

Some Laryngeal and Pharyngeal Mechanisms Observed in the Realisation of Emphatics and Pharyngeal Consonants in Iraqi Arabic.

Zeki Majeed Hassan Gothenburg University. Sweden
Currently Al-Zaytoonah University. Jordan
zekihassan_50@hotmail.com

Acoustic measurements of previous studies showed that vowels in the vicinity of emphatics in Iraqi Arabic are characterised by lowering of F2 and slight raising of F1; an indicative that the type of the co-articulation concerned is pharyngealisation. (Hassan 2005, Hassan & Esling 2007). This acoustic evidence was supported by an articulatory (laryngoscopic) evidence which showed a higher degree of stricture in the pharyngeal articulator throughout all syllables in words containing an emphatic, at points where F2 and F1 narrow acoustically. This was shown as a result of the three classic components of laryngeal constriction (aryepiglottic sphinctering, tongue retraction, and larynx raising).

Pharyngeal consonants, on the other hand, showed more narrowing of F2 & F1 but considerably less ability to spread over the other syllables of the word as the emphatics; their influence hardly exceeds the preceding and /or the following vowels. (Hassan & Esling Forthcoming). From an articulatory point of view, the laryngoscopic data showed very interesting laryngeal mechanisms such as; the generation of aryepiglottic trilling vibration in realisation of the geminate /ħ/; one of the most convincing pieces of evidence to record voiceless pharyngeal trilling as a speech sound. (Edmondson, et al 2007). Also, Iraqi Arabic

/ʕ/ was shown in different phonetic contexts as having different realizations; a pharyngeal tap when used in intervocalic position, or as a full epiglottal stop when used as an intervocalic geminate. These findings strongly support the findings of (Esling et al, 2005) in Nuuchahnulth that pharyngeals /ħ/ and /ʕ:/ are not only lingually retracted but are primarily a function of an aryepiglottic laryngeal constriction mechanism.

A more elaborated study (Esling & Hassan, Forthcoming) studies Iraqi Arabic voiced and voiceless pharyngeals in these phonetic contexts, concentrating on the laryngeal articulator which consists of the glottal, pharyngeal and epiglottal mechanisms.

References

- Edmondson, Jerold A., Cécile M. Padayodi, Zeki Majeed Hassan & John H. Esling. 2007. "The Laryngeal Articulator: Source and Resonator". *Proceedings of the 16th International Congress of Phonetic Sciences* ed. by Jürgen Trouvain & William J. Barry, vol. 3, 2065-2068. Saarbrücken: Universität des Saarlandes
- Esling, J H. Fraser. K E and Harris. J G "Glottal stop, glottalized resonants, and pharyngeals: A reinterpretation with evidence from a laryngoscopic study of Nuuchahnulth (Nootka) in *Journal of Phonetics* 33 (2005) 383–410.
- Esling, J H and Hassan, Z M "The Laryngeal Articulator in Iraqi Arabic Pharyngeals" Forthcoming.
- Hassan, Z M and Esling, J H. "Laryngoscopic (Articulatory) and Acoustic Evidence of a Prevailing Emphatic Feature OVER THE WORD in Arabic" *Proceedings of the 16th International Congress of Phonetic Sciences* ed. by Jürgen Trouvain & William J. Barry, vol. 3, 2065-2068. Saarbrücken: Universität des Saarlandes
- Hassan, Z.M. 2005. "Acoustic evidence of the prevalence of the emphatic feature over the word in Arabic". *Proceedings FONETIK 2005*, 127-130
- Hassan, Z M and Esling, J H "Investigating the Emphatic Feature in Iraqi Arabic: Acoustic and Articulatory Evidence of Co-articulation" Forthcoming in *Instrumental Studies in Arabic Phonetics*. Hassan & Heselwood. Editors. John Benjamin. 2009