

MODERATING VIBRATO COMFORTABLY AND HEALTHILY

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- I. What vibrato is
 - A. Caused by recurring variation in tension levels of the intrinsic muscles of the larynx, stimulated by the vagus nerve
 - B. Occurs at the laryngeal level, not at the respiratory level (airflow remains constant, smooth, and steady)
 - C. Pitch oscillation
 - D. Amplitude oscillation
 - E. Timbre oscillation
 - F. Ideals
 1. Pitch variation
 - a) Normally a quarter step up and a quarter step down (use the Quantz Tuner app to check!)
 - b) As wide as a half step up and down in solo singing
 - c) Even wider among large-voiced elite singers
 - d) Narrower, even approaching zero, in early music, folk, and some jazz
 2. Speed
 - a) Normally between 6 and 7 oscillations per second
 - b) Faster than that is a tremolo
 - c) Slower than that is a wobble
 - d) Some coloratura voices are closer to 8 osc/sec
 - e) Some large-voiced elite singers are closer to 5 osc/sec
- II. What affects it
 - A. Subglottic airflow and glottal closure: the phonatory modes
 1. Whisper phonation (low pressure, high airflow, no closure)
 2. Breathy phonation (low pressure, high airflow, low closure)
 3. Flow phonation (medium pressure, medium airflow, medium closure)
 4. Bel canto phonation (medium to high pressure, medium airflow, high closure)
 5. Pressed phonation (high pressure, medium airflow, VERY high closure) DANGER, DANGER!
 - B. Laryngeal position
 - C. Timbre and “placement”
 - D. Pre-audiated sound concept (see below)

- III. Bill's first hypothesis: You have to want it and you have to hear it
 - A. The brain is very skilled at getting the voice to MIMIC
 - B. Many teachers effectively use mimicry in pedagogy by demonstrating the student's incorrect sound first followed by the correct sound, and the student mimics the change, NOT the teacher's intrinsic sound
 - C. It's important to do LOTS of close listening to good sound models. Scandinavian and continental European choirs are particularly good for this:
 - 1. Accentus Chamber Choir
 - 2. Ars Nova Copenhagen
 - 3. Collegium Vocale of Ghent and the Ensemble Vocal Européen, conducted by Philippe Herreweghe
 - 4. Ensemble Aedes
 - 5. Eric Ericsson Chamber Choir
 - 6. Estonian Philharmonic Chamber Choir
 - 7. Latvian Radio Choir
 - 8. Netherlands Chamber Choir
 - 9. RIAS Kammerchor
 - 10. Stuttgart Chamber Choir
- IV. Exercises
 - A. Encouraging vibrato
 - 1. The "ghost" exercise
 - 2. 54321 and 13531 patterns
 - 3. Messa di voce with vibrato
 - a) the "Broadway" crescendo
 - b) The jazz middle-of-a-note vibrato
 - B. Minimizing vibrato
 - 1. Soapbox moment: imitating boy sopranos and "white tone" or *voce bianca*: don't do it! (Reason: a child's larynx is smaller than an adult woman's, and produces a different contour of overtones that an adult soprano can only reproduce with unhealthy technique. *This has nothing to do with whether or not there is vibrato in the sound.*)
 - 2. Singing as pitched speech (i.e. we don't speak with vibrato)
 - 3. Bill's second hypothesis: Directionality
 - a) Sirens and slides
 - b) Messa di voce
 - c) Using active phrase shaping to minimize vibrato
- V. For further reading:
 - A. From the NATS *Journal of Singing*:

1. Scott McCoy on singing in choirs, part one:
http://www.vocapedia.info/_Library/JOS_files_Vocapedia/JOS-067-3-2011-297.pdf
 2. Scott McCoy on singing in choirs, part two:
http://www.vocapedia.info/_Library/JOS_files_Vocapedia/JOS-068-3-2012-287.pdf
 3. John Nix on vibrato:
http://www.vocapedia.info/_Library/JOS_files_Vocapedia/JOS-070-4-2014-411_vibrato_nonvibrato_singing.PDF
- B. Conference papers and dissertations:
1. Danya Katok on vibrato and straight tone:
https://academicworks.cuny.edu/cgi/viewcontent.cgi?article=2410&context=gc_etds
 2. Greta Moens-Haenen on vocal vibrato in baroque music:
<https://www.york.ac.uk/music/news-and-events/events/conferences/nema/haenen/>
 3. Richard Bethell on vocal vibrato in early music:
<https://www.york.ac.uk/music/news-and-events/events/conferences/nema/bethell/>