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The Relationship between the Morphological Phenomena of the Current Sakakan Dialect and the Modern Standard Arabic

Atalah Mohammad Al-Rubaat[a*]

a Jouf University, College of Arts, Department of English, Jouf, Saudi Arabia

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Abstract

The Modern Standard Arabic (MSA) and many of its dialects have been investigated, described, and analyzed morphologically by intensive previous research. However, the dialect of Sakakan tribes in the north region of the Arab peninsula has not received any adequate attention in this regard. Therefore, this research aims at describing, analyzing and documenting some current morphological phenomena in the Sakakan dialect (SD) that is spoken in Al-Jouf region, KSA. This research also aims at finding out the relationship between four morphological phenomena of SD namely: the masculine regular plural, the dual, the feminine plural, and the irregular plural and their corresponding examples in MSA or any other neighboring Semitic languages. In order to achieve these objectives, the related literature was reviewed before implementing a semi-structured interview and an observation scale. The research employed a nonprobability sampling procedure (convenience sampling) to select (30) Sakakan participants from various ethnographic and demographic backgrounds (age, gender, and education level variables). By using a mixed-analytical method based on quantitative and qualitative approaches, the investigated SD morphological phenomena when described and documented showed a strong relationship with MSA. One implication of this research is the need for further investigation and identification of the morphology of current Arabic dialects.

Keywords: Sakaka dialect, SA; morphological features; masculine regular plural; dual; feminine plural; irregular plural.

Introduction

The movement of the Arab tribes and sub-tribes from one place to another within and around the northern borders of the Arab peninsula for various reasons including, and may not be limited to, religious pilgrimages, trade caravans, weekly markets, alliances and, migratory work has continued along with the history until few last decades. This continuing movement has resulted in a shift from a tribal or semi-nomadic society to a settled society with a mostly ethnic plurality (Kamp & Yoffee, 1980). Their movement has also influenced the Classic Arabic language significantly through taking from and giving other languages many words resulting in the development of many Arabic dialects that have never been in isolation of the linguistic contact with other languages (Alahmadi, 2015).

The classificatory division of dialects in the Arab world is traditionally seen in terms of Bedouin versus sedentary (Enam Al-Wer & de Jong, 2017; Eades, 2011; Holes, 1995; Theodoropoulou &

* Corresponding Author.
Orcid: https://orcid.org/0000-0003-1241-3200
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Tyler, 2014). However, the most popular works on the dialects of Saudi Arabia were those of Charles A Ferguson (2003); Ishkewy, Harb, and Farahat (2014); Lucas (2014); Sandler, Meir, Padden, and Aronoff (2005); Tahir (2009); Versteegh (2001). The relationship between current Arabic dialects and the Standard Arabic, whether modern or classic, remains controversial and a subject of four main different theoretical interpretations: they are either rooted in the ancient Arabic, variants of MSA (A. I. Ibrahim, 2010), existed after the emergence of Islam (Boudelaa & Marslen-Wilson, 2013) or separate variants of many different dialects (Edzard, 2015).

Therefore, the origin of almost all current Arabic dialects have always been associated with MSA which has heavily influenced their morphological, phonological, syntactical, and semantic features. However, in spite that MSA passes several stages of evolution, it has kept its linguistic status as the main source of Arabic literature. This intensive use of MSA in formal settings, research, and academic fields drove most Arab scholars, especially old linguists, to inherently hold negative attitudes towards the dialects around the Arab peninsula, and thus to ignore and degrade their roles in everyday life and literature of most Arabs (Diab & Habash, 2007; Saiegh-Haddad & Henkin-Roitfarb, 2014; Schiff & Saiegh-Haddad, 2018).

The controversy, sometimes may be called dispute, over the roots of the current Arabic dialect, especially in Saudi Arabia (KSA) may not be easily resolved because some scholars believe that these dialects existed in the Classical Arabia language before the Islamic era, whereas others believe that any development in these dialects is just confined to borrowing some words from other neighboring languages such as Persian and Aramaic. Whether these dialects are rooted in classic Arabic or developed normally from the MSA, they are currently spoken by almost millions these days. However, the question here is not the origin of Arabic dialects in their far historical evolution, but their relationship with the MSA, which is the only common representative spoken language or variant of the ancient Classic Arabic. In case of current Arabic dialects having strong relationship, especially from a morphological perspective, it is normal to claim that these dialects are similarly rooted in the classic Arabic. The morphological perspective is considered since it can provide clearer representation of the utterances and development taking place on these utterances than any other linguistic perspective.

Considering all linguistic differences between the MSA and related variants or dialects across the countries that speak Arabic formally would be beyond the scope of this research. This research is concerned with investigating the relationship between the current Arabic dialects, especially the morphological phenomenon of SD and that of the MSA. Sakaka city is located in the north region of Saudi Arabia surrounded by towns that were historically known since the Assyrian era. Sakaka was also known during the Aramaic period, which ruled Iraq and Syria, and expanded to Egypt and part of Saudi Arabia. The Aramaic period coincided with Nabataea's for some time where the two languages almost disappeared from Sakaka after the Islamic conquest of Aljouf Region, which strengthened the MSA in the region (Palmer, 2007; Sadat, Mallek, Boudabous, Sellami, & Farzindar, 2014).

Some previous studies Legate (2008) identified some morphological phenomena of SD. Schmtiz (1995); Trentman (2011) described the omission of the suffix of the second feminine singular object pronoun listing some examples such as *ana nabbaht akθar min marrah* (I gave a notice more than once) instead of *nabbahtić*. However, research on the phenomena remains rare which drove this research to investigate the relationship between MSA and the local dialects of Sakakan tribes in terms of the morphological evolution and linguistic origins of these dialects. More specifically, four morphological phenomena were considered: masculine regular plural, dual, feminine plural and irregular plural (Sandler et al., 2005).

Investigating the morphological phenomena of SD would help in understanding the relationship between the dialect of the Bedouin tribes in the north of Saudi Arabia and other Arab tribes, and even the neighboring peoples. The finding of this research would also help scholars in the field to locate and relate the morphology system of dialects under investigation and that of the Arabic as well as the corresponding languages. More importantly is that the data provided by this research on the morphology of a rarely described and documented Arabic dialect (SD) would help in filling in the gap, especially in terms of creating a specialized morphological analyzer program or instrument that might facilitate or relevant future research attempts (El-Shorbagy, 2021; Youssef, 2021).

Literature Review

A controversy over changes in morphological features between many Arabic dialects has emerged recently leaving a big room for interpretations and further research. For instance, it is claimed that the dialects of the Bedouin are more conservative than others due to the rare contact between Arab tribes with other languages in comparison with the urban. Therefore, it is less open to new linguistic features including the morphological system of their dialects (Aronoff, 2007; Charles A. Ferguson, 1959; Larkey, Ballesteros, & Connell, 2002). Related research rarely investigated the morphological changes or deviations of the Arabic dialects from that of the MSA deeply. It has also rarely shed light on the reasons beyond the remote relation between Arabic dialects and their origins, or the underlying reasons of their evolution.

It is believed that the language variants of the Arab tribes that lived on the northern borders of the Arab peninsula and southern part of Syria have long been neglected by old linguists (E Al-Wer, 2018; Aronoff, 2007). This negligence has led many old and contemporary linguists to avoid recording variants of the north Arab peninsula and south Levantine Arabic considering their close relations to various nations, and adapting accents of other languages and typography as threatening to the pure SA. This negligence and avoidance continued among later linguists who might still have misperceived variants and accents of Arab tribes as non-standard languages and studying such accents would lower the pure status of Arabic or, at least, underestimate its high position as a pure sacred language (Carlisle, 2001; Rossabi, 2002).

While some organizations consider all Arabic dialects and variants as different languages Lukitowati and Ramli (2020), others, including the Library of Congress, consider them as dialects of Arabic. This absolute controversy around the status of the Arabic dialects is evident and supported by scholars in the literature. For example, there are significant differences between the SA and the contemporary colloquial represented in the loss of the grammatical case, different word order, restrictions in the use of the dual number, and the loss of the feminine plural (Bybee, 2002). Most differences were observed between the speech of Bedouin and sedentary, the countryside and major cities, ethnic and religious groups, social classes, men and women, and the young and the old.

All Arabic varieties differ from SA in many ways. For example, the order subject-verb-object has become more common than verb-subject-object, the old subjunctive forms (feminine /iː/, masculine plural /uː/) were adopted by some dialects, while the old indicative forms (feminine /*iːna*/, masculine plural /*uːna*/) were adopted by many others such as many of the Bedouin dialects. According to Pat-El (2009) some Arabic dialects lost the dual marking everywhere except on nouns where a frozen dual was kept as the regular plural marking of some words that normally came in pairs (e.g., eyes, hands, parents) (Owens & Dodsworth, 2009).

In other cases, a productive dual marking on nouns was found in most dialects but differed morphologically from the frozen dual in various dialects, such as Levantine Arabic. Examples of the change of morphological phenomena from standard or classic Arabic into modern Saudi dialects can be seen in the verbal markers /-tu/ (first singular) and /-ta/ (second singular masculine) where both became /-t/, while second singular feminine /-ti/ remained. In the dialect of southern Nejd, the second singular masculine /-ta/ was retained but took the form of a long vowel rather than a short one as in MSA (Drake, 2018).

Most Arabic dialects distinguish gender in two ways: masculine and feminine. When on a single occasion, the unmarked gender of nouns refers to the masculine, the marked one refers to feminine nouns. Such distinction is also evident in the plural personal pronouns particularly in dialects of the Bedouin origin which is the focus of this research. In this way, masculine is most commonly expressed with /m/ or /u/, and feminine by /n/. Some dialects also distinguish gender in the plural demonstrative pronouns, with feminine tending to be expressed either by (pre-) final /n/ or by the mid-front vowel /e/ (Rosenhouse, 1998).

According to Versteegh (2001), various contemporary Arabic dialects can be categorized into five groups with some common characteristics: a) dialects of the Arabian Peninsula, where Sakakan is considered, b) Iraqi dialects, c) the Levantine dialect, d) Egyptian dialect; and (e) Maghreb dialect. In another similar categorization, Zaidan and Callison-Burch (2011) too attempted to distinguish the Arabic dialects. On these categorizations of the Saudi dialects, various

studies have been published such as the Najdi dialect (A. I. Ibrahim, 2010; Ishkewy et al., 2014), the Abha dialect (Obeid, Salameh, Bouamor, & Habash, 2019), and the Amayrah (1987); Boudelaa and Marslen-Wilson (2013). However, as Owens (2006) argued, "there is little serious application of the comparative method in an account of the historical development of contemporary spoken Arabic".

Najdi dialect (ND) sentence structure has VSO word order and SVO, where, VSO usually occurs more often (Taha, Stojanovik, & Pagnamenta, 2021). The morphology of ND is distinguished by three categories: noun *ism*, verb *fial*, and particle *harf*. Verbs are inflected for number, gender, person, tense, aspect and transitive. Nouns show number (singular and plural) and gender (masculine and feminine (Weiss, 2015). Moreover, in line with most Arabic dialects the dual number form had also disappeared in Sakakan dialect with the exception of Hanakiyya dialect (spoken in the cross road between Hail and Makka) *ħfarat* (e.g., she dug) and *frudaw* (e.g., they escaped).

Table 1 compares between the Arabic terms of some Saudi dialects: e.g., urban Hejazi and urban Najdi in addition to the dialect of the Harb tribe with its parts (Najdi and Hejazi parts) which shows a correlation between those dialects: (Alahmadi, 2015)

Table 1: *Linguistic Comparison Between A Numbers Of Dialects' In Saudi Arabia*

Term	Standard Arabic	Urban Hejazi	Ḥarb tribe (Hejazi)	Ḥarb tribe (Najdi)	Urban Najdi
"water"	*mā'*	*Mōya*	*ʾmā or mōya*		*mōya*
"I want"	*'urīd*	*'abḡa or rarely ʃ'aba*	*'aba*	*'abi*	
"where?"	*'ayn*	*Fēn*	*Wēn*		
"what?"	*māḏā*	*ʃ'ēš*	*Wēš*		*Wiš*

Source: (E Al-Wer, 2018; Aronoff, 2007)

Generally, Arabic dialectologists distinguish between two major norms: Bedouin and Sedentary. This classification has been based on phonological, morphological, and syntactic characteristics (Enam Al-Wer & de Jong, 2017). The morphological characteristics in the geographical context of the Peninsular Arabic modern varieties were the focus of this research due to rare attempts on the morphological structure of the Sakaka dialect (SD). An exception to this generalization is cited in Zaidan and Callison-Burch (2011) who slightly investigated SD in terms of the change in its morphological evolution. Therefore, this research also attempted to find out if there is a relationship between the morphological phenomena in SD and that of the MSA and/or other neighboring Semitic languages such as that of Hebrew. The reasons beyond avoiding documenting, describing, and analyzing MSA are also major motive for this research.

The morphological features of the Sakakan tribes' dialect (SD) have rarely been documented, analyzed, or investigated in the literature. Millions of people who speak this dialect in the north part of Saudi Arabia are even unlikely aware whether their dialect is related to MSA or other neighboring ancient languages. Researchers in the field can hardly find any publication or documentation of SD morphology. Analyzing the morphology of SD is also conducted manually due to the lack of related research or shortage of computerized analyzers according to the best knowledge of the author. To this end, this research aims at identifying, describing, documenting and analyzing some morphological phenomena of SD. It also attempts to determine the relationship between the morphology SD and other variants or languages. This research also aims at identifying the extent to which these dialects have morphologically deviated from the MSA.

Keeping in view these aims and objectives, this study addressed the following questions:

1. What are the major morphological characteristics of the Sakakan dialect (SD) spoken in the north of the Arab peninsula?
2. How can the Sakakan dialect (SD) be well described and documented?
3. Is the Sakakan dialect (SD) related to the Standard Arabic (SA) in terms of morphological features?

Methodology

Research Design

A mixed methodology of quantitative and qualitative approaches was employed to collect and analyze the data. This design was selected due to the nature of the data that was gathered using different instruments based on the semi-structured interview, observations, literature review. This design was also governed by the ethnographic nature of the sample which is different in terms of their demographic characteristics. The most important factor in following this mixed methodology was the research questions which necessitated the use of both approaches to better understand and document the phenomena under investigation.

Research Sample

This research employed a nonprobability sampling procedure (convenience sampling) due to several factors: the first is the large population of speakers of the dialect under investigation, the second is the wide demographic variation of the possible participants in terms of age, education, and gender especially in a conservative society of Bedouin tribes, in general, and the Arabian people, in particular, and finally the limited ability of the researchers' movement in the geographical area of the population whose residence extends along hundreds of kilometers in the north region of Saudi Arabia (from Hail in the middle of the Arab peninsula to the Qurayyat in the north). One motivating factor of the sampling process was the researcher's personal factors as a resident in the region since birth; a lecturer in a North Arabian university; and a member of the tribes whose dialect is under investigation. This enabled the research to be better selective of the convenience sample.

Generally speaking, due to the complicated demographic factors especially related to the education variable, which may have influenced the daily spoken language of participants, the selected sample, which consisted of (30) participants, was distributed equally to three demographic variables as shown in Table 2. All participants were given a clear idea about the research objectives and their consent was formally ensured before conducting this research.

Table 2: *Distribution of The Research Sample*

Demographic variables*	**Category**	**No**	**Percentage**
Age	Adult	10	33
	Middle Age Adult	15	50
	Senior Adult	5	17
	Total	30	100
Education	Illiterate	6	20
	High school	11	37
	Post-high school	13	43
	Total	30	100
Gender	Male	15	50
	Female	15	50
	Total	30	100

Demographic variables were defined as follows:

- *Age:*
  - *Adult = 20-39 yrs*
  - *Middle Age Adult = 40-59 yrs.*
  - *Senior Adult = 60+)*
- *Education:*
  - *Illiterate are those who did not receive any kind of formal education and cannot read or write.*
  - *High school, those who are currently studying in the secondary schools*
  - *Post-high school: those who got a university degree or similar levels after high school stage*

Research Instruments

In addition to the author's own observation and experience in the field as a linguist who currently resides in the region of the spoken dialect under investigation, and who has extended relations with relatives who speak this dialect, two main instruments were implemented. The first was a semi-structured interview that aimed at identifying and documenting the current morphological phenomena of the spoken dialect. This tool was used systematically with individual participants. The researcher built up a number of questions by which the participants were requested to demonstrate how certain specific Arabic words and utterances were used in their daily life. It also focused on finding out the level of participants' awareness of the equivalent utterances in the SA.

While the phonological aspect was beyond the scope of this research, it was strongly interrelated and overlapped with the orthography of Arabic language whether dialectical or standard related. It was therefore necessary to introduce a second instrument for this research which was an observation checklist that focused on specific utterances that were frequently uttered by the sample along a period of 4 months extended from January 2021 to May 2021.

Both instruments were validated by a jury of experts in Arabic linguistics from Jouf University, Sakaka, KSA. The reliability level of these instruments was also established by testing-and-retesting procedure on a small sample that was selected from the population of this research.

This observation checklist recorded the sample's responses and analyzed them in terms of their morphological appearance in comparison to SA from the perspective and experience of the researcher. A scale measuring the morphological features of the interviewees' daily conversations was also developed. These features were organized, coded, and analyzed quantitatively in comparison to their corresponding utterances in SA. Findings obtained from these two instruments were collated in one file and analyzed qualitatively in light of the reviewed literature and the corresponding counterparts of other neighboring Semitic languages such as Hebrew.

Data Analysis

Most previous works on Arabic morphological analysis focused on MSA (Boudad, Faizi, Thami, & Chiheb, 2018; Guellil, Saâdane, Azouaou, Gueni, & Nouvel, 2021; Habash, Eskander, & Hawwari, 2012; H. S. Ibrahim, Abdou, & Gheith, 2015; Salloum & Habash, 2014), while a few others targeted dialectical analysis (DA) of morphology (Boudad et al., 2018; Holes, 1995, 1996; Jassem, 2013; Kamp & Yoffee, 1980; Khalifa, Habash, Abdulrahim, & Hassan, 2016). These efforts can generally be classified into two types: the first attempted to extend MSA tools to cover DA phenomena such as that of Al-Rubaat and Qarqaz (2019); Alahmadi (2015); Aronoff (2007) who worked on investigating DA prefixes and suffixes in their attempt to map DA text to some MSA-like form. The second category worked on modeling DA directly.

In this research, the morphological analysis of participants' utterances was based on the works of Khalifa et al. (2018) whose work '*A Large Scale Corpus of Gulf Arabic* 'employed a set of rules to study Arabic dialectical morphology, and was presented in the Language Resources and Evaluation Conference in Portoroz, Slovenia. Their analysis was mainly focused on manual annotation of the raw data (isolated utterances in the original language orthography). Table 3 presents the analyzed words in the SA, Sakakan dialect, and meaning in English. This is example of manual morphological annotation (Shoufan & Alameri, 2015).

Table 3: *An Example of Manual Annotation Representing the Orthography and Morphology of Features to be Annotated.*

English Meaning	MSA	SD	Coda	Morph.	POS
Proper noun	*ziyAd*	*ZyAd*	*zyAd*	*zyAd*	Noun_pron
	:		*:*	*:*	punc
2 eyelids	*Jufun*	*jufun*	*jufun*	*jufun*	Arabic dual
Female teachers	*Mu'alimaat*	*m'almaat*	*m'almaat*	*m'almaat*	Plural feminine noun

Morph. = morphology representation
POS = part of speech
SD = Sakakan Dialect

All interviews were audio-recorded, transcribed into isolated utterances before being organized and classified under the categories of the morphological phenomena under. Next, each word was coded as demonstrated in the above-mentioned way. Finally, the frequency of utterances was calculated using descriptive statistics of percentages by the demographic variables of the participant. The observations were conducted un-systemically along a four-month period where and when it was possible. The main observations took place in the direct interactions with participants. All observations were also recorded and analyzed in the same manner of the interviews using the same annotation symbols.

Findings

A close analysis of interviews, observations, and related literature revealed that the investigated linguistic phenomena were common amongst the vast majority of participants when using the Sakakan dialect spontaneously. A few exceptions to this general finding were demonstrated by a limited number of participants (5%) from the middle age adults, post-high school and female participants who were more committed to MSA when being engaged in spontaneous daily talk. This indicated that the quantitative analysis may not be presented in the list of findings due to its limited or low general value. The findings of this research are addressed in this section in terms of morphological features under investigation namely: masculine regular plural, the dual, feminine plural and irregular plural.

The Masculine Regular Plural

The analysis of the obtained data indicated that there were two prominent morphological phenomena taking place in the masculine regular plural of MSA pattern (*wazn*): *mufaa'aliin* (CuCaCaCiiC) and *faa'aliin* (CaCaCiiC), where the change took place in their vowels to be *mfaa'liin* and *faa'iliin*. Some examples on this feature are shown in Table 4:

Table 4: *An Example Of Masculine Regular Plural.*

English Meaning	MSA	SD	Coda	Morph.	POS
Male teachers	*mu'alimiin*	*m'almiin*	*m'almiin*	*m'almiin*	Noun pl.
Male teachers	*mudarrisiin*	*mdarisiin*	*jufun*	*jufun*	Noun pl.
Male passengers	*musaafiriin*	*msAfiriin*	*m'almaat*	*m'almaat*	Noun pl.
rested people	*murtahwn*	*mirtahiin*	*m'almaat*	*mirtahiin*	Adj.pl.

It was also observed that the masculine plural in Sakaka dialect did not follow the rule of SA morphological form forcing the (*ya & nuun*) to be attached in all the plural forms throughout their use of forming plural except in a few words.

The Dual

The dual marker was found to be less in use than that of the plurals in SD. Examples of such use are shown in Table 5:

Table 5: *Examples of The Dual in SD in Comparison to its Corresponding Form in SA*

English Meaning	MSA	SD	Coda	Morph.	POS
2 legs	*rjjlain*	*rajleen*	*rajleen*	*rajleen*	*Noun*
2 hands	*Yadain*	*yadiin*	*yadiin*	*yadiin*	*Noun*

The findings from observations and interviews also indicated that the Sakakans tended to use dual for specific numbers such as in *ba'erain* (two camels), *hasanin* (two horses). They were also found following one pattern of the dual by adding the suffix (*ain*) with the change of structure of the word which led to a different pronunciation like the sound /pain/ in English. As far as the verbs patterns are concerned in the Sakakan dialect in using dual, the *alf* is deleted totally from both genders. The use of the expression *yajlason* for both genders results in the deletion of the dual marker in the verbs.

The Feminine Plural

The findings revealed that most feminine plural forms of SD were affected by SA. Almost all participants showed examples of using the suffix *aat* of SA when using feminine plurals of SD. Table 6 shows some of these examples:

Table 6: *Examples of The Feminine Plurals In SD In Comparison To Its Corresponding Form In SA*

English Meaning	MSA	SD	Coda	Morph.	POS
Female teacher	*mudarrisaat*	*mdarsaat*	*mdarsaat*	*mdarsaat*	noun
Girl	*banaat*	*banaat*	*banaat*	*banaat*	noun
Grandmother	*jaddaat*	*jaddat*	*jaddat*	*Jaddat*	noun

Some exceptions to this finding were found in participants' replacement of the suffix *aat* by the suffix -ah. Examples are shown in Table 7:

Table 7: *Examples of the irregular feminine plurals in SD and their corresponding SA form*

English Meaning	MSA	SD	Coda	Morph.	POS
Years	*sanawat*	*snahaat*	*snahaat*	*snahaat*	noun
sheep	*shiyah*	*shyaah*	*Shyaah*	*shyaah*	noun

The Irregular Plural (Broken Plural)

The findings also revealed that the regular plural form of Arabic was not common in Sakaka dialect. Most participants tend to abandon the regular form of plural and restored the broken one according to special rules that satisfied them and their listeners. Table 7 shows examples of the phenomena of broken/ irregular plural used by the Sakakans:

Table 8: *Examples of The Irregular Plurals In SD And Their Corresponding SA Form*

English Meaning	MSA	SD	Coda	Morph.	POS
A tribe name*	*Fuhaigaat*	*Fahaigaat*	*Fahaigaat*	*Fahaigaat*	noun
A tribe name	*Shararaat*	*Shararaat*	*Shararaat*	*Shararaat*	noun
A tribe name	*Rowailat*	*rwalah*	*rwalah*	*rwalah*	noun

**The singular of these tribes' names is Fahigi, Sharari and Rwaili respectively.*

Another interesting finding was the participants' frequent change of some of the diacritic, known in Arabic as movements, by making some letters silent. Examples include words such as: *shiffah* (lip), where its plural is *shifayaf* in SD instead of the SA *shifaah*. Table 8 shows a set of other similar examples:

Table 9: *A Comparison Between Sample Irregular Plural Nouns in SA and SD*

English Meaning	MSA	SD	Coda	Morph.	POS
Lips	*Shifaah*	*Shifayef*	*Shifayef*	*Shifayef*	noun irr. pl.
Female camels	*Nooq*	*Nagaat*	*Nagaat*	*Nagaat*	noun irr. pl.
Female snakes	*Hayyaat*	*Hayaat*	*Hayaat*	*Hayaat*	noun irr. pl.
Male teeth	*Asnaan*	*Snuun*	*Snuun*	*Snuun*	noun irr. pl.

Discussion

Results reveal that a majority of participants shared common usage of Sakakan dialect regardless of their various demographic background. They used similar morphological features of the linguistic phenomenon under investigation namely, masculine regular plural, the dual, feminine plural and irregular plural. This general finding indicated that SD was strongly related to MSA. For example, the plurality in SA was categorized into singular, dual, and plural (Hahne, Mueller, & Clahsen, 2006) denoting the masculine regular plural marker by adding a suffix consisting of two letters of the vowels: (waw and ya) (e.g., *muslimuuna, muslimiina* and *mudarrissiina*. In the SD, however, the vowels are the mostly influenced by omitting the /u/ sound due to and fixing the plural marker of /ii/ instead of /u/ (Souag, 2021). Examples of such cases in SD are *gasliin, saniin, arbaiin* (Hahne et al., 2006). It was also observed that the masculine plural did not follow the rule of SA form where the (*ya* & *nuun*) were mostly attached in all the plural forms.

In spite of the fact that the dual form in SD was not common like the masculine plurals, there was a good evidence seen of its strong relationship with SA. For instance, the words: *rajleen* (two legs), and *yadiin* (hands) represented how Sakakans used the duals in a similar way to SA (Tiersma, 1982). The dual of SD was specifically used when counting money and properties such as *ba'erain* (two camels) and *hasanin* (two horses). In such cases, the SD speakers added the suffix

(*ein*) instead of (*ain*). This transformational phenomenon existed in Semitic languages where the change of (*aw* & *ay*) became (*o* & *e*) (Bybee, 1995). In this sense, it is believed that the existence of the SD in the north of Saudi Arabia was as old as the semiotic languages (Hebrew and Aramaic) (Lowry, 2021).

The feminine marker suffix (*ha)* is very old in the Arabic language, but its use is limited to dual nouns, which were taken to form a plural maker (Mahmoudzahi, 2015). It is believed that this suffix feminine marker (*ha)* was also found in the Aramaic in words as *abahaat*, and *emmhata*, and in Hebrew too *amahot (*Bergstraser, 1994). Therefore, the use of this morphological structure in Sakaka dialect indicated that it was rooted in either SA or *Aramai.*

As for the broken or irregular plural forms, they mostly need to be heard before identifying their pattern (*wazin*) according to Khedher (1999). In fact, the irregular plural form in both SA and SD did not have a specific rule or formula upon which it can be measured. In spite of the difference between SA and SD in formulating the irregular plural, both remained consistent since both lacked the governing rule. This contrast indicated the dialect under investigation was rooted or at least affected by the irregularity of forming some plural nouns.

The irregular plural noun in Arabic, known as "*jam,' takasiir*" is known by several semiotic languages, but the Arabic language is considered to be the highest productive among them. A broken plural indicates more than two with the change in the morphological word structure. A broken plural in Arabic is of two types: plural for a few and plural for many: the former concerns plurals from three till ten, and the latter was used for above ten till unlimited number. Examples of this case are used intensively in SA and SD. For instance the plural of *'aazab* (unmarried man) is *'uzzab* in SD while it is *'aazabbiin/ 'aazabuun* (unmarried men) in SA. The same can be said *about khadam* (servant) *khadaam* (servants), *bissah* (cat), *bsaasah* (cats) and so on.

Generally speaking, this research revealed many distinguishing morphological features of SD and how it differentiates with the morphology of some phenomena in SD. Some of these features were found to be apparent in the masculine regular plural, the dual, the feminine plural and the irregular plural, just to count a few, with strong relationship with MSA. Describing and documenting these linguistic phenomena is still in its initial stage.

Conclusion, recommendations and implications

This research has shed light on the changes in some morphological phenomena of the dialect of Sakakan tribes. It indicated a few SD morphological phenomena having a strong relationship with the SA. In fact, SD morphological features such as the feminine plural were rooted in the SA or borrowed from Aramaic or Semitic. This linguistic relationship reflected a normal universal influence as a result of movement of tribes in the north region of Saudi Arabia. Studying the morphological changes in the Arabic dialects with specific focus on the current dialects in the north region of the Arab peninsula remains a rich field for further investigation in the future. Future research should take into account not only the need for description, documentation and identification of current Arab dialects in the north of the peninsula but also the need for creating effective tools for analyzing these variants morphologically. This research is limited to the SD which is spoken in the north part of the Arab peninsula, so its findings may not be generalized to other Arabic dialects.

References

Al-Rubaat, A., & Qarqaz, A. A. (2019). Supra Segmental Phonology in Skaka Dialect and Its Relation to the Modern Standard Arabic. *Open Journal of Modern Linguistics, 9*(05), 330. doi:https://doi.org/10.4236/ojml.2019.95027

Al-Wer, E. (2018). Arabic Languages, Variation. In *Concise Encyclopedia of Languages of the World* (pp. 53-56): Elsevier Ltd.

Al-Wer, E., & de Jong, R. (2017). Dialects of Arabic. In C. Boberg, J. Nerbonne, & D. Watt (Eds.), *The Handbook of Dialectology* (pp. 523-534): John Wiley & Sons, Inc. doi:https://doi.org/10.1002/9781118827628.ch32

Alahmadi, S. D. (2015). Loanwords in the Urban Meccan Hijazi Dialect: An Analysis of Lexical Variation according to Speakers' Sex, Age and Education. *International Journal of English Linguistics, 5*(6), 34. doi:https://doi.org/10.5539/ijel.v5n6p34

Amayrah, I. (1987). *Characteristics of Arabic nouns and verbs*. Irbid – Jordan: Jordan, Al-Malahi House.

Aronoff, M. (2007). In the beginning was the word. *Language, 83*(4), 803-830. doi:https://doi.org/10.1353/lan.2008.0042

Boudad, N., Faizi, R., Thami, R. O. H., & Chiheb, R. (2018). Sentiment analysis in Arabic: A review of the literature. *Ain Shams Engineering Journal, 9*(4), 2479-2490. doi:https://doi.org/10.1016/j.asej.2017.04.007

Boudelaa, S., & Marslen-Wilson, W. D. (2013). Morphological structure in the Arabic mental lexicon: Parallels between standard and dialectal Arabic. *Language and cognitive processes, 28*(10), 1453-1473. doi:https://doi.org/10.1080/01690965.2012.719629

Bybee, J. (1995). Regular morphology and the lexicon. *Language and cognitive processes, 10*(5), 425-455. doi:https://doi.org/10.1080/01690969508407111

Bybee, J. (2002). Main clauses are innovative, subordinate clauses are conservative. *MN Joan L. Bybee, Complex Sentences in Grammar and Discourse; Essays in honor of Sandra A. Thompson*, 1-17. doi:https://doi.org/10.1075/z.110.02byb

Carlisle, R. S. (2001). Syllable structure universals and second language acquisition. *International journal of english studies, 1*(1), 1-19. Retrieved from https://revistas.um.es/ijes/article/view/47581

Diab, M., & Habash, N. (2007). *Arabic dialect processing tutorial*. Paper presented at the Proceedings of the Human Language Technology Conference of the NAACL, Companion Volume: Tutorial Abstracts, Rochester. Retrieved from https://aclanthology.org/N07-5003.pdf

Drake, S. (2018). The form and productivity of the Maltese morphological diminutive. *Morphology, 28*(3), 297-323. doi:https://doi.org/10.1007/s11525-018-9328-0

Eades, D. (2011). A transitional Arabic dialect of the northern Omani interior. *Zeitschrift für arabische Linguistik*(54), 27-41. Retrieved from https://www.jstor.org/stable/10.13173/zeitarabling.54.0027

Edzard, L. (2015). Inner-Semitic loans and lexical doublets vs. genetically related cognates. In *Semitic Languages in Contact* (pp. 181-197). Leiden: Brill. doi:https://doi.org/10.1163/9789004300156_011

El-Shorbagy, N. F. (2021). *The prefixes in urban Arabic dialect in Gaza: a morphological study*. (Master Thesis). The American University in Cairo, Retrieved from https://fount.aucegypt.edu/retro_etds/2478

Ferguson, C. A. (1959). The arabic koine. *Language, 35*(4), 616-630. doi:https://doi.org/10.2307/410601

Ferguson, C. A. (2003). Diglossia. In *The bilingualism reader* (pp. 71-86). London: Routledge. doi:https://doi.org/10.4324/9780203461341-11

Guellil, I., Saâdane, H., Azouaou, F., Gueni, B., & Nouvel, D. (2021). Arabic natural language processing: An overview. *Journal of King Saud University-Computer and Information Sciences, 33*(5), 497-507. doi:https://doi.org/10.1016/j.jksuci.2019.02.006

Habash, N., Eskander, R., & Hawwari, A. (2012). *A morphological analyzer for Egyptian Arabic*. Paper presented at the Proceedings of the twelfth meeting of the special interest group on computational morphology and phonology, Montreal, Canada. Retrieved from https://aclanthology.org/W12-2301.pdf

Hahne, A., Mueller, J. L., & Clahsen, H. (2006). Morphological processing in a second language: Behavioral and event-related brain potential evidence for storage and decomposition. *Journal of cognitive neuroscience, 18*(1), 121-134. doi:https://doi.org/10.1162/089892906775250067

Holes, C. (1995). Community, dialect and urbanization in the Arabic-speaking Middle East. *Bulletin of the school of oriental and African studies, 58*(2), 270-287. doi:https://doi.org/10.1017/S0041977X00010764

Holes, C. (1996). The Arabic Dialects of South Eastern Arabia in a socio-historical perspective. *Zeitschrift für arabische Linguistik*(31), 34-56. Retrieved from https://www.jstor.org/stable/43525663

Ibrahim, A. I. (2010). Noun Formation in Standard English and Modern Standard Arabic: A Contrastive Study. *Journal of Language Teaching & Research, 1*(5). doi:https://doi.org/10.4304/jltr.1.5.614-623

Ibrahim, H. S., Abdou, S. M., & Gheith, M. (2015). Sentiment analysis for modern standard Arabic and colloquial. *International Journal on Natural Language Computing (IJNLC), 4*(2), 95-109. doi:https://doi.org/10.5121/ijnlc.2015.4207

Ishkewy, H., Harb, H., & Farahat, H. (2014). Azhary: An arabic lexical ontology. *International Journal of Web & Semantic Technology (IJWesT), 5*(4), 71-82. doi:https://doi.org/10.48550/arXiv.1411.1999

Jassem, Z. A. (2013). The Arabic Origins of Derivational Morphemes in English, German, and French: A Lexical Root Theory Approach. *Language in India, 13*(1), 48-72. doi:https://doi.org/10.11648/j.ijll.20130104.13

Kamp, K. A., & Yoffee, N. (1980). Ethnicity in ancient Western Asia during the early second millennium BC: archaeological assessments and ethnoarchaeological prospectives. *Bulletin of the American Schools of Oriental Research, 237*(1), 85-104. doi:https://doi.org/10.2307/1356508

Khalifa, S., Habash, N., Abdulrahim, D., & Hassan, S. (2016). *A large scale corpus of Gulf Arabic.* Paper presented at the 10th conference on International Language Resources and Evaluation (LREC'16), Portorož, Slovenia. doi:https://doi.org/10.48550/arXiv.1609.02960

Khalifa, S., Habash, N., Eryani, F., Obeid, O., Abdulrahim, D., & Al Kaabi, M. (2018). *A morphologically annotated corpus of Emirati Arabic.* Paper presented at the LREC 2018 - 11th International Conference on Language Resources and Evaluation, Miyazaki, Japan. Retrieved from http://bspace.uob.edu.bh/xmlui/handle/123456789/3468

Khedher, M. Z. (1999). *Use of Neural Networks in Arabic Text Transliteration.* Paper presented at the Fourth International Conference on Recent Trends in Computer Science Applications & Information Systems, Amman, Jordan. Retrieved from https://www.researchgate.net/publication/228940632

Larkey, L. S., Ballesteros, L., & Connell, M. E. (2002). *Improving stemming for Arabic information retrieval: light stemming and co-occurrence analysis.* Paper presented at the Proceedings of the 25th annual international ACM SIGIR conference on Research and development in information retrieval, Tampere, Finland. doi:https://doi.org/10.1145/564376.564425

Legate, J. A. (2008). Morphological and abstract case. *Linguistic inquiry, 39*(1), 55-101. doi:https://doi.org/10.1162/ling.2008.39.1.55

Lowry, J. (2021). Enregistering the Badawī Dialect in Jāzān, Saudi Arabia. *Journal of Arabian Studies, 11*(1), 38-55. doi:https://doi.org/10.1080/21534764.2021.1934953

Lucas, C. (2014). Contact-induced language change. In C. Bowern & B. Evans (Eds.), *The Routledge handbook of historical linguistics* (pp. 519-536). London: Routledge. doi:https://doi.org/10.4324/9781315794013-37

Lukitowati, R., & Ramli, K. (2020). Assessing the Information Security Awareness of Employees in PT ABC Against International Organization for Standardization (ISO) 27001: 2013. *Journal of Computational and Theoretical Nanoscience, 17*(2-3), 1441-1446. doi:https://doi.org/10.1166/jctn.2020.8823

Mahmoudzahi, M. (2015). Analogy and some case studies in the historical study of Iranian languages: with emphasis on Persian. *Theory and Practice in Language Studies, 5*(10), 2169. doi:https://doi.org/10.17507/tpls.0510.27

Obeid, O., Salameh, M., Bouamor, H., & Habash, N. (2019). *ADIDA: Automatic dialect identification for Arabic.* Paper presented at the Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics (Demonstrations), Minneapolis, Minnesota. doi:http://dx.doi.org/10.18653/v1/N19-4002

Owens, J. (2006). *A Linguistic History of Arabic*. Oxford: Oxford University Press. Retrieved from https://eref.uni-bayreuth.de/id/eprint/21940

Owens, J., & Dodsworth, R. (2009). Stability in subject-verb word order: From contemporary Arabian Peninsular Arabic to Biblical Aramaic. *Anthropological linguistics, 51*(2), 151-175. doi:https://doi.org/10.1353/anl.0.0014

Palmer, J. (2007). Arabic diglossia: Teaching only the standard variety is a disservice to students. *Journal of Second Language Acquisition and Teaching, 14*, 111-122. Retrieved from https://journals.librarypublishing.arizona.edu/jslat/article/id/222/

Pat-El, N. a. (2009). The development of the Semitic definite article: a syntactic approach. *Journal of semitic studies, 54*(1), 19-50. doi:https://doi.org/10.1093/jss/fgn039

Rosenhouse, J. (1998). Women's speech and language variation in Arabic dialects. *al-'Arabiyya, 31*, 123-152. Retrieved from https://www.jstor.org/stable/43192797

Rossabi, M. (2002). Autocracy and China's Rebel Founding Emperors. Comparing Chairman mao and Ming Taizu. By Anita Andrew and John Rapp. pp. xiii, 360. Maryland, Rowman & Littlefield, 2000. *Journal of the Royal Asiatic Society, 12*(1), 132-132. doi:https://doi.org/10.1017/S1356186302470150

Sadat, F., Mallek, F., Boudabous, M. M., Sellami, R., & Farzindar, A. (2014). *Collaboratively constructed linguistic resources for language variants and their exploitation in NLP application–the case of Tunisian Arabic and the social media.* Paper presented at the Proceedings of workshop on Lexical and grammatical resources for language processing, Dublin, Ireland. doi:https://doi.org/10.3115/v1/W14-5813

Saiegh-Haddad, E., & Henkin-Roitfarb, R. (2014). The Structure of Arabic Language and Orthography. In E. Saiegh-Haddad & R. M. Joshi (Eds.), *Handbook of Arabic Literacy: Insights and Perspectives* (pp. 3-28). Dordrecht: Springer Netherlands. doi:https://doi.org/10.1007/978-94-017-8545-7_1

Salloum, W., & Habash, N. (2014). ADAM: Analyzer for dialectal Arabic morphology. *Journal of King Saud University-Computer and Information Sciences, 26*(4), 372-378. doi:https://doi.org/10.1016/j.jksuci.2014.06.010

Sandler, W., Meir, I., Padden, C., & Aronoff, M. (2005). The emergence of grammar: Systematic structure in a new language. *Proceedings of the National Academy of Sciences, 102*(7), 2661-2665. doi:https://doi.org/10.1073/pnas.0405448102

Schiff, R., & Saiegh-Haddad, E. (2018). Development and relationships between phonological awareness, morphological awareness and word reading in spoken and standard Arabic. *Frontiers in psychology, 9*, 356. doi:https://doi.org/10.3389/fpsyg.2018.00356

Schmtiz, P. C. (1995). A problem of punic morphology: the third person singular feminine of the suffixing conjugation with affixed object pronoun. *Journal of semitic studies, 40*(2), 219-225. doi:https://doi.org/10.1093/jss/XL.2.219

Shoufan, A., & Alameri, S. (2015). *Natural language processing for dialectical Arabic: A Survey.* Paper presented at the Proceedings of the Second Workshop on Arabic Natural Language Processing, Beijing, China. doi:https://doi.org/10.18653/v1/W15-3205

Souag, L. (2021). Pattern borrowing and hybridization in Mubi (East Chadic): The importance of congruence. *Word Structure, 14*(2), 246-270. doi:https://doi.org/10.3366/word.2021.0189

Taha, J., Stojanovik, V., & Pagnamenta, E. (2021). Sentence repetition as a clinical marker of Developmental Language Disorder: Evidence from Arabic. *Journal of Speech, Language, and Hearing Research, 64*(12), 4876-4899. doi:https://doi.org/10.1044/2021_JSLHR-21-00244

Tahir, I. (2009). Copula in standard English and its Counterpart in Standard Arabic. *Al-Fatih Journal, 5*(39), 74-88. Retrieved from https://www.iasj.net/iasj/article/17544

Theodoropoulou, I., & Tyler, J. (2014). Perceptual dialectology of the Arab world: a principal analysis. *Al-ʿArabiyya, 47*, 21-39. Retrieved from https://www.jstor.org/stable/24635371

Tiersma, P. M. (1982). Local and general markedness. *Language*, 832-849. doi:https://doi.org/10.2307/413959

Trentman, E. (2011). L2 Arabic dialect comprehension: Empirical evidence for the transfer of familiar dialect knowledge to unfamiliar dialects. *L2 Journal, 3*(1), 22-49. doi:https://doi.org/10.5070/L2319068

Versteegh, K. (2001). Linguistic contacts between Arabic and other languages. *Arabica, 48*(Fasc. 4), 470-508. doi:https://doi.org/10.1163/157005801323163825

Weiss, M. (2015). The Comparative Method. In *The Routledge Handbook of Historical Linguistics* (pp. 145-163): Routledge. doi:https://doi.org/10.4324/9781315794013-16

Youssef, I. (2021). Contrastive Feature Typologies of Arabic Consonant Reflexes. *Languages, 6*(3), 141. doi:https://doi.org/10.3390/languages6030141

Zaidan, O., & Callison-Burch, C. (2011). *The arabic online commentary dataset: an annotated dataset of informal arabic with high dialectal content.* Paper presented at the Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies, Portland, Oregon. Retrieved from https://aclanthology.org/P11-2007.pdf