanese adds medially and finally. Noticeably, the

addition is restricted to vowels rather than consonants. This is expected because if addition happens with consonants radical changes will be resulted and entailed by semantic change as new lexicals come into being. Segment loss seems to operate distinctly in the three dialects of the study. This occurs mostly due to laziness in pronunciation of words. For example, it is easier to say /z/ instead of /ð/ and /s/ instead of /θ/. Segment movement is the least frequently occurring process in all the three dialects of the study. It occurs due to easiness in pronunciation. The second part of analysis is concerned with the phonological sequential change among the three dialects of the study. The sequential change is divided into: assimilation, metathesis, deletion and mergers. All of these processes are practiced in the three dialects of the data of the study. Obviously the processes take place at one phoneme and its counterpart is usually considered the variable, thus the meaning is affected. Mergers indicate that two or more phonemes collapse into a single one. It is found that mergers are present in all the three dialects of the study and they present language variation as phonemes are rearranged.

5. Conclusion

Amazingly, the number of consonants is alike between the three dialects compared to the Standard Arabic. The three dialects have the same number of consonants. The percentages of variations of three dialects are 23%- 24%- 25% in the type of consonants. They are altered by other allophones as listed below:

Table 33.

Allophones in Syrian, Kuwaiti and Sudanese dialect

	MSA	Syrian Arabic	Kuwaiti Arabic	Sudanese Arabic
Allophones	[θ]	[t – s]	---	[t – s]
	[ð]	[z – d]	---	[D – d – z]
	[ð̲]	[Z]	---	---
	[q]	[ʔ]	[q – g – j]	---
	[D]	---	[D – ð̲]	---
	[k]	---	[k – tʃ]	---
	[dj]	---	---	[j – dj]

This asserts that if the percentage of variation is not big the dialect will not depart from the standard and legibility still prevails among varieties. There is a one-to-one relation between the increasing percentage of variation and the departure from the standard variety. The vocalic variations are limited, with the exception of the diphthong [aw] in the Syrian dialect. This of course does not affect the number of the phonemic systems in the three dialects especially in comparison to the standard one. The four segmental processes (segment addition, segment loss, segment substitution, and segment movement) are existing the three varieties and the standard Arabic with the diversity. Loss as a segmental phonological change is practiced by the varieties and the standard as well. The vowel is the phonological unit that is affected by this process in all of them. Movement as a phonological segmental change is restrictedly used in the three varieties and the modern standard too unlike the previous two processes. Movement as a process takes place among consonants in all dialects in addition to the MSA. The shift of sounds occurs differently in a dialect than the other, but still legibility is maintained. Substitution as a phonological segmental process is prevailing in the three dialects and the MSA. The process occurs among the consonants and the glides which still causes the settlement of the legibility among them. Although the sequential are frequent and recurrently used by the speakers of the dialects as the frequencies of the study indicate, yet the dialects are not illegible and the drastic change requires ample time. Sound variation and sound change are closely related aspects. They involve similar processes but have different outcomes. Sound variation may be the key to all linguistic and nonlinguistic factors that influence the users of language. Incidental and systematic variation appear in phonology. However, the adoption of one or other pronunciation by individual speakers hardly constitute dialect variation and it is primarily idiosyncratic. This kind of variation may be accepted as correct even within the standard dialect. More significant are differences that make up an accent. To be able to study linguistic differences, the geographical isoglosses should be made use of.

These isoglosses define the imaginary borders of different dialects. The linguistic interest of dialectology lies in the fact that dialects are dialects are a source of cultures. In other words a dialect not only reflects history but also cultural aspects of dialects. Finally speaking, the variations and the variables are phonological facts and they cannot be ignored. They are increasing by the passage of the time due to the dynamic nature of the language. Although the processes are very slow, yet they entail the nucleus for other changes such as semantic- lexical and syntactic, etc. The combination of these changes will lead to illegibility. Therefore, linguists must pay much care for these variations and variables and try to stop their sweeping and prevailing in the dialect in order to limit the diversity among the dialects of the same language.

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