Oranees' Interdental Realisation in the Reading of the Holy Koran

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Résumé
Reading[1] the Koran is a holy task performed by Muslims worldwide. Koran readers are required to have a good control of its rules and regulations: No alterations or modifications are allowed at any linguistic level. A number of our recorded interviews in Oran speech community reveal that young Oranees, who are majorly Muslims, opt for the dental plosive pronunciation of interdental sibilants in their daily Arabic speech. This paper tackles the kind of phonetic behavior adopted by these speakers when they read the Koran: is their interdental sibilant articulation maintained or do they extend their use of dental plosives to this sacred context? To provide a tentative answer to this question, a rapid and anonymous survey is supplied and used among Oranees at the university level. The objective behind this examination is to provide the computer scientist with some necessary linguistic tools to undertake the Koranic automatic translation.

1. Introduction: Arabic Language Variation

Much earlier before western linguists like De Saussure and Chomsky, the Arabs had long marginalized Arabic variation. The Koran was revealed in the Arabic dialect of Prophet Mohammed's Quraysh tribe, a fact that, among Muslims, led to regard this variety or Mudar language in Ibn Khaldoun's (1958) terms as the purest and most sacred. In the 7th and 8th centuries (AD), the Arab-Muslim conquests (∂l futuħat ∂l islamija) resulted in the establishment of Arabised centres outside the Arabian Peninsula. Unlike the latter area (source of

[1]. The word 'reading' is alternatively used with the word 'recitation' in this paper

Mudar Arabic language) which was seen far from foreign linguistic impacts, the new non-Arab sites were highly exposed to all external influential kinds. Both Arab and non-Arab speakers inhabited these places and were inescapably in daily contact. Linguistically, new 'corrupted' Arabic vernaculars sprang up, and were divergent from the 'purest Arabic'. According to Ibn Khaldoun (1958: 750),

> "…the Mudar language was only felt when that language became corrupt through the contact of (Arabs) with non-Arabs, at the time when (the Arabs) gained control of the provinces of the Iraq, Syria, Egypt, and the Maghrib. (At that time) the (Arabic linguistic) habit took on a form different from the one it had had originally. The (Mudar language) was thus transformed into another language."

Traditional governors started to call upon Mudar Arabic grammarians, for the sake of making an end to this rapid linguistic 'aberration'. Mudar Arabic grammarians' duty was then orientated towards protecting this variety by fixing its grammatical rules.

2. Arabic Language Typology

The spoken-type Arabic in Islamic cities was Sedentary. The former original non-Arab languages of these centers turned foreign varieties. Ibn Khaldoun (1958) followed the path of Ancient Arabic grammarians who stood against Arabic variation and change. The author confirmed that Sedentary Arabic was infected "… in some of its rules and through changes of the word endings" (ibid: 472), due to its permanent contact with these 'foreign' languages. It is, on the other hand, obvious that Mudar language or Quraysh tribe's dialect, the most correct and purest Arabic variety, represents Bedouin

Arabic. Arabic dialect typology has then appeared out of language contact; Bedouin Arabic dialects genealogically preceded the birth of Sedentary Arabic which later came out of contact between Bedouin dialects with non-Arabic languages. Marçais (1958) chose to readapt Ibn Khaldounian categorization in North Africa. He referred to Arabic dialects used by Sedentary inhabitants in the Maghreb as pre-Hilali(ian), and Hilali(an) dialects to those varieties spoken by Bedouin Arabs who came essentially from Banu Hilal Arabic tribe.

3. The Koranic Automatic Translation

Human languages are all natural and could be standard or non-standard. The standard natural language, such as Mudar language (known as Classical Arabic[2] nowadays) is that variety which is recognized as the medium of instruction, science, religion and news broadcasts. By contrast, non-standard varieties, such as Oran dialect (hereafter ORD), are viewed as irrelevant in either academic institutions or news transmission. It is consequently standard languages which gain involvement in automatic translation. Computer (or machine) translation relies heavily on artificial intelligence: a computer field which covers simulation (a technique whereby a physical object (or process) is imitated by a computer programme. Data is thus treated as if it were the object (or process) itself[3]) of some human intelligence aspects by computers[4]. One branch of artificial intelligence is natural language recognition. Alternatively used with speech recognition (or voice

[2]. Standard Arabic could indicate other types of Arabic varieties. Here, we consider it as Mudar language only.
[3]. Dictionnaire encyclopédique bilingue de la micro-informatique (1999: 448)
[4]. Dictionnaire encyclopédique bilingue de la micro-informatique (1999: 254)

recognition), this kind of computer recognition is a technique whereby voice messages are transmitted to the computer, which in turn attributes to them an alphabetical retranscription[5].

Non-standard languages, on the other hand, are still out of use by computers. Inserting non-standard varieties in automatic translation is being realized as more and more necessary. If we take the case of Koran, it is relatively fixed and Muslims are bound to recite it with a high degree of consideration. Errors are not allowed at any part of its linguistic levels and particularly on the level of pronunciation either. Since the mother tongues are often non-standard, their interference is greatly expected. It appears possible, then for computer scientists, to provide the Koran with its specific automatic translation. But, they still need another sort of intervention. Particularly, while a computer is exposed to Koran reading, there might be deviations from the pronunciation norm due to the mother tongue interference. Here, speech recognition requires a corrective pre-step, which is the task of an artificial intelligence specialist, before undertaking Koranic automatic translation into the language required. This correction necessitates the computer to recognize the non-standard linguistic features that regionally vary. The cooperation between the different specialised scientists .i.e. the computer specialists and linguists will probably give fruitful results with regard to Koranic machine translation.

[5]. Dictionnaire encyclopédique bilingue de la micro-informatique (1999: 410)

4. Interdentals: The Fieldwork

As an Islamic rule, pronunciation needs a high level of care and precision, as already indicated, once reciting the Koran. It is believed that, at least, every single phonetic or phonological feature has to be respected so that meaning would not bear any alteration. If dental plosives represent the sedentary norm, the interdental sibilants, Bedouin-type features (Bouamrane, 1989), are widespread in the Koran and deserve attention. While undertaking a research on ORD, we noticed, through our spontaneous interview, recorded in 2010 among university students, that our informants tended in many times to switch to standard language. And, although they produced interdental sibilants, they frequently used, instead, dental plosives, a phenomenon which is known as interdental sedentarisation. I specifically refer to the plain unvoiced and voiced interdental sibilants. If we search for the reason behind their rare realization, we can say that it is the result of non-standard influence on their standard language. The question that arises here: if the informants do not respect standard interdental pronunciation, do they meet it in their Koran reading, or do they likewise neglect it? The hypothesis is that reciting the Koran is the most Muslims' sacred performance. It is indeed subjected to variation following the prophet Mohamed's saying: 'nazala l-qur?a:nu bi sab□ati aħrufin kulluha: ka:fin □a:fin' *The Koran is revealed in seven dialects, all sufficient and satisfactory* (Baccouche, 2006). However, this variation is clearly limited, and since the young Oranees are majorly Muslims, they are supposed to be careful with God's Speech.

The fieldwork of the current research was a second investigation undertaken in the following year. Our objective

was to verify the above hypothesis. We met other 79 informants (37 male and 42 female) aged between nineteen and twenty seven years old. All the participants were Oranees and university students. Gender was not taken into account since we restricted the present study to the extra-linguistic variables 'region' and 'genealogy'. The participants faced an oral directive anonymous questionnaire; we addressed, among other questions, the following:

-/?inaa ?a□□ajnaaka al- kawθara/ *To thee have We granted the Fount (of Abundance)* (verse 1/Abundance: Surah 108)

-/?alhaakumu at-takaaθuru/ *The mutual rivalry for piling up (the good things of this world) diverts you (from the more serious things)* (verse 1/ The Piling Up: Surah 102)

-/saja□la naaran ðaata lahabin/ *Burnt soon will he be in a Fire of blazing Flame!* (verse 3/The Plaited Rope: Surah 111)

-/?ihdinaa a□-□iraa□a al- mustaqiima □-□iraa□a l-laðiina an□amta □alajhim □ajri al-ma□□uubi □alajhim wa laa □aaliina/ *The way of those on whom Thou hast bestowed Thy Grace, those whose (portion) is not wrath, and who go not astray* (verse 7/ The Opening: Surah 1)

Four Koranic verses were given to the informants who were required to recite them loudly. Our particular interest was in the occurrence of /θ/ in /kawθar/ *abundance* and /takaaθur/ *piling up* respectively from the first two verses, and the production of /ð/ in /ðaata/ *of* and /laðiina/ *those* from the second two verses. The reason why the participants were given two verses for each sibilant is to check the results, which are given and discussed below.

4.1 The Results

Unexpectedly, a very minor number of informants produced the interdental sibilants, while reading the verses, in their attributed positions in the Koranic items. A more sizeable score was assigned to plosive pronouncers who tended to substitute the original features for this articulation. As a result, our hypothesis has been invalidated.

4.1.1 The Unvoiced Interdental Sibilant /θ/

Table 1 deals with the first verse given above. It, more precisely, covers the pronunciation of /θ/ in /kawθar/ *Abundance*. In this Koranic item, the phoneme was realized as [θ] by some informants whereas [t] by others.

Bedouin [θ]	Sedentary [t]	Gloss
[kawθar**]**	**[**kawtar**]**	*Abundance*
18(23%)	61(77%)	

Table 1: The Unvoiced Interdental Sibilant Realisation

This table shows that only a low number of informants (18 out of 79) retained the unvoiced interdental sibilant in [kawθar] '*Abundance*'. The major number (61 out of 79) articulated the item with the unvoiced dental plosive. As indicated, another verse including another Koranic item characterised by /θ/ was addressed to the informants for the purpose of verification. The phoneme in / takaaθ□r/ '*The Piling Up*' was also realised as [θ] or [t],

Bedouin [θ]	Sedentary [t]	Gloss
[taka:θ□r]	[taka:t□r]	*The Piling*
27(34%)	52(66%)	*Up*

Table 2: The Unvoiced Interdental Sibilant Realisation

This seems to substantiate the results found in Table 1. Only an inferior number of respondents (27 out of 79) maintained the Bedouin pronunciation in /takaaθ□r/ '*The Piling Up*'. The massive majority (52 out of 79) represented those articulators of [t] at the expense of [θ]. The tables are supplied with the following overall graph for further clarification.

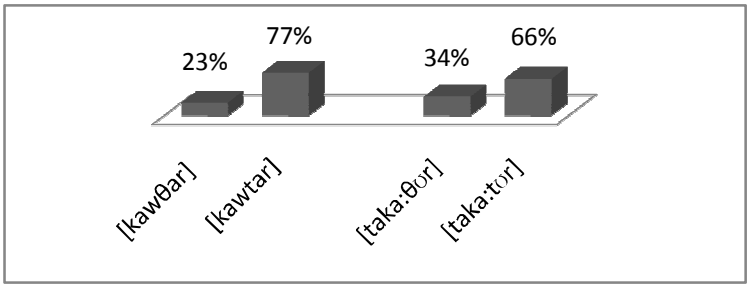

Figure 1: /θ/-articulation

4.1.2 The Voiced Interdental Fricative /ð/

The third verse is tackled within this section. /ðaata/ *of* in this verse is the focus of study. After that we have examined the results with regard to the unvoiced sibilant, it is high time deal with its counterpart in the above utterance. Once a comparison is made, it seems interesting to observe again an insignificant percentage (24%) scored by [ð]-realization while an important percentage (75%) was recorded in favour of the voiced dental plosive. Indeed, more than half of the population were [d]-pronouncers. On the other hand, 1% of the respondents were classified under the heading of blank; they did not supply any reading of the verse. This might be due to their hesitation in the nature of pronunciation they had to provide, they were tired or in a hurry to leave, or they forgot to

read it. Whatever the reason for the blank, its reached score is relatively neglected.

Bedouin [ð]	Sedentary [d]	Others	Gloss
[ða:ta]	[da:ta]	blank	*of*
19(24%)	59(75%)	1(1%)	

Table 3: The Voiced Interdental Sibilant Realisation

Following the earlier steps as undertaken in 4.1.1, the fourth verse was also accounted for: We, through this, aimed at checking the results attained in Table 3,

Bedouin [ð]	Sedentary [d]	Others	Gloss
[laði:na]	[ladi:na]	blank	*those*
21(27%)	57(72%)	1(1%)	

Table 4: The Voiced Interdental Sibilant Realisation

Obviously, 21 (27%) informants uttered [ð] against 56 (72%) who did [d] instead. One informant did not supply either sibilant or plosive. He was again considered as blank for the same probable reasons listed above. The results in Table 3 were further corroborated by the articulation of the Bedouin segment in our fourth item. The scores, if comparing Table 3 and Table 4, converged; in both cases, the voiced dental plosive receives high scores in contrast with the voiced interdental sibilant. The corresponding graph that combines and illustrates the last two tables is given below,

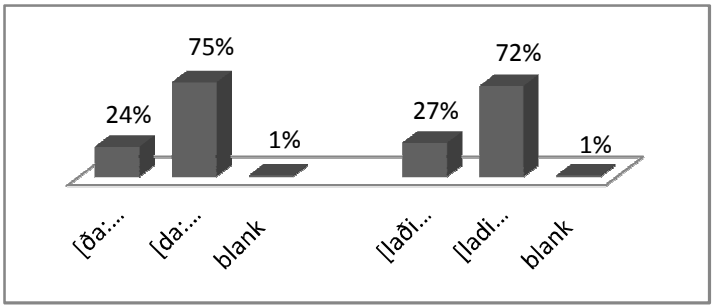

Figure 2: /ð/-articulation

Considering the overall achieved results with regard to the unvoiced interdental sibilant with those of its counterpart, we arrive at the table and diagram below,

[θ]	**[ð]**
22 (28%)	20 (25%)

Table 5: The Bedouin Interdental Pronunciation

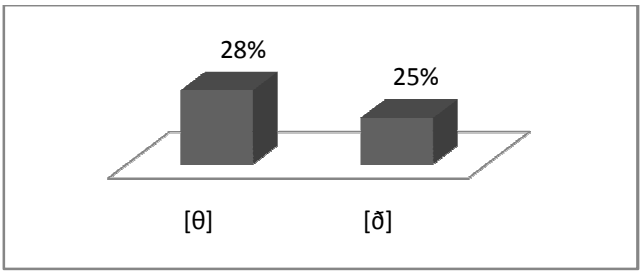

Figure 3: The Interdental Pronunciation

From Figure 3, it is very revealing that the category of interdental sibilant-articulators ranked very low. No much

difference was detected between the scored realisation of [θ] and that of [ð]; 28% represented the former while 25% was the corresponding percentage of the latter. It is clear that around a quarter of the interviewed population solely preserved the Bedouin pronunciation.

4.2. Discussion

The Informants' dialectal Arabic interfered in their Koran recitation. A suggestive cause is related to Koran learning. Koranic schools have existed in Algeria for a very long time. Children usually go to these places from the age of 3 or 4 years old and recite the Koran. At this phase, the human mind is believed to grasp easily any linguistic features, and since the Koran is holy, children are supposed to learn it correctly by heart. Other families are content with transmitting this tradition to their children at home by getting them accustomed to deal with the sacred Koran as dictated by Islam. Conservative Algerians who still follow either path constitute a minor number only. The great majority enroll their children in public schools where just some sections of the Koran are taught as part of the Islamic science subject. Pupils are usually required to learn these sections by heart and present them during their written or oral examinations. The rules and principles of Koran recitation are hardly ever taught. It is thus the Koranic educated minority of informants who has correctly pronounced the interdental sibilants. The vast majority, previously attending public schools, tend to broaden the use of dental plosives from their everyday speech into their most sacred reading.

Another probable explanation underlying the reduction of [θ] and [ð] in data could be their association with bedouinity.

As mentioned earlier, the two segments are genealogically seen as Bedouin; although they are used in a number of sedentary varieties, such as old Tenes, Cherchell, and Dellys (Boucherit, 2002), and not employed in other Bedouin dialects, such as Temouchent and Bel Abbes dialects (Bouhadiba, 1992), they are almost heard among Hilalian dialects, such as those corresponding to Tiaret, Mascara and Bayad (ibid). Attitudinally, the two segments may seem salient to ORD speakers in the sense that they are seen as too Bedouin that they prefer to avoid them. Bedouinity, for them, is probably related to backwardness and ignorance.

Still another reason behind the seldom presence of the two interdental sibilants is the lack of reading among youngsters. Koran recitation is only one manifestation of this phenomenon. Today, a remarkable reading scarcity is witnessed among the young generation in the world in general and Algeria in particular. This might be one consequence of the spread of new ways of spending one's spare time. This generation is more interested in devoting many hours dealing with technological devices, such as electronic games, mobiles, cameras, computer tablets/ laptops, internet, television; as well as many others, at the expense of reading. Others have preference towards buying and renewing fashionable clothes, shoes and accessories (e.g. jewelry, watches, and cars) and going to expensive restaurants instead of buying books or registering at libraries.

Conclusion

The mother tongue interference is something unescapably dictated by nature. However, other factors may accelerate this process. The lack of interest in reading and deficiency in specialized teaching syllabi get young individuals unfamiliar

with the basic principles to perform precise and concise tasks, such as Koran recitation. The spread of technological devices in Algeria turns the youngsters' attention further from reading. Attitudes come also into play in deciding for the speakers' linguistic selection from their verbal repertoire. Even though Koran is subjected to variation, the latter is limited and its reading is specified into seven types (Baccouche, 2006). Therefore, it is easy for the computer to recognise natural non-standard features once equipped with the necessary software: The artificial intelligence specialist's intervention will be straightforward in cases where the computer faces linguistic deviations from the Koranic norms.

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