

APPLICATION OF TECHNOLOGY IN PRACTICAL VOICE INSTRUCTION AND THERAPY

D.G. Miller

Groningen Voice Research

d.g.miller@vocevista.com

Singing teachers and voice therapists are generally endorsed and evaluated on the basis of two factors: credentials (training and affiliation) and reputation, which imperfectly reflects the results of their past work. The great variation among actual voices, as well as among the skill of these practitioners, makes objective evaluation of both the practitioners and their methods very difficult. Medical practice, which has a firmer basis in scientific investigation, can rely more securely on evidence-based medical research.

SLPs and singing teachers are further hindered by two factors: the difficulty of imaging the voice organs, and the limited precision of language in describing the results of voice production. These limitations greatly increase the difficulty of evaluating the results of both therapeutic and instructional interventions.

This workshop will focus on the use of two non-invasive technologies that offer objective data on what actually happens in voice production:

- 1) Real-time spectrum analysis, to follow the rapidly adjusting resonances of the vocal tract;
- 2) Electroglottograph (EGG) to follow the patterns of the individual closings of the vocal folds, which produce the acoustic impulses of the glottal voice source.

The two signals are processed in combination by the software *VoceVista*, presenting factual information that can be further used as both a model for desirable patterns and routine feedback in the practice of therapy and instruction. The signals give an objective basis for sharing information and insights among practitioners who are otherwise tempted to invent their private descriptions of what singers and patients do, as well as of the acoustic results.