

DEVELOPING THE MALE HEAD VOICE

A Paper by

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Achieving a healthy and satisfying head voice can be one of the most challenging hurdles that male singers must accomplish during vocal training. This paper will outline select strategies for head voice development with a focus upon the tenor voice, as this is the category of male voice that employs head voice to the greatest extent. In an effort to also facilitate the instruction of baritones and basses, the end of the paper provides a short section devoted to particularities faced in the development of their upper register. The study proceeds as follows: (1) a working understanding of the head voice phenomenon as it contrasts the chest voice is established; (2) select strategies are outlined from three respected pedagogues regarding the achievement and early development of the head voice; (3) further development of the head voice including its employment into song literature is discussed; (4) consideration is given to baritones and basses; and finally, conclusions are drawn regarding various aspects of head voice development.

Head Voice and Chest Voice

According to *The New Harvard Dictionary of Music*, “In singing, register refers to a series of pitches that are of like tonal character because of a consistent vocal production.”¹ The lyric-tenor divisions of head and chest registers according to their respective pitches are seen below, from Richard Miller’s *Training Tenor Voices*.²

¹ Don Michael Randel, ed., *The New Harvard Dictionary of Music* (Cambridge: Belnap Press, 1986), 927.

Fig. 1³ Vocal Registers in the Lyric Tenor Voice.

Falsetto	C ₅ -(F ₅) G ₅
Upper Voice (head)	G ₄ -C ₅
Upper-Middle Voice (mixture, head/chest)	D ₄ .G ₄
Lower-Middle Voice (mixture, chest/head)	G ₃ -D ₄
Lower Voice (chest)	C ₃ -G ₃
Strobass	G ₂ -C ₃

Generally, the lyric tenor has his main lifts, or *passaggi*, at D₄ and G₄ and thus the *zona di passaggio* falls between them in the upper-middle voice. The transition from chest voice to head voice sounds generally begins at E₄. At the point of G₄ and higher, the tenor must have made all the necessary adjustments to sing in the head voice. Miller describes what happens during this period of adjustment, stating that the muscle functions within the larynx which must work to successfully sing through the *zona di passaggio*, are of a dynamic, not static, nature. The “lengthening” of the cords is activated by muscle groups in the larynx called cricothyroids. It is cricothyroid activity which is associated with the head voice. Thyroarytenoids, in contrast, control the adduction forces of the vocal folds, and are associated with the chest voice.⁴ In order for these fine dynamic adjustments to take place easily, there must be considerable freedom within, as well as vertical stability of the vocal mechanism. It is for this reason, that many teachers of singing advocate the slight lowering of the larynx as a position ideal for the male singer when he passes into the upper voice.⁵

² Richard Miller, *Training Tenor Voices* (New York: Schirmer Books, 1993).

³ Ibid, 7.

⁴ Ibid, 3-7.

⁵ R. D. Appelman, *The Science of Vocal Pedagogy* (Bloomington: Indiana University Press, 1967), 95.

Achieving the Head Voice

Now will be considered the best means to accomplish control of these complex laryngeal activities. The historic Italian school of vocalism defines covering (*copertura*), as gradual acoustic adjustments which are brought about by modifying vowels in the ascending scale. In this form of covering there are adjustments made in many of the same areas as with the Germanic/Nordic model (*Deckung*), however, the difference lies in the amount of conscious effort involved in the process. In *copertura*, there is no sudden mechanical action or sensation of “hooking over.” This paper will focus upon achieving the Italian model, although it should be noted that Miller believes that there are several schools which teach methodology somewhere in between these two approaches.⁶ Considered here will be perspectives from three respected pedagogues.

In an article published in 1999, Ingo Titze⁷, Executive Director of the National Center for Voice and Speech, explains why the assistance of nasals like “/m/, /n/, and /ŋ/ and respectively closed vowels, like /u/, /U/ and /i/ are useful for accessing the head voice—providing insight into the acoustic process by which the unique resonance of the head voice is created. He acknowledges that although it would seem that use of these vowels and consonants would function to cap off the sound, in reality, they do not create an adverse acoustic back-pressure. Rather they encourage in “vocal fold tissues that are not as capable of vibrating over the entire depth and thickness of the vocal fold,” a lighter registration for singing, when there is an “acoustic coupling to the supraglottal vocal

⁶ Miller, *Training Tenor Voices*, 38, 89.

⁷ Ingo R. Titze, “The Use of Low First Formant Vowels and Nasals to Train the Lighter Mechanism,” *Journal of Singing* 55, no. 4 (March/April 1999): 41-43.

tract.”⁸ Additionally, this process “lowers F₁, the first formant frequency of the vocal tract.⁹ Thus Titze adds to our working definition of the head voice. He continues, explaining that in the chest voice a heavier register is used (operating over a greater thickness of the vocal folds) with the subglottal vocal tract in resonance.¹⁰ Titze’s implication is that teachers should design vocalises utilizing these nasals and closed vowels to develop the head voice. Once these exercises are employed, he tells teachers how they can know that they are on the right track with their students’ development.

If they can do lip trills, humming, and frontally closed vowels like /u/ and /i/ in soft voice over a wide range, they have found the trick. A virtual guarantee that they have arrived is if they can crescendo and decrescendo without cracking on very high notes with these partial occlusions. They have then learned how to lighten the voice, yet stay connected to the vocal tract.¹¹

Corroborating Titze’s approach, Anthony Frissel, author of the *The Tenor Voice*¹², clearly teaches that the two primary registers (head and chest) must be blended, both in quality and action, in order to attain a mastery of singing through the *passaggio*. He believes that the falsetto should be brought down to overlap all of the lower register to enable the middle falsetto, or mixed voice, to appear. He states that the appearance of this mixed voice is what is necessary to find the head voice.

The only way for the singer to unite the action and quality of the lower register with that of the falsetto is by a phenomenon of muscular co-ordination called the middle falsetto. At one time the *mezzo falso*, as it was named by the earlier teachers of *bel canto*, was considered an essential part of voice training. Since it was the outgrowth of the falsetto itself, it was

⁸ Ibid, 41-42.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid.

¹² Anthony Frissell, *The Tenor Voice* (Somerville: Bruce Humphries, 1968).

discarded along with it. With its aid, singers are able to produce a full spectrum of tonal colors by controlling the dynamics from pianissimo to forte.¹³

Frissel explains that the middle falsetto gives the singer the feeling that he is still “attached” to the lower register, while pure falsetto does not. After the middle falsetto’s appearance and development, the singer will be able to use this new quality to enhance singing throughout the vocal range as described in the quotation above.¹⁴ The quality of the voice will then be as follows:

As the voice mounts to the upper range the resonance of the lower register is automatically lessened by a contour pattern natural to that register. It is graduated with each successive tone ascending. The same rule applies when descending toward the lower extreme; the quality of the upper register is lessened by the graduation with each descending tone. When the registers are correctly blended this is an automatic process and does not affect the volume at either extreme.¹⁵

During 2009 and 2010, I spent some time training with Dr. Thomas Cleveland¹⁶, at the Vanderbilt Voice Center, in Nashville, Tennessee. Dr. Cleveland is well known for his many pedagogical articles published in *The Journal of Singing*. The following entry records some of the author’s experiences with Dr. Cleveland and in subsequent study with his exercises for building the head voice, substantiating Titze’s and Frissell’s pedagogy.

Dr. Cleveland instructed me to begin singing falsetto on /u/ with descending five-note scales. Once the voice was warm enough, the following procedure was taken: The pattern was sung beginning on C₅ and sung with

¹³ Ibid, 22.

¹⁴ Ibid, 23.

¹⁵ Ibid, 24.

¹⁶ Thomas Cleveland, voice training for author, Vanderbilt Voice Center, 2009 and 2010.

successive descending patterns, the final pattern beginning on F₄. Furthermore, once I crossed over to a sound connected with the lower register, I kept it there in subsequent patterns, as I returned to higher starting pitches. He assured me that these sounds would be light at first, but should grow with several weeks practice.

Another exercise used was similar to a lip trill. However, Dr. Cleveland's version gave me the clear sensation that the sounds up to C₅ were connected to the chest voice. To accomplish this, the singer should phonate as if he was performing lip trills, but without allowing the lips to vibrate. This partial closure of the mouth opening encourages activation of the lighter mechanism, correlating with Titze's use of closed vowels. The resulting sound has a brassy sound like a trombone in timbre.

My time with Dr. Cleveland also included working into an optimum chest voice. Once this was established, and I sang in chest voice for at least thirty minutes, and then began the aforementioned vocalise, I could bring in true head voice sounds opening to vowels after 5 or 10 minutes. Dr. Cleveland had me produce these sounds on descending and ascending arpeggio patterns, but stepwise motion may be used as well.¹⁷

Further Development and Working the Head Voice into Songs

Once it is clear that the head voice is working, Titze's, Frissel's and Cleveland's understanding of head voice production should be used in collaboration with the historic *coperatura* technique. This Italian model of vowel modification generally involves moving more "open" or front vowels toward the sounds of more "closed" or

¹⁷ Ibid.

back vowels. Richard Miller explains that the neutral vowels, /ʌ/ and *schwa*, /ə/, may be used as central points for all vowel modification.¹⁸ Examples of vocalizes that Miller gives to practice the technique follow.

For vocalises using Example 1 below, Miller suggests singing on a front vowel, such as /i/ and /e/. Secondly, he suggests singing them beginning on a front vowel and then changing to a back vowel, such as /o/ or /u/, on the second measure. I would suggest that this pattern may be sung in inversion as well (using one vowel throughout), depending upon which seems easier at first for the singer to make the adjustment into the passaggio. These exercises follow a pattern of stepwise motion and should be followed by Example 2—combining stepwise and leaping motion—for the early stages of developing the technique.¹⁹

Example 1.²⁰ Vowel modification exercise using stepwise motion.

¹⁸ Richard Miller, *The Structure of Singing: System and Art in Vocal Technique* (New York: Schirmer, 1996), 157.

¹⁹ Miller, *Training Tenor Voices*, 52, 53.

²⁰ Ibid. Examples 2, 3, and 4 are also from *Training Tenor Voices*, 53-57.

Example 2. Vowel modification exercise using a combination of leaping and stepwise motion.

Next are some of Miller's arpeggiated exercises. Once the singer has gained mastery of the earlier exercises, he may be ready for those following. Example 3 should be practiced in lower keys first, progressing to higher keys, as does Example 4. Miller gives suggestions for vowels, but maintains that singers should try various front and back vowel combinations.²¹

Example 3. Vowel modification exercise employing arpeggiated motion and the shift from a front to a back vowel.

²¹ Ibid, 55.

Example 4. Vowel modification exercise employing arpeggiated motion and alternating front and back vowels.

The musical score consists of two staves of music. The top staff is in G major (one sharp) and the bottom staff is in E major (no sharps or flats). Both staves feature a treble clef and a common time signature. The lyrics are written in square brackets below each staff.

Top Staff Lyrics:

- [e c e c e c e]
- [c e c e c e c]

Bottom Staff Lyrics:

- [e c e c e c e]
- [c e c e c e c]

Finally, Example 5 is similar to Example 4 above, but utilizes stepwise motion and neighboring vowels in each series.²² Miller's various exercises may be used to train the ability to adjust from chest to head voice via leaping or stepwise motion, as they appear in the literature. Exercises such as these along with those of leaps of greater intervals should also be practiced.

Example 5.²³ Vowel modification exercise utilizing neighboring vowels.

Music notation for vocal exercises:

Top Line:

- [i]
- [e]
- [ɔ]
- [ɑ]
- [ʊ]
- [ɛ]
- [ɑ]

Bottom Line:

- [ɔ]
- [ɔ]
- [ʊ]
- [o]
- [o]
- [ɔ]
- [e]

²² Miller, *The Structure of Singing*, 158-60.

²³ Ibid, 160.

Finally, as Titze implies, use of the *messa di voce* should be employed to master the freedom necessary in making adjustments between chest and head voice. To assist control of the crescendo and decrescendo events of the exercise, Appleman suggests that the singer must: (1) During the decrescendo – keep the resonating space open and expanded to the jaw position used in the production of the forte; (2) During the crescendo – allow the volume of the phonatory tract to increase. Also he explains that in working the *messa di voce*, changes in intensity should be carried out gradually, by disciplined laryngeal muscle coordination and control of the expiratory musculature.²⁴

Baritones and Basses

At a Robert Edwin²⁵ seminar the author attended in 2007, valuable information was gained about the production of the top notes of the baritone range. Although baritones and basses will not need to go the lengths that tenors do in the development of head voice, teachers should keep the following in mind. Often, rather than using the Italian method of covering, baritones employ the German model (*Deckung*), which gives the sensation of “hooking over” for their upper most notes. This practice may seem more acceptable for baritones than tenors, due to the fact that baritones don’t sing as many notes above the *passaggio*. However, even baritones should apply vowel modification, and only as much “hooking” cover as will allow their voice to still be brilliant and free in the uppermost notes.²⁶ Finding

²⁴ Appelman, *The Science of Vocal Pedagogy*, 100.

²⁵ Robert Edwin, “Bach to Rock: Teaching and Singing” (seminar, The Southern Baptist Theological Seminary, Louisville, KY, June 25-29, 2007).

²⁶ Ibid.

this balance can be challenging, but the rule is the same as for tenors, the voice should feel effortless in production, as free as possible from any sensation of weight or pushing.

Conclusion

It is my belief that for most tenors, the chest voice must be developed securely with good tone up to the zone of the *passaggio* before the tenor is ready to develop the dynamic control necessary to sing in head voice. Tenors will often come to training with very different levels of development of the head voice. The use of the above developmental exercises should help in development, and the Italian method of vowel alteration should be applied in vocalises and literature once the quality of the head voice is sufficient. Furthermore, teachers should use a graduated method in regard to tessitura of songs. These should proceed from early study of those songs which only reach transitional notes, such as E^b₄, E₄ and F₄ to those that only reach high notes that secure the singer in head voice, G₄, for most tenors. Songs with higher notes should only be attempted, once the tenor has mastered the former, usually increasing the tessitura by half steps.²⁷ The training of the higher range for baritones and basses should apply a similar approach to literature selection for their respectively lower tessituras and *passaggio* zones.

²⁷ Miller, *Training Tenor Voices*, 59.

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