The Palatalisation of /ʤ/ into /j/ in Emirati Arabic (EA): A Rule-Governed or Random Alternation?

Hodan Mohamoud Hassan

Department of English Language Teaching, College of Education, Humanities and Social Sciences, Al Ain University of Science and Technology

P.O. Box: 64141, Al Ain, UAE

Tel: 971-3702-4888   Fax: 971-3702-4777

Abstract

This study aims to investigate a phonological phenomenon that occurs in Emirati Arabic (EA), whereby the voiced palato-alveolar affricate /ʤ/ changes into the voiced palatal approximate (glide) /j/. In particular, this study attempts to determine whether this phonological alternation is triggered by a certain phonological environment, or whether it occurs randomly without any rule. It also endeavours to examine the hypothesis that this phonological phenomenon was borrowed from other Arabic dialects spoken in the Gulf through language contact.

Keywords: Phonological alternation, palatalisation, Emirati Arabic, language contact

1. Introduction

The linguistic situation of Arabic can be described as complex due to the existence of two types of varieties, namely, Modern Standard Arabic (henceforth MSA) and Colloquial Arabic (henceforth CA) (Khalifa et al. 2016). MSA is the official language variety in Arab countries; it is the language used in writing, official speeches, sermons, correspondence and the media, whereas CA is the one used in everyday life. Several studies were conducted on MSA in general, and its phonological system and alternations in particular (see Altakhaineh and Zibin 2014; Altakhaineh and Alshamari 2016; Altakhaineh 2017). What makes CA difficult to analyse is its lack of an orthographical system that can be accessed by researchers. In addition, some varieties of CA have received more attention than other varieties, e.g. Egyptian Arabic and Jordanian Arabic are among the dialects that have been examined extensively in comparison with other CA dialects (Khalifa et al. 2016; Zibin and Altakhaineh 2016). In contrast, Gulf Arabic (henceforth GA) has not received due attention in linguistic research. GA can be defined as the variety of Arabic language spoken in the Arabian Peninsula, specifically, in Saudi Arabia, Kuwait, the United Arab Emirates, Bahrain, Oman and Qatar. This dialect is the closest to MSA, as argued by Versteegh (2001), who suggests that "while there are major differences between Gulf and MSA, Gulf has notably preserved more of MSA's verb conjugation than other varieties have". One variety of GA, i.e. Emirati Arabic (henceforth EA) is one of the understudied varieties of Arabic based on the relevant literature. Therefore, this study aims to look closely at EA and to examine a phonological phenomenon that occurs in this variety. Specifically, this study aims to investigate the palatalisation of /dʒ/ into /j/ in EA and to determine whether it is a rule-governed or random alternation.

2. Literature Review

2.1 Emirati Arabic (EA)

The United Arab Emirates (UAE) lies in the East of the Arabian Gulf region on an area of 83,600 km² with a population of 7.9 million. The official religion of the country is Islam and the official language is Arabic. The federation of the UAE has seven member emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm al-Quwain, Ras al-Khaimah and Fujairah.

The Emirati dialect is one variety of Gulf Arabic (GA). It is distinct in a number of linguistic aspects from the rest of GA varieties (e.g. Saudi, Qatari, Kuwaiti, Omani and Bahraini), as shown in the following tables:

Table 1. An example of a phonological difference between Omani Arabic and EA

The adjective /dʒædi:d/ 'new'	Emirati	/beet **j**idi:d/ Meaning: a new house
	Omani	/be:t **g**ædi:d/ Meaning: a new house

Table 2. An example of a morphological difference between Saudi Arabic and EA:

Your book (female)	Emirati	/kitāb/ + /itʃ/
	Saudi	/kitāb/ + /iʃ/

Table 3. An example of a semantic difference between Kuwaiti Arabic and EA

The verb /gæʕad/ 'sat/woke up'	Emirati	/gæʕæd ʔæħmæd ʕælæl ʔærd̪ˤ/ Meaning: Ahmad **sat** on the floor.
	Kuwaiti	/gæʕæd ʔæħmæd mininnɔːm/ Meaning: Ahmad **woke up**.

2.2 Palatalisation

Palatalisation is a wide phonological term that includes any movement of the tongue towards the hard palate and the alternation of a primary articulation to a secondary articulation, e.g. [t] palatalised to [ṫ], [tʲ] and [t'] (Crystal 2011).

In addition, palatalisation could also refer to the addition of a secondary palatal articulation as the case of the Russian sj and pj (Zsiga 2000). This phenomenon has morphological motives as well in some languages such as Somali, e.g. the /g/ in the imperative verb /tjoog/ 'stay or stop' is palatalised into /tj/ after adding the suffix *i* to change the meaning into 'stop something', becoming /tjootji/ (Lampitelli 2011).

Regarding MSA, the term palatalisation is equivalent to Al-ibdal (see Altakhaineh and Zibin 2014), and it was familiar to Arabs before the existence of the current CA dialects. According to Al Obaidi (2010), the palatalisation of /dʒ/ into /j/ is reported to be a main feature of Tamim tribe or Bany Tamim. The following are some examples from their speech (Al Obaidi 2010:11):

(1) /ʃædʒæræh/ vs. /ʃæjæræh/ 'a tree'

(2) /sˤæhāriːdʒ/ vs. /sˤæhāriːʒ/ 'tubes'

Al Obaidi (2010) attributed the alternation of /dʒ/ into /j/ in Tamim Arabic to the fact that /j/ is a continuant sound, which makes it louder and clearer than the non-continuant /dʒ/. Furthermore, both sounds are in the same articulatory area.

2.3 Language Contact

Simply, language contact, according to Thomason (2001), is the use of two or more languages in the same place at the same time. Curnow (2001) added that when the majority of the speakers of one of the contacted languages have some competence in the other, they gradually become like each other. This process could take place through physical interactions like immigration, slavery, and marrying someone from outside one's ethnic group, or through the movement of a group to the territory of another group, e.g. Native Americans welcomed

the first Europeans (Thomason 2001). The borrowed items can be words, e.g. English 'algebra' from Arabic, or features, e.g. English borrowed constricted *r* from other dialects (Thomason 2007).

The following section reviews some studies on palatalisation in GA.

2.4 Previous Studies on Palatalisation in GA

Drawing on the previous studies that examined palatalisation in some Gulf dialects, e.g. Kuwaiti Arabic (KA), it appears that different accounts have been advanced to account for this phonological alternation. In his study on Qatari Arabic, Al-Amadidhi (1985: 161), states that native speakers of this dialect learn that /g/ and /j/ are equivalent to /q/ and /ʤ/, respectively. That is, this kind of alternation is a part of the mental lexicon of Qatari people. In addition, Al-Qenaie (2011: 174-176), has attributed this phenomenon in Kuwaiti Arabic to the speakers' desire to show their social class or ethnicity and has given the Sunni group as an example. Al-Mubarak (2016) investigated Al Aḥsā Arabic, which is spoken in Saudi Arabia and discussed the palatalisation of /k/ and /g/. In Omani Arabic, /k/ is palatalised into /kʲ/ as in /[rikʲab] 'camels' (Al-Aghbari 2004: 31).

This study aims to contribute to the body of knowledge related to phonological alternations in GA. Specifically; this study investigates the palatalisation of /ʤ/ into /j/ in Emirati Arabic seeking answers to the following research questions:

1. What is the phonological environment (if any) in which the palatalisation of /ʤ/ into /j/ in Emirati Arabic takes place?

2. To what extent could the palatalisation of /ʤ/ into /j/ in Emirati Arabic be borrowed from other Gulf Arabic dialects and adopted by Emirati Arabic speakers through language contact?

The next section describes the methods employed in this study.

3. Methods

3.1 Data Collection

The data used in the current study was collected from pieces of Emirati poetry that was written by two old Emirati poets: Al Majidy Bin Dhahir, particularly his poem *yigu:l ʔalma:yidi: ʔabyāt ʃiʕrin* 'Al Maydi recites poetic verses' and Rashid Bin Tannaf, particularly his poem *ma: giltillək* 'did not I tell you so'.   These two poems were chosen to be analysed in the current study based on the judgment of 10 native-speaker informants, who indicated that these two poems are representative of daily EA. Additionally, due to the lack of an online corpus that represents EA, some of the data analysed in the current study includes words that were collected from 10 native-speaker informants (see Zibin and Altakhaineh in press).

3.2 Data Analysis

The data collected for the purpose of this study is presented in the tables below, which show some words where /ʤ/ changes into /j/.

Table 4. Words collected from the above mentioned poems in which /ʤ/ is palatalised

Modern Standard Arabic	Emirati Arabic	Modern Standard Arabic	Emirati Arabic
mā[1].ʤi.di 'male name'	ma:**ji**di	ʤā.ʔu: 'they came'	**J**æw
ʤidādul 'the new(plural)'	**ji**da:dil	ʤæ.bæl 'mountain'	**ji**bæl
fi.ʤāʤ 'paths'	f**ju:ji**l	ʕæ.ʤæzt 'I despair'	ʕi**jæ**zt
ʤæ.nu:b 'South'	**ji**nu:b	ʤā.ʔætk 'she/it came to you'	**jæ**tk
ʤā.feit 'I estranged'	**ja:**feet	ʤiʔ.tuk 'I came to you'	**ji:**tæk
ʕæ.ʤu:l 'hasty'	ʕi**ju:**l		

Table 5. Words collected from the 10 native-speaker informants in which the initial /ʤ/ is palatalised

Standard Arabic	Emirati Arabic	Standard Arabic	Emirati Arabic
/ʤā.bir/ 'male name'	/ja:bir/	/ʤædd/ 'grandfather'	/jædd/
/ʤum.ʕæh/ 'Friday'	/jimʕæh/	/ʤu:ʕ/ 'hunger'	/ju:ʕ/
/ʤæl.sæh/ 'sitting'	/jalsæh/	/ʤæmr/ 'embers'	/jæmr/
/ʤæ.bæl/ 'mountain'	/jibæl/	/ʤinn/ 'gin'	/jinn/
/ʤi.dār/ 'wall'	/jida:r/	/ʤæ.ra:d/ 'locusts'	/jara:d/
/ʤæ.di:d/ 'new'	/jidi:d/	/ʤisr/ 'bridge'	/jisir/
/ʤæ.mi:l/ 'favour'	/jimi:l/	/ʤæmb/ 'side'	/jæmb/
/ʤā.ʔæ/ 'he came'	/jæ/	/ʤæ.wāz/ 'passport'	/juwa:z/
/ʤæb.hæh/ ' forehead'	/jæbhæh/	/ʤā.hil/ 'child'	/ja:hil/
/ʤi:.ra:n/ 'neighbours'	/ji:ra:n/	/ʤild/ 'skin'	/jild/
/ʤaʊf/ 'inside'	/jɔ:f/	/ʤær.dāʔ/ 'barren'	/jærdæ/
/ʤæ.zāʔ/ 'reward'	/jizæ/	/ʤær.ræ/ 'he pulled'	/jærr/
/ʤæ.nu:b/ 'south'	/jinu:b/	/ʤa.nā.zah/ 'funeral'	/jina:zæh/

Table 1 presents some words in EA in which the initial /ʤ/ is palatalised. Through analysing the phonological environment of these words, i.e. their position and the phonological features of the sounds surrounding them, it can be observed that the quality of the vowel changed in some words e.g. /jimʕæh/ 'Friday' and did not change in other words like /ji:.ra:n/ 'neighbours'. Furthermore, it can be noted that all these words have the following pattern:

(3) /ʤ/ → [j] / #____V

The rule in (3) states that /ʤ/ changes into [j] when it occurs at the syllable boundary followed by one of these vowels: ɪ, i:, u, u:, æ, ā, aʊ.

Table 6 presents some words, in which /ʤ/ does not change into /j/:

---

[1] /ā/ presents the long vowel /a:/ but without the feature of backing.

Table 6. Words in which the initial /ʤ/ does not palatalise

/ʤi.hād/ 'holy war'	/ʤæn.næh/² 'Paradise'	/ʤæ.ri:.dæh/ 'newspaper'	/ʤa:m.ʕæh/ 'university'
/ʤæ.māl/ 'beauty/male name'	/ʤe:ʃ/ 'army'	/ʤism/³ 'body'	/ʤāf/⁴ 'dry'

Table 7. Words in which the middle /ʤ/ is palatalized

Modern Standard Arabic	**Emirati Arabic**	**Modern Standard Arabic**	**Emirati Arabic**
/wæʤh/ 'face'	/ wæjh /	/fæʤr/ 'dawn'	/fæjər/
/ʃæ.ʤæ.ræh/ 'tree'	/ʃjæræh/	/dæ.ʤāʤ/ 'chicken'	/dja:j/
/mæʤ.lis/ 'sitting room'	/mæjlis/	/ħā.ʤæh/ 'need/item'	/ħa:jæh/
/ʕæ.ʤi:n/ 'dough'	/ʕji:n/	/mus.tæʕ.ʤil/ 'in hurry'	/mistæʕjil/
/ʕæ.ʤu:z/ 'old man/woman'	/ʕju:z/	/ʔæʕ.ʤæb/ 'to impress'	/ʕijæb/
/mæs.ʤid/ 'mosque'	/mæsjid/	/wā.ʤid/ 'a lot'	/wa:jid/
/wæʤ.bæh/ 'meal'	/wæjbæh/	/ʕæʤ.mān/ 'Ajman'	/ʕejma:n/
/ʕaʊʤaaʔ/ 'crooked(feminine)'	/ʕɔ:jæh/	/ri.ʤāl/ 'men'	/rija:ji:l/
/wæ.ʤæʕ/ 'pain'	/wijæʕ/	/mæʤ.ru:ʃ/ 'grounded'	/meejru:ʃ/
/mā.ʤid/ 'male name'	/mājid/	/fin.ʤān/ 'coffee cup'	/finja:n/

Table 7 presents examples of palatalised middle /ʤ/. Similarly to the words in Table 1, the quality of the preceding and the following vowels changes in some examples such as /ʕɔ:jæh/ 'crooked (feminine)'. In another example, a vowel is omitted like in /dja:j/ 'chicken'. Another observation as far as the vowels in the words that undergo palatalisation are concerned is that there is an addition of a vowel like in the word /fæjər/ 'dawn'. The phonological pattern of words in Table 7 can be presented as follows:

(4) /ʤ/ → [j]/ V__V

The rule in (4) states that /ʤ/ changes into [j] when it occurs intervocalically.

Table 8 presents some words, in which middle /ʤ/ does not change into [j]:

---

² Some speakers say /jannah/, mostly old people.
³ Emiratis do not have this word in their native dialect, but they may use it. The Emirati word is /jamb/.
⁴ Emiratis do not have this word in their native dialect, but they may use it. The Emirati word is /ja:bis/.

Table 8. Words in which the middle /ʤ/ does not palatalise

/hiʤ.ræh/ 'immigration'	/ʔæʤr/[5] 'reward'	/nu.ʤu:d/ 'female name'	/mæʤd/ 'glory'
/xæ.ʤu:l/ 'shy male'	/wu.ʤu:d/ 'existence'	/mæ.ʒa:l/ 'field'	/ħæʤm/ 'size'

Table 9. Words in which final /ʤ/ is palatalised

Modern Standard Arabic	**Emirati Arabic**	**Modern Standard Arabic**	**Emirati Arabic**
/ħæʤʤ/ 'pilgrimage'	/hijj/[6]	/fæ.læʤ/ 'water channel'	/fælæj/
/xa:.riʤ/ 'outside'	/xa:rij/	/dæ.ʤāʤ/ 'chicken'	/dja:j/
/ʕæ.wæʤ/ 'warp'	/ʕæwæj/	/fæ.ræʤ/ 'relief'	/færæj/
/ʕi.lāʤ/ 'treatment'	/ʕila:j/	/dæ.ræʤ/ 'stairs'	/dæræj/
/si.ra:ʤ/ 'lantern'	/sira:j/	/ʔæʕ.ræʤ/ 'lame'	/ʔæʕræj/

Table 10 presents some words in which final **/ʤ/** does not change into [j]:

Table 10. Words in which final /ʤ/ does not palatalise

/mæn.hæʤ/ 'curriculum'	/θælʤ/ 'snow/ice'	/tæ.xær.ruʤ/ 'graduation'	/xæ.li:ʤ/ 'gulf'
/xlinʤ/ 'new'	/mɔ:ʤ/ 'sea waves'	/ta:ʤ/ 'crown'	/ʔiz.ʕa:ʤ/ 'annoyance'

In Table 9, ten examples of palatalised final /ʤ/ were presented. Examining the quality of the vowel preceding it, a change in the vowel feature is noted in one word of the ten, i.e. /hijj/ 'pilgrimage' and /fju:jil/ 'paths' in Table 4. The palatalisation of final /ʤ/ can be represented as follows:

(5) /ʤ/ → [j] / V__#

The rule in (5) states that /ʤ/ changes into [j] when it occurs at the end of the word following a vowel.

After analysing the data, the following three phonological environments are observed:

---

[5] Some speakers say /ʔajer/, mostly old people.
[5] Some speakers do not palatalise the /ʤ/.

(6) /ʤ/ → [j] / #___V

(7) /ʤ/ → [j] / V___V

(8) /ʤ/ → [j] / V___#

In fact, these three patterns have no particular significance or uniqueness as they represent the normal case of all EA utterances except for few situations, such as /ʃjuːjil/ 'paths', /ʕjiːn/ 'dough', /djaːj/ 'chicken', and /ʃjæræh/ 'tree' in which consonant clusters appear at the beginning. According to Alotaibi and Hussain (2010), "The allowed syllables in Arabic language are: consonant-vowel (CV), consonant-vowel-consonant (CVC), and consonant-vowel-consonant-consonant (CVCC), where V indicates a (long or short) vowel while C indicates a consonant. Arabic utterances can only start with a Consonant".

Thus, after analysing the data, it is clear that the palatalisation of /ʤ/ into /j/ in EA has no specific phonological environment that triggers its occurrence suggesting that this phenomenon is not rule-governed; rather it is a random alternation.

The second question in the current study is related to the extent to which this phenomenon can be borrowed from other Gulf Arabic dialects and adopted by Emirati Arabic speakers through language contact.

Arabs in the Arabian Peninsula have always lived in tribes, and they interacted with each other through marriage, markets like Okath, anniversary meetings such as Hajj, wars, taking slaves and adopting them, or by having a part of a tribe moving to the land of another tribe as in the case of Bani Tamim. In this regard, Almusallam (2001) ascribed the richness of EA to the various immigration movements that synchronised the gathering of the first Emirati residents. Specifically, the first Emiratis came from two main destinations: the West and the South of the Arabian Peninsula. From the West came three groups: Hijazis (from Al Hijaz), Najdis (from Najd), and Ihsa'is (from Al Ihsa') and each group had its own dialect. From the East came the Omani group with their dialect loaded with vocabulary and structures from the Himyariah dialect.[7] Thus, the UAE has been the melting-pot in which the dialects of these groups interacted, and from all of this, and through a long and complex chain of sculpting, modulating, inverting, alternating, shortening, and merging, the Emirati dialect we have today emerged. Amongst Najdis were Bani Tamim, and according to Abdulbaqi (1985: 80-81):

> We find it in the East of the Arabic peninsula [sic] in Kuwait, Bahrain, Qatar, Abu Dhabi, Al Buraimi, and Dubai, and if this phenomenon was common in these lands and was a feature of their dialects, this could never be attributed to a reason but to the fact that among the residents of these lands are those who belong to Tamim.

The above statement suggests that palatalisation exists in Bani Tamim dialect, so one can argue that this phenomenon could have been borrowed from that dialect and adopted by EA.

---

[7] This is a Semitic language that was spoken in pre-Islamic Yemen.

Finally, note here that in EA, the palatalisation of /ʤ/ is used more by the elderly than young people. The reason for this lies in the fact that young people mingle with people from other cultures and languages more than the elderly do. This results in a noticeable decrease in the occurrence of this phenomenon in the speech of the former group. Two other reasons can also account for the use of this phenomenon by both groups of speakers. Firstly, education contributes to the degree of use of palatalisation, i.e. learning MSA and being taught by teachers from different linguistic backgrounds can influence one's speech. Secondly, it can be argued that the reason why young people avoid the palatalisation of /ʤ/ could be attributed to the usual tendency of young people to be perceived as modern and civilised. This can be achieved by avoiding the speech patterns of old speakers whose dialect is close to the Bedouin variety, which is mostly regarded as less prestigious compared to urban dialects. This conclusion is in line with that of Al-Amadidhi (1985: 3, 346), who posits that:

> The social motivation for change and variation are highlighted. Such processes occur as a result of status-ranking of local social dialects and as a result of the tendency of the younger people to modify their speech in the direction of the superimposed variety, which is learnt at school.

4. Conclusion and recommendations

This paper has analysed words from Emirati Arabic (EA) to examine whether the phenomenon of palatalisation that occurs in this dialect is rule-governed or random. The paper concludes that the phenomenon of palatalising /ʤ/ into /j/ in EA is a random alternation and has no specific phonological environment that motivates its occurrence. Moreover, the study suggests that this phonological alternation could have been borrowed from Bani Tamim dialect through language contact.

The study recommends that the data presented in this study should be further analysed using specialised linguistic approaches to either confirm the study findings or to provide other possible interpretations of the palatalisation of /ʤ/ into /j/ in EA. The study also recommends compiling a corpus of Emirati dialect to have as a database for all researchers interested in analysing this dialect in future research.

References

Abdulbaqi, D. (1985). The Language of Tamim: A Historical and Descriptive Study.

Al-Aghbari, K. H. (2004). Broken plurals in the Muscut dialect of Omani Arabic.

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), 34-58.

Al-Amadidhi, D. G. H. Y. (1985). Lexical and Sociolinguistic Variation in Qatari Arabic. *Thesis submitted for the degree of Doctor of Philosophy University of Edinburgh 1985*.

Al-Mubarak, G. (2016). An Investigation of Sociolinguistic Variation in al-ʾAḥsāʾ Arabic. *Doctoral dissertation, SOAS, University of London*.

Almusallam, A. (2001). The Book of The Emirati Dialect (an introduction), a guidance of the field researcher. *Sharjah: Department of Culture and Information*.

Alobaidi, A. J. A. (2010). Alternation in dialects and the influence of sound on it. *Alanbar Journal of Languages and Literature, 3*, 11.

Alotaibi, Y. A., & Hussain, A. (2010). Comparative analysis of Arabic vowels using formants and an automatic speech recognition system. *International Journal of Signal Processing, Image Processing and Pattern Recognition*, *3*(2), 11-22.

Al-Qenaie, S. H. A. M. L. A. N. (2011). Kuwaiti Arabic: A Socio-Phonological Perspective. *Doctoral dissertation, Durham University, UK*.

Altakhaineh, A. R. M. (2017). Stress Assignment in N+ N Combinations in Arabic. *International Journal of Applied Linguistics and English Literature*, *6*(6), 83-100. https://doi.org/10.7575/aiac.ijalel.v.6n.6p.83

Altakhaineh, A. R. M., & Alshamari, M. R. (2016). A Re-examination of Al-ʔiʕlaal in Arabic: An autosegmental approach. *Advances in Language and Literary Studies*, *7*(6), 1-8.

Altakhaineh, A. R. M., & Zibin, A. (2014). Phonologically Conditioned Morphologically Process in Modern Standard Arabic: An Analysis of Al-ibdal 'Substitution' in ftaʕal Pattern Using Prosodic Morphology. *International Journal of English Language and Linguistics Research*, *2*(1), 1-16.

Crystal, D. (2011). Dictionary of linguistics and phonetics (Vol. 30). John Wiley & Sons. https://doi.org/10.1002/9781444302776

Curnow, T. J. (2001). What Language Features can be 'Borrowed'. Areal Diffusion and Genetic Inheritance: Problems in Comparative Linguistics, 412-436. Retrieved from https://iasj.net/iasj?func=fulltext&aId=64091

Khalifa, S., Habash, N., Abdulrahim, D. and Hassan, S. (2016). A large Scale Corpus of Gulf Arabic. *arXiv preprint arXiv:1609.02960*.

Lampitelli, N. (2011, June). Morpho-phonology of Somali nouns. *In Italian Meeting of Afroasiatic Linguistics*.

The Emirati poem of Al Majidy Bin Dhahir 'Al Mayidi recites poetic verses'. Retrieved from http://www.7awaya.com/poemPage.do?poemId=13862

The Emirati poem of Rashid Bin Tannaf 'did not I tell you so'. Retrieved from https://www.youtube.com/watch?v=bSeo7rylP0U.

Thomason, S. G. (2007). Language contact and deliberate change. *Journal of Language Contact, 1*(1), 41-62. https://doi.org/10.1163/000000007792548387

Thomason, S. G., & Kaufman, T. (2001). *Language contact*. Edinburgh: Edinburgh University Press. https://doi.org/10.1016/B0-08-043076-7/03032-1

Versteegh, K. (2001). Linguistic Contacts between Arabic and Other Languages. *Arabica*, *48*(4), 470-508. https://doi.org/10.1163/157005801323163825

Zibin, A., & Altakhaineh, A. R. M. (2016). Acquiring the English Causative Alternation: Evidence from the University of Jordan. *International Journal of Applied Linguistics and English Literature*, *5*(3), 7-15. https://dx.doi.org/10.7575/aiac.ijalel.v.5n.3p.7

Zibin, A., & Altakhaineh, A. R. M. (in press). An Analysis of Arabic Metaphorical and/or Metonymical Compounds: A Cognitive Linguistic Approach. To appear in *Metaphor and the Social World, 8*(1).

Zsiga, E. C. (2000). Phonetic Alignment Constraints: Consonant Overlap and Palatalization in English and Russian. *Journal of Phonetics*, *28*(1), 69-102. http://doi.org/10.1006/jpho.2000.0109

Copyrights