

## TEACHING ARABIC EMPHATICS TO THE ENGLISH LEARNERS OF ARABIC<sup>1</sup>

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In teaching the Arabic language to native speakers of English it has been found that:

1. The vowels are hardly any cause of trouble. This is mainly attributed to: firstly, the restricted vowel quality range; and secondly, the maximum qualitative difference between them. In other words the vowel system of Arabic is a maximum triangular one, i.e.

i     u  
         a

Length, which is of phonological relevance in Arabic, doubles the number of vowels, i.e.

i    i:    u    u:  
         a    a:

2. The following consonants:

b, t, d, k, dʒ, f, θ, ð, s, z, ʃ, h, l, r, m, n, j, w are seldom the cause of any serious difficulty since they are very similar to their English counterparts.<sup>2</sup>

3. It is usually these sounds: ʔ, ɖ, q, p, ʕ, ʁ, X, ʁ, h̄, ɟ that are the source of difficulty both in recognition and production.

<sup>1</sup> I would like to express my thanks to Mr. P. Falvey of the British Council, Baghdad, for his comments on this paper.

<sup>2</sup> See O'Connor (1967) for a similar identification. However, it is noteworthy that if a refined phonetic evaluation is made, some differences can be marked with one sound or the other.

In this paper we would like to focus our attention on four of the last group of sounds, namely the emphatics:

- ð a voiced interdental emphatic fricative
- ʂ a voiceless denti-alveolar emphatic fricative
- ɖ a voiced denti-alveolar emphatic plosive
- ʈ a voiceless denti-alveolar emphatic plosive

which form a well-defined category of sounds that is typical of the Arabic language. The term 'pharyngealization' is equally common to that of 'emphatic' as a label for this category of sounds. *Mufaxxama*, the Arabic coinage that is frequently used by native investigators to designate these sounds, has also gained some circulation in the English literature on Arabic phonetics and linguistics.<sup>3</sup>

In the first part of this paper we will deal with the articulatory nature of these sounds which constitute the difficulty, whereas in the second part we will introduce the approaches that we have tried in helping foreign learners of Arabic to overcome the difficulty.

#### THE ARTICULATORY NATURE OF THE EMPHATICS

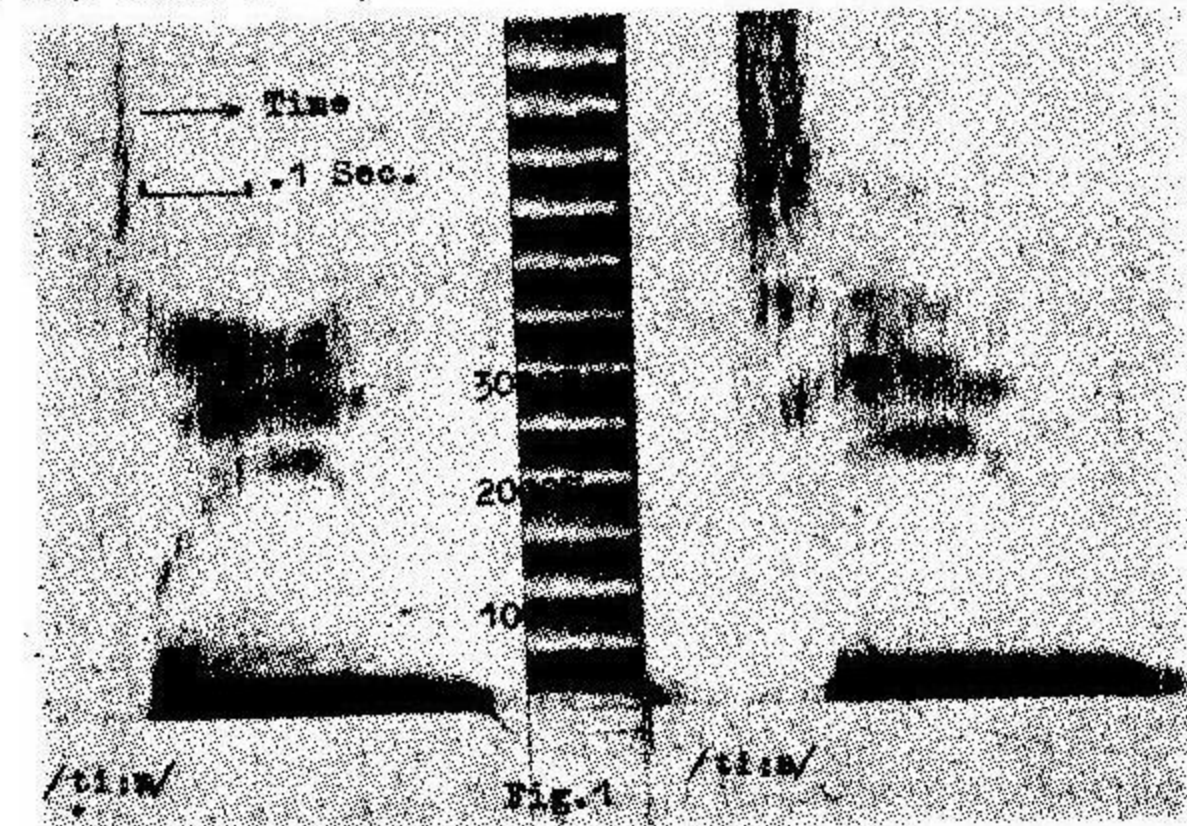
The production of these sounds is a typical example of a secondary articulation called *pharyngealization*. According to Abercrombie such a secondary articulation is effected 'if the tongue is low in the mouth and retracted towards the back wall of the pharynx' (1967: 62). Ladefoged expresses the same thing in a different manner: 'pharyngealization is the superimposition of a narrowing of the pharynx' (1975: 208). This narrowing of the pharynx is superimposed on the tongue configurations of /ð, ʂ, ɖ, ʈ/. However, the consequence of such a manoeuvre has not to be envisaged in terms of a simple mechanical process of laying one thing on top of the other. With pharyngealization the resulting configuration of the tongue represents a compromise between two antagonistic manoeuvres both of which are indispensable and are to be well effected. The first is the movement of the tongue-tip towards the denti-alveolar region to perform the primary stricture, and the second is the rearward movement of the back-root of the tongue towards the posterior pharyngeal wall to effect the secondary stricture. The features of lateral spreading of the anterior part of the tongue and its concavity pointed out by Lehn (1963), among others, that also characterize the Arabic emphatics, are in our view the 'size-effects' of the above-mentioned articulatory compromise. Therefore, we do not think of them as articulatory features that are executed

<sup>3</sup> See Blanc (1953), Jakobson (1957), Odisho (1973).

by special orders from the brain. The last assumption is relevant in determining the priorities in instructions that we will recommend for the learners of Arabic to adhere to in order to produce satisfactory versions of the Arabic emphatics.

Another feature that accompanies the production of the emphatics, and is proprioceptively felt, is the increased tension of the whole oral and pharyngeal musculature.

Most investigators agree that the significant feature that differentiates the emphatics and their plain counterparts is the backing gesture of the tongue which divides the vocal tract into two cavities: a small back cavity (pharyngeal) and a large front cavity (oral). This feature has also been described by some investigators as 'tongue shape' (Ali *et al.* 1972). Nevertheless, inasmuch as the opposition /t/=[t] vs. /t/=[t<sup>h</sup>] is concerned, it is necessary to point out that we do not agree with the conclusion drawn by Ali *et al.* in that there is no physiological correlate other than tongue shape to differentiate them (*op. cit.*, 645) because the same opposition can be distinguished on the basis of another physiological feature, namely the glottal state at the instant of the release of the supraglottal stricture (Odisho *et al.* 1975). [t] has a closed glottis at the instant of the release and for a while before it, whereas [t<sup>h</sup>] has an open glottis at the instant of the release and for a while after it. The direct consequence of such a glottal gesture is that the former



appears unaspirated while the letter appears aspirated (Fig. 1). This is in line with Kim's definition of aspiration in that it is the function of glottal opening at the instant of release (1970: 111).

The backing gesture which we also consider the most significant manoeuvre in the production of the emphatics and also in determining the articulatory settings<sup>4</sup> of Arabic (Odisho, 1973) does not play an equally important role



in the sound system of English. In English the best example of the backing gesture is found in the production of the vowel /a/. Moreover, its production represents a primary articulation not a secondary one as is the case with the Arabic emphatics. It is therefore the difference in the nature and the extent of the phonetic and phonological manipulation of the backing gesture between the two languages that causes the difficulty for the native English learners of Arabic in the proper production of the Arabic emphatics.

#### PRACTICAL PROCEDURES TO MASTER THE PRODUCTION OF EMPHATICS

The existence of the two vowel qualities /æ/ and /a/ in English is of great help in this respect. /æ/ being a front vowel and just below the half-open position, and /a/ being a back and open vowel — though not so back as the Cardinal Vowel 5, (Gimson 1967) may be utilized to demonstrate the difference between the emphatics and their plain counterparts fairly satisfactorily.

We have already mentioned above that the English and Arabic /ð, s, d, t/ hardly show any significant phonetic differences, therefore to use those consonants before or after the vowel /æ/ will yield sounds that are auditorily very similar to the Arabic non-emphatics. The idea behind choosing the English vowel /a/, or preferably Cardinal Vowel 5 as an auxiliary device to produce the emphatics is because this vowel is pharyngeal in terms of its relevant stricture (Fant 1968). For its proper production the back-root of the tongue moves drastical towards the posterior pharyngeal wall thus causing considerable reduction in the size of the pharyngeal cavity. In fact Ladefoged (1975 : 209) clearly states that since cardinal vowel 5 has been defined as the lowest, most back possible vowel without pharyngeal friction, pharyngealization may be considered as the superimposition of this vowel quality.

In the light of the articulatory nature of Cardinal Vowel 5 or any other language-specific vowel that is near to it in quality, when /ð, s, d/ are produced before or after this vowel quality they give the impression to the native speaker of Arabic that they are auditorily fairly acceptable versions of the Arabic /ð, s, d/. English words 'suck, dumb, dull, sub, sud' which contain the vowel /ʌ/ are more

similar to the Arabic words *صك ، ضم ، ضل ، صب ، صد* than to the Arabic words *سك ، دم ، دل ، سب ، سد*. The first group of Arabic words contains emphatics whereas the second group contains their unemphatic counterparts. The realization of the phonetic difference between the above English words and the Arabic words in the second list could be used

\* For the term 'articulatory settings' see Honikman (1964).

as phonic material to enable the English learner to consciously distinguish the Arabic emphatics from their plain counterparts.

As regards the English or the Arabic /t/ its occurrence with /a/ does give it an unmistakable pharyngealized colouring but it still retains its aspirated nature. In other words it will appear as aspirated emphatic [t<sup>h</sup>] whereas what we should be aiming at is an unaspirated emphatic. Consequently, we need to train the learner to successfully produce a deaspiration manoeuvre. Of course we do not mean to give him the instructions in terms of phonetic jargon. The procedure we have adopted to face such a situation is to ask the learner to produce first a French 't' which is unaspirated. If he is able to do so then the next step will be to ask him to use the 't' before or after /a/. When he is able to satisfy these conditions he will find himself in a good position to produce a satisfactory Arabic /t/. In case of his failure to produce an independent unaspirated [t] one has to follow another procedure. We have to make use of the English consonant clusters of [s+t] in which the 't' loses its aspiration either partially or fully. It has been found that in order to produce an auditorily satisfactory /t/ in this type of clusters the vowel /a/ should preferably be after the cluster to secure a better superimposition of the feature of pharyngealization on [t] since it will be in juxtaposition to /a/. To substantiate the validity of such a procedure for the attainment of this kind of emphatic, one can adduce the English words 'stamp' and 'stop' and the way they are pronounced in the colloquial Arabic of Iraq. In fact they are pronounced with a full realization of the emphatic /t/. This is so partly because the 't' in these two English words is unaspirated and partly because their vowels are replaced in Arabic by /a/.

Another approach for the production of the Arabic emphatics has been used with both English and non-English, learners of Arabic. This approach is based on Jakobson's et al. (1952) statement that the acoustic results of labialization are perceptually similar to those of pharyngealization, and also on what they have reported concerning the tendency of the Bantus and the Uzbeks to substitute a labialized articulation for the corresponding pharyngealized (emphatic) consonants of Arabic word. When my students were asked to produce /ð, s, d, t/ followed by /u/ the resulting sounds were hardly recognizable as the Arabic emphatics. It is true that they look somewhat 'muffled' due to lower resonance, a quality that is characteristic of the emphatics and is designated by Jakobson as the feature 'flatness'. But the question is whether 'flatness' is equal in both cases. Auditorily judged, the answer is in negative, because any native speaker will reject the labialized versions of /ð, s, d, t/ as unsatisfactory substitutions for the Arabic emphatics. Therefore, Jakobson's suggestion that pharyngealization (non-pharyngealization and rounding) unrounding should be combined into the feature 'flat/plain' seems to be motivated by the requirements of having a limited set of universal distinctive



features rather than by the evidence of phonetic equivalence of the above two phenomena. As for the observation that the Bantus replace the Arabic pharyngealized consonants by labialized ones we agree that this is so but we doubt whether the substitution does produce what can be judged by the native speaker of Arabic as auditorily satisfactory emphatics.

#### CONCLUSIONS

It has been found that the Arabic emphatics do cause a real problem to the learners of Arabic. It has also been found that in order to enable the learners master the difference in the production of the emphatics and non-emphatics the approach that is based on an /æ/ vs. /a/ opposition is more helpful and constructive because it is systematic and takes into consideration the proper articulatory manoeuvres that are behind the Arabic oppositions of emphatics and non-emphatics.

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