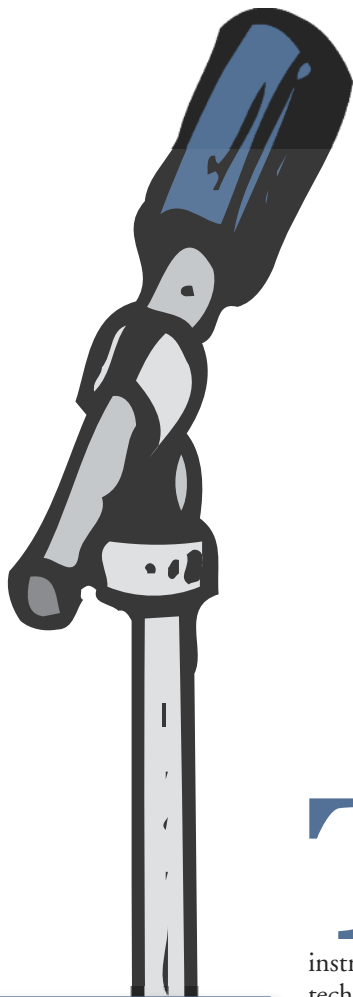


BELTING

As An Academic Discipline



Andrew R. White is assistant professor of voice at the University of Nebraska at Kearney, where his duties include voice training for both musical theater and traditional voice majors, as well as directing *The Nebraskats*, a touring show choir.



The study of voice itself has held a rather precarious position in academia. While it is obvious that mastery of an instrument requires the cultivation of technique to such an extent that the course of study may be considered “rigorous,” the voice is still regarded by many to be something requiring “talent” more than skill. Of course, nobody belittles the achievements of the mathematician because he/she just happens to have a talent (they prefer to call it “aptitude”) for math, but singers frequently encounter this attitude. Classical, and especially operatic, singing styles at least are clearly identifiable as requiring a cultivated voice. The “natural” vocal quality desired in

CCM (contemporary commercial music) is often maligned as undisciplined. To quote one operatically oriented voice teacher (who shall remain nameless): “They already know how to do *that*. That’s what I’m trying to get them *not* to do!” We will address the element of truth in this statement later, but for now we will examine its falsehood.

While many untrained singers can indeed convincingly imitate the sounds they hear in the popular media, they may find they can’t carry that sound quite as high as the famous recording artist can. Perhaps they can’t hold the sustained notes as long, or sing the same ornamentation as cleanly. Perhaps in listening to themselves objectively they have discovered that

their intonation is not true, or perhaps the voice tires quickly. These shortcomings are *not* simply because the untrained singers have less talent than the famous recording artist. Such limitations indicate a lack of cultivation, and can be largely, if not completely, overcome through study and practice. All of the above mentioned vocal problems result from a sound that *imitates* a belt sound, but is not one authentically. An authentic belt is a healthy, balanced sound that is fully viable musically and can withstand the rigors of a career.

What exactly *is* a “belt” voice, you might ask? The primary ingredient is in the registration. Belt makes use of a thyro-arytenoid-dominant (TAD) production *in both genders*. This contrasts sharply with classical vocal technique in which, with the exception of the countertenor, this TAD mode of production is reserved for men only. (To spare you the rudiments of laryngeal anatomy and physiology with which the pedagogically uninitiated may not be familiar, TAD equates with the *ordinario* in the male voice, chest voice in the female, TAD being the cross-gender term, based on laryngeal muscular activity, rather than societal norms or subjective resonance sensations. CTD [crico-thyroid-dominant] is the corresponding term that equates to the *falsetto* in the male voice, head voice in the female. To illustrate how confusing these traditional terms are, for the male voice the term “head voice” is often used to describe a mixture of the two registers to distinguish it from pure *falsetto*. When the same term is applied to the female voice it refers to the same laryngeal function as the male *falsetto*. So to summarize: TAD = lower register, chest voice, *ordinario*; CTD = upper register, head voice, *falsetto*.) It would be an oversimplification to say that a belter sings like a traditional male singer. After all, male belters sing with a distinctly dif-

ferent vocal quality from their operatic counterparts. There is more to the belt sound than just TAD.

The position of the larynx is *not* lowered in belt. This is distinctly different from classical technique in which the inhalatory position of the larynx is maintained during phonation.¹ Place your hand on your larynx and breathe deeply through your mouth; you will feel your larynx descend. That is the position of the larynx in classical singing. The position of the larynx in belt is more neutral (*not* elevated, as some contend).² This neutral position of the larynx, combined with the more speech-like registration, is primarily what lends belt its characteristic “natural” quality, as opposed to the more “cultivated” sound of classical technique. The lowered larynx of classical technique enlarges the laryngeal vestibule (the area just above the larynx) which gives rise to an acoustic phenomenon known as the “singer’s formant,” defined as energy in the acoustic signal in the area of 3,000–3,500 Hz.³ The belter does not have this enlarged laryngeal vestibule, and the shorter resonance chamber elevates the energy in the acoustic signal to the area of 4,000–4,500 Hz.⁴ With this article I would like to coin a new term. I would like to call the phenomenon of energy in the acoustic signal in the area of 4,000–4,500 Hz the “belter’s formant.” This is the characteristic “brassy” quality of Broadway-style singing.

Furthermore, the airflow rate in belt is significantly slower than it is in classical singing, resulting in comparatively higher closed quotients. (The “closed quotient” refers to the duration of the phase of the vibratory cycle in which the vocal folds close the glottis.) In classical CTD production the closed quotient is below 40 percent. Fifty-two percent is the marker for TAD,⁵ and belters can exhibit a closed quotient as high as 70 percent.⁶

So if the goal of our aforementioned classically oriented voice teacher is to accelerate breath-flow and lower the closed quotient, lower the larynx and induce the “singer’s formant,” then indeed, belting is antithetical to his purposes. Or is it? Comparison/contrast is an age-old pedagogical technique, and one that has been applied in voice pedagogy for centuries. For example, the stereotypical exercise “mee—mee—mee” trains the elevation of the soft-palate (The “soft-palate” is the “door” to the naso-pharynx. When it is up the naso-pharynx is closed and no air can pass through the nasal passages. When the soft palate is down the naso-pharynx is open, resulting in nasality.) by juxtaposing a nasal consonant with a non-nasal vowel. In fact, one of the best ways to teach about nasality in singing is to have the student sing in French, in which some vowels are deliberately nasal and other vowels are not. The student quickly learns the difference between the two, and palatal strength, flexibility, and coordination are promoted in the process. From the standpoint of exercise physiology, we know that in order to stretch a muscle it helps to flex it first, and conversely, in order to derive the fullest flexion from a muscle one must first achieve its fullest extension.⁷ I assert that classical technique may best be taught by teaching what it is *not*.

Likewise, belters benefit from the study of classical technique. “TAD” means exactly that: “thyro-arytenoid-dominant.” Belting should *never* be TA exclusively. Working the CT muscle like a classical soprano is an important component of any belter’s vocal regimen regardless of gender, and the engagement of the transverse arytenoids (the muscles responsible for completion of glottal closure in CTD production) helps the belter to rely less on the TA element to achieve firm glottal closure. A young male singer

may find the coordination for the full-voice top more easily with the larynx stabilized in the lowered position (Laryngeal stabilization eliminates the problem of the larynx raising and lowering with pitch, which is the main stumbling block in finding the full-voice top in young male voices). From there, one can maintain the laryngeal coordination while allowing the larynx to rise to the neutral position, thereby accessing the high male belt. (The opposite tack can also be taken, where a classical male singer first begins to access the full-voice top in belt, then maintains the coordination while adopting a lower laryngeal position.) Moreover, people working in musical theatre are expected to be able to “do legit” as well as belt, so it behooves the musical theater major to master that skill, if for no other reason than that it must be added to his/her bag of tricks.

So if belting is the “natural” sound, and classical technique helps the belter, why study belting, other than as a foil for the classical model? Because the music demands it. CCM has extended the range of the belt sound to the top of the staff and beyond. (Early belt numbers seldom rise above Bb4.) Feathered registration and the capacity for cross-register *messa di voce* are the hallmarks of contemporary style. Facility with ornamentation and vibrato control are also imperative. These are hard-won skills. *No* one comes by this naturally. The sound may be natural, but the skills within that sound are *not*.

One of the first things that must be achieved in this discipline is a smooth transition between the registers. This is usually accomplished through pitch-slides (or “sirens,” they are sometimes called), though they may prove too stressful initially, as excessive cracking is abusive. Cross-register scales on a lip-buzz (or tongue-trill, or “raspberry,” or singing through a straw, or whatever other occlusion seems to work for the individual) can be an

effective preparatory exercise, as can cross-register arpeggios, where the break is simply leapt-over rather than passed through.

Another important task is extending the overlap between the registers. Doing this will also help the slides. Classical teachers understand this *so* poorly that the standard pedagogical literature actually names specific pitches for the span of the overlap, as if it were a fixed entity. It is not. In untrained voices it varies greatly from person to person, and it can be extended. CTD in particular can be extended to cover the entire range of the voice; it doesn’t project very well down low, but it can, and should, be trained to function in that range.

The next order of business is to establish the “mix,” which is to say, the ability to sing in both registers at the same time. This is easiest to achieve in the lower part of the overlap. Once it is established, it is not too hard to extend it over most of the singing range. From there, various *messa di voce* exercises may be employed to take the voice from CTD to TAD and back again. It is this ability to use TAD without entirely losing the connection to CT that both extends the range of the belt voice, and insures its vocal health, because TA by itself is inherently abusive.

Resonance strategies also must be altered from the classical model. The neutral position of the larynx will demand a slightly higher chin level than would the lowered laryngeal position of classical singing, for obvious reasons, and the shorter resonating tube will demand a wider “bell” to compensate. Consequently, the shape of the mouth opening will be wider, generally, in belt, and vowels will require modification in the open direction (/i/ may gravitate towards /e/, for instance), whereas in classical singing vowel modification in the closed direction (such as /a/ towards /o/) is conventionally taught.¹⁰

Robin Williams did a comedy routine where he “did Joan Sutherland doing Rod Stewart.” He sang in his falsetto, with generous vibrato, and affected diction: “If you think I’m sexy, and you want my body, come on baby let me know!” The routine was funny because by juxtaposing one style of music with a different style of vocalism he made a mockery of both. The overblown vocalism of opera was spoofed, of course (an easy target), but so was the banality of the Rod Stewart lyric. When approaching a piece of vocal music it is wise to take note of the style of vocalism appropriate to the music, lest one pull a Robin Williams, and make a mockery of both. ♪

Notes

1. Richard Miller, *The Structure of Singing* (Boston: Schirmer Cengage Learning, 1996), 24.
2. Scott McCoy, “A Classical Pedagogue Explores Belting,” *Journal of Singing* 63, no. 5 (May/June 2007): 547.
3. Miller, 55–6.
4. Wendy Lynn DeLeo LeBorgne, “Defining the Belt Voice: Perceptual Judgements and Objective Measures” (Ph.D. diss., University of Cincinnati, 2001), 132.
5. Martine E. Bestebreurtje and Harm K. Schutte, “Resonance Strategies for the Belting Style: Results of a Single Female Subject Study,” *Journal of Voice* 14, no. 2 (2000): 194.
6. McCoy, *Your Voice: An Inside View* (Princeton: Inside View Press, 2004), 65–6.
7. Keith G. Saxon, *Vocal Exercise Physiology* (San Diego: Singular, 1995), 91–6.
8. Ingo Titze, “How to Use Flow-Resistant Straws,” *Journal of Singing* 58, no. 5 (May/June, 2002): 429.
9. Van L. Lawrence, “Laryngological Observations on ‘Belting,’” *Journal of Research in Singing* 2, no. 1 (1979): 26–8.
10. Miller, 150–160.