



**A STUDY OF SUBGLOTTAL PRESSURE FOR EMPHATIC AND NON-EMPHATIC SOUNDS IN ARABIC**

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**ABSTRACT**

The Phonetic feature of "emphasis" in Arabic involves (1) a narrowing in the back cavity caused by retracting and lowering the rest of the tongue and the epiglottis and an inward movement of the lateral walls of the pharynx, (2) a widening in the front cavity caused by lowering the body of the tongue in the mouth. Acoustically this results in F1 raising and F2 lowering; Fo has been found to be lower for the emphatic items than for the non-emphatic counterparts.

The subglottal pressure (Psg) was measured during the production of non-emphatic and emphatic minimal pairs by inserting a transducer to the trachea through the nose across the glottis; the speech signal was simultaneously recorded with (Psg). It has been found that (Psg) is higher for the emphatic utterances than for the non-emphatic counterparts; although Fo was found to be lower for the emphatic items.

A fiberoptic study of the State of the glottis during the production of emphatic and non-emphatic stops in Arabic showed that the glottis is much narrower during the emphatic voiceless stops than for their non-emphatic counterparts; this resulted in a much shorter VOT for the emphatics.

This study indicates a more expiratory action during the production of emphatic than for the non-emphatic sounds, possibly due to a decrease in the glottal and supraglottal volumes.