Velum behaviour in professional classic operatic singing

Birch, P. and Gümoes, B. and Stavad, H. and Prytz, S. and Björkner, E. and Sundberg, J.

journal: TMH-QPSR
volume: 40
number: 3-4
year: 1999
pages: 055-064

http://www.speech.kth.se/qpsr
Velum behaviour in professional classic operatic singing

Peer Birch¹, Bodil Gümoes², Hanne Stavad², Svend Prytz³, Eva Björkner⁴, and Johan Sundberg⁴

¹ Royal Academy of Music, Aarhus
² Royal Academy of Music, Copenhagen
³ Phoniatric Department, Bispebjerg Hospital, Copenhagen
⁴ KTH Voice Research Centre, Department of Speech Music Hearing, Stockholm

Abstract

Many singers regard “nasal resonance” as important to tone production in singing. In this study, we test the hypothesis that professional operatic singers sing with a slight velopharyngeal opening. The opening was estimated from nasofiberscope video recordings of 16 singers of different classifications who sang an ascending triad pattern throughout their pitch range. For each tone, the size of the opening was rated by a panel of experts. Many cases of a clear velopharyngeal opening were found. The singers repeated the same task into a flow mask (Glottal Enterprises), recording oral and nasal airflow separately and the DC component of these signals was analysed. In addition, the degree of “nasal resonance” was evaluated by a panel of singing teachers. The correlation between velopharyngeal opening, nasal airflow, and degree of “nasal resonance” is analysed.