

ACOUSTICS2008/514 **Investigation of the mechanisms of voicing offset**

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During voiced speech the source of sound production arises from the vibrations of the vocal folds within the larynx. In order to terminate these vibrations it is necessary either to adduct the vocal folds to produce a forced closure or to reduce the pressure drop across them to below a threshold level. A reduction in pressure drop might be achieved by reducing the sub-glottal pressure, by increasing the supra-glottal pressure or by abduction of the folds. Two human subjects were asked to achieve phonation offset by each of these strategies in turn. Acoustic and EGG signals measured on the subjects were compared with the output of a simple theoretical vocal fold model. A further comparison was made with corresponding signals recorded during the production of selected short phrases by a European Portuguese speaker; a language where devoicing of both vowels and voiced consonants is particularly prevalent.