Giving a Hoot:
Basic Countertenor Pedagogy for the Choral Conductor
by Michael Hrivnak, August 2002

The modern, falsetto countertenor voice is a unique and specialized instrument. However, training it need not remain an esoteric or intimidating process with which private voice teachers alone may work. Although unique mechanical skills are required of the countertenor, many universal techniques of trained singing are also applicable and equally important in artistic countertenor vocal production. Equipped with clear information and practical experience, the choral conductor may foster and encourage the latest generation of historical and compelling singers: choral countertenors. The scope of this investigation is to reveal and codify basic information regarding falsetto countertenor pedagogy and potential issues for the inclusion of countertenor voices in a choral setting.

Men have been singing in their falsetto register since the Middle Ages (Randell 25). By the early thirteenth century, a plainchant-derived melody (*tenor* in Latin) was often joined by a higher voice part called the *superius*. During the fourteenth century a second voice began to appear in high counterpoint to the tenor and was literally named *contratenor*. Toward the middle of the fifteenth century the contratenor divided into two contrapuntal voices; the *contratenor altus* and *contratenor bassus*. These voices sounded above and below the tenor respectively. Coincidentally, vernacular languages began to replace their Latin predecessor, and in the England the term "contratenor" was modified to the presently used countertenor (Upton 1). By the seventeenth century, the English *countertenor* often denoted a male falsettist, and by the mid-nineteenth century this fact was almost exclusively the case (Miller, "Countertenoring" 19). Today, it is generally understood and agreed that a *countertenor* is a male alto who most often sings in his falsetto register.

Falsetto is an Italian word meaning "false little voice." All men may produce a falsetto tone by one of two methods, but the degree to which it is comfortable, practical, or even musical may vary greatly. Brinegar has suggested that bass-baritones may more quickly and easily produce a pleasingly useful falsetto register, but tenors should not be discouraged from developing this spectrum of their voices and may succeed equally well. Though historically male, falsetto should be thought of as natural, (Randell 25; Ardran & Wulstan 19) and, in its simplest pedagogical terms, an imitation of the female voice (Miller, "Tenor" 416). Basic, fundamental principles of good singing apply to falsetto production, and include issues of breath, agility, vowels, vocal tract adjustment, and register equalization (Miller, "Countertenoring" 20). Yet, the encouragement of male falsetto singing requires specific understanding of its unique production requirements, as well as its relationship to the full, or chest voice, and the "head" voice.

Phonation in its simplest terms is the production of vocal sound. It may also be thought of as the coordination of the vibrator (the vocal folds or "chords") and the actuator (the breath) (Vennard 18). The issues of breath and breathing techniques are complex. Briefly, the basic principle of airflow "across" or through the aperture of the vocal folds is the acknowledged basis for phonation. Issues of air management in regard to onset and pitch will be developed in as much as they relate to the choral conductor/countertenor relationship.

Before the puzzle of falsetto production can be solved, a severe simplification of a few physiological concepts must be presented. To the extent that the phenomenon of vocalization is now understood, acknowledged, and available among medical, therapeutic, pedagogical, and vocal instruction circles, an assumption that the average choral conductor shares in this knowledge is largely untrue. (Brinegar, Interview) Yet, this information is accessible via many avenues, and it behooves the choral conductor to both further his or her own pedagogical knowledge and develop his or her voice as completely as possible.

Phonation involves a few small but significant muscles. The vocalis muscles are commonly called the vocal folds or "cords." The arytenoids and cricothyroid muscles are responsible for stretching the vocal folds, resulting in their tightening, lengthening, and separation from each other (Vennard, Hirano, and Ohala 30). The lateral cricoarytenoid muscles are most responsible for counteracting or resisting the separation (abduction) caused by the cricothyroids, and facilitate falsetto-vocal fold approximation: the "cords" vibrating against one another. The space between the vocal folds is called the glottis. Air pressure beneath and above the glottis is defined as supraglottic or subglottic, respectively (Miller, *Structure* 309).

Dampening, and *damping* are interchangeable terms referring to the partial vibration of the vocalis muscles. It is common in both trained and untrained singers, but not an exclusive means of falsetto production (Vennard 69). It is important to reveal that damping is an *effect* of the vocal fold lengthening by the cricothyroids, and *not a cause* or technique of physically shortening the "cords" for the production of high pitches (Vennard 68). Damping is one possibility for achieving the male falsetto, and is usually accompanied by increased medial compression, defined as the result of the laterals pulling the "cords" together (*adduction*) for the purpose of approximation (Vennard 63). Occasionally in younger singers a developmental phenomenon called the mutational chink coincides with the dampened falsetto. *Mutational chink* refers to an incomplete approximation of the vocal folds resulting in a persistent opening between the arytenoid cartilages during phonation (Vennard 67). To the listener this vocal manifestation may cause the voice to sound breathy and thin. This phenomenon often corrects itself as the singer matures.

Singers who do not employ damping achieve falsetto tones by intense vibration of the vocalis ligaments, or extreme edges of the "cords." In this case, the vocalis muscles are in a state of comparative relaxation despite their ligaments being stretched to their longitudinal capacity. This falsetto production is most efficient at high frequencies and employs less air than damping. It also possesses more fundamental pitch than partials, or overtones, resulting in what may be described as a more flute-like timbre (Vennard 67). With a fundamental grasp of the activities of the vocal folds and their influences in hand, one may now delve deeper into issues relating to the incorporation of the choral countertenor voice.

Richard Miller defines *onset* as the initiation of vocal sound (Miller, *Structure* 1). Ideally, a cooperative combination of light subglottic pressure and mere sliver of glottal space between the folds prepare and coordinate the onset. As the singer moves air through the glottis, the coordinated onset permits an initial vocalis vibration via the Bernoulli effect (5). The Bernoulli principle states that air in motion is less dense than stationary air, and can cause suction by way of a resultant imbalance of air pressure (Miller, *Structure* 302). Vocal manifestation of this effect occurs as air moves through the glottis. The air pressure between the vocal folds is reduced, and the resultant suction draws the folds together. In

countertenor singing, the coordinated onset is a difficult but not impossible technique to master due to the stretched and abducted position of the vocal folds prior to phonation and an increase of subglottic pressure necessary to initiate vibration. Young or inexperienced countertenors will tend to demonstrate glottal onset until they have refined the necessary influence of medial compression for coordination. (Brinegar, Interview) Choral conductors should identify the pitch range wherein a coordinated onset is most nearly or consistently achieved by their countertenor section and gradually exercise onset techniques from that range outward. Certainly there are instances for which a glottal onset is desired and appropriate. However, choral conductors should assist countertenors with the development of various styles and degrees of onset as they would for other voice categories.

The issue of pitch is one of particular interest, and choral conductors should become familiar with the unique aspects of falsetto vocal tuning. Perhaps surprisingly, the breath is the most influential aspect of upper-range falsetto intonation. In the lower falsetto range the cricothyroids adjust the length of the vocalis muscles to correspond to the step-by-step rising of pitch as they do in the male chest voice. At a maximum point, however, the folds cannot continue to lengthen, but can hold their fully stretched position. From this state, pitch continues to be manipulated by as much as an octave through marginal increases in *breath energy* (Vennard, Hirano, and Ohala 31). This is an important revelation for choral conductors. While arguments may be attempted for continual modification of the vocal tract in an effort to "place" vowels for the purpose of falsetto intonation, the evidence of breath as the fundamental aspect of upper-range falsetto tuning compels the choral director to diversify his or her approach to countertenor tuning issues. This is true for pitch agreement within the countertenor section as well as countertenor pitches within the context of a section or piece of music. Modification of the vocal tract is much more a function of establishing or altering vocal color (timbre) than it is for achieving precise tuning (Brinegar, Interview).

Breath is also a major consideration in regard to vocal efficiency and phrasing. Countertenors who sing with the aforementioned mutational chink employ a breathy and therefore inefficient mechanism. It is also proposed that light falsetto phonation is not dissimilar to a whisper: a spoken but decidedly ineffective vocalism (Miller, "Tenor" 417). Compared to full, or chest, voice, falsetto singing requires less overall breath energy. Yet, the approximation of falsetto singing is generally less efficient than that of chest voice phonation. Therefore, developing countertenors require more frequent breaths and shorter phrase considerations than their full-voiced, choral counterparts. Mastery of sustained pitches, lines, and phrases, as well as skillful management of the falsetto glottis liabilities are the marks of a skilled countertenor (Miller, "Countertenoring" 20).

Blend is generally regarded as uniformity of timbre. It is often achieved through the reduction of resonance and elimination of particular vocal qualities when choral conductors discourage particular sounds from an individual or section of singers (Brinegar, Interview). Regardless of whether or not the result of such an approach to blend is generally regarded as effective, choral conductors should learn to discern the implications of such an approach. This holds equally true when blending individual singers with each other, and respective sections (including countertenor), into the corporate timbre of a choir. Vibrato, one component of this blending, may be simply defined as a natural phenomenon of a trained singing voice (Miller, *Structure* 312). Without attempting to traverse the slippery slope of explaining vibrato, it is possible to remind choral musicians of the simple reality than an

imbalance of first and third vocal formants arises when a healthy and genuine vibrato is arrested. Formants are naturally occurring overtones (harmonic partials) present in the characteristic resonant qualities of individual voice classification (singers' formant) and vowels (vowel formant) (Miller, *Structure* 304). Vocal formants do not depend on the presence of vibrato, but natural and healthy vibrato is a reliable indicator of their presence. Suppression of formants results in a tone quality that is comparatively thin or uncomplicated as a result of relatively strong fundamental pitch sounding without a harmonic context. In the ear of a singer, this diminished resonance can sound and feel unstable. To compensate, and often overly so, singers increase breath flow and modify the vocal tract in an attempt to replace lost timbre. Most often the initial result is a strident tone combined with pitch discrepancies and vowel disunion. Similar overcompensation by the falsettist is known by the commonly attributed and pejorative "hooty" description.

Countertenors are particularly susceptible to this unfortunate circumstance because of the difficulty in establishing the relaxed and coordinated phonation required for vibrato. Choral blend via timbre reduction is an option for the conductor who wants to achieve one type of uniformity of sound. The same is also an initial default function of falsetto singing. It is possible, however, to restore resonance to the countertenor, as well as the other voices of a choir, by building formants through demonstration and guided vocalization (Brinegar, Interview). As the primary feedback instrument of his or her singers, the choral director shoulders a great responsibility in understanding both the mechanics of the voice as well as familiarity with its most desired choral applications.

The development of any muscular anatomy depends on the type and frequency of exercise it receives. To this end the vocal musculature is no exception. If a muscle is to perform to its full potential, it first must be brought to a point of fatigue (Brinegar, Interview). A sung, three-step process may be divided into isometric, isotonic, and calisthenic vocal activities. Isometrics work muscles against one another, develop flexibility through tension and release, and are the initial method by which a muscle is gently fatigued. Isotonics build strength and foster sustained energy through coordinated motion and continue the exertion process. Calisthenics build versatility, enable variety of coordination, and complete the vocal exercise with an athletic conclusion (Brinegar, Seven 1). Despite its unique phonation, the countertenor should vocalize initially in his baritone or tenor register, and secondly in his falsetto range. By breaking down the vocal muscles to a point of fatigue before changing registers, a countertenor may most benefit from the flexibility and resilience he'll likely carry into the affected phonation of falsetto singing (Brinegar, Interview).

A second aspect of vocalizes glosses the issue of registers. Chest voice, what one might regard as the low or speaking voice, and falsetto have already been mentioned. Head voice denotes an intermediate adjustment between chest and falsetto. Although this voice is easily heard and felt by the singer, he may not easily produce it (Vennard, Hirano, and Ohala 31). The great feat of singing with the head voice is an ability to combine the cricothyroid activity of the falsetto with an aspiration rate less than that of the chest voice (Vennard, Hirano, and Ohala 37) and a relaxed vocalis (Vennard, Hirano, and Ohala 35). The head voice, however elusive it may be, is a vitally useful register for men because it permits agile and pianissimo singing in a high pitch area, and a direct, unbroken connection to the chest voice via crescendo. A direct shift between the falsetto and chest voice requires a noticeable "break" in phonation and timbre as the vocal mechanism changes from one

extreme of vocal coordination to another. The result is a glottal pulse not unlike an uncoordinated glottal onset, commonly referred to as a vocal cough. The same gentle transition between head and chest voice also exists between head and falsetto, making the head voice *the* desirable vocalism for developing one unified, ideal register (Vennard 69). Choral conductors may facilitate experimentation with the male head voice by having men sing pitches common to both the low-falsetto and mid-range chest voice in alternation. The goal of this activity is the successful combination of the two. Countertenors will find the head voice invaluable whenever musical passages require the unique timbre of the falsetto in a low range of alto pitch.

Falsetto countertenor singing is a teachable technique, and one from which choral conductors need not shy away. Men have been employing falsetto singing for centuries, and what we now describe as the countertenor voice continues to sound in choirs throughout the world. Hence, choral conductors should encourage singers who express an interest in falsetto singing. For some men, the falsetto register may be their most comfortable and facile vocal mechanism (Brinegar, Interview).

Choral conductors can successfully teach basic countertenor production after gaining a primary understanding of the male falsetto mechanism. The issues of countertenor breath, onset, phonation, resonance, and timbre should be understood as consistent with those of other vocal categories and instructed as such. However, the specific manifestations of these concepts paired with the unique aspects of falsetto vocal production, pitch, blend, and the fascinating relationship between the male chest, head, and falsetto registers present a challenging and exciting opportunity for the ambitious choral director. Conscientious vocalization can foster the development of falsetto singing in terms of efficiency, timbre, agility, and flexibility while concurrently maintaining healthy vocalisms in a typical tenor or baritone chest voice range. Choral conductors are encouraged to add an ability to work with countertenors to their overall teaching and performance regimens. This worthy effort will confirm that training and incorporating this unique and specialized voice need not remain a unique and specialized talent.

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Abstract

Falsetto countertenor singing is presented as a teachable technique. A brief history of the countertenor voice is offered. Issues of both general vocal and specific countertenor vocal pedagogy are explored and both anatomical structures and functional definitions are described. Specific topics include breath, onset, phonation, resonance, timbre, intonation, and blend. The relationships between the male chest, head, and falsetto registers are compared, and the male falsetto voice is investigated in detail. Vocalization techniques for both general and countertenor singing are suggested. Choral conductors are encouraged to learn to work with both the countertenor voice and timbre.