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Vocal Pedagogy and Using Healthy Technique to Sing

David Kovalsky

Honors Research Project

The voice is a marvel of the natural world. To think that such a small thing can produce sounds that touch a person's very soul is quite remarkable. Singing has been around since the dawn of man and it is believed that the voice was the original musical instrument. Mimicking what was heard from nature, singing developed from sounds to simple individualistic melodies, and from simple melodies onto more complex musical aspects like singing in unison, drones, and canons. All of this served to develop a growing sense of tonic and scale structure, and eventually new techniques and pedagogy were introduced to refine the use of the voice. Through the continued evolution of teaching the voice, and the refinement of scientific instruments to understand vocal function, the fundamentals of healthy singing technique were discovered and served to bring the vocal pedagogy and singing to what it is today.

The earliest organized singing had its roots in ancient cultures like ancient Egypt, where there is evidence that large choruses and orchestras existed. For the ancient Greeks, who were responsible for the development of the pythagorean scale, singing was a highly important art form and it permeated the ancient Greek culture. The Judaic culture also had singing as an integral part of their worship. Many ancient songs are preserved and found in the Psalms of David and Songs of Solomon, as well as some melodies that may go back to 500 BC. Singing was also an important part of the early Christian community. As the church became organized and formed the Catholic church by the 4th century AD, it worked to suppress secular influences and advance its own style of plainchant music. For the next thirteen centuries sacred music slowly developed and new musical devices such as polyphony, a musical style where multiple voices with individual melodies are combined into a whole and harmonize with one another, were created and employed in music. As the times moved forward, troubadours, traveling musicians, and composers started to create works that were not strictly sacred and began to take

on more secular elements. Songs were composed around secular poems and lyrics had themes about love, joy, and pain. Then in the late 16th century, the *bel canto* style of singing emerged and engaged in both polyphonic and solo singing. As the times moved on, music evolved and tastes in music changed, and along with the invention of new technology like the radio, television, and microphones, new singing styles were brought to light and began to be used extensively. These new styles like folk, gospel, blues, jazz, pop, and rock, collectively have lately become known as CCM (Contemporary Commercial Music). These styles have various approaches and stylistic requirements for singing in their respective repertoires that differ in many ways from the *bel canto* style.

Bel canto literally means “beautiful singing” and refers to the specific florid singing used by Italian singers of that time period, and still used by opera singers today. The development and philosophy of the technique “is based on the ideas of ease, purity and evenness of tone production, and agile, precise, and virtuosic use of the voice” (Spinato). In the late 1500s, a group of Italian intellectuals known as the *Florentine Camerata* began meeting and informally discussing literature, science, and the arts with a goal of reviving the music and drama of the ancient Greeks. From this organization emerged the first opera. The *bel canto* technique was applied to the singing of opera, and continued to develop during the 17th, 18th, and early 19th centuries. With the virtuosic abilities of this technique, singers were able to amaze and move audiences through the operatic music and show off their extraordinary abilities. Although the *bel canto* style was used extensively, the specific vocal techniques that the singers used were not clearly communicated in written records. The early books on voice were few and used imprecise and vague language to communicate singing concepts and techniques. Early voice pedagogy was a mostly oral tradition where the teacher would listen to the student, ask for a change, keep the

change if the sound produced was pleasing, and try something else if it was not what was desired. It was not until the invention of the laryngoscope in the 1850s that one was able to peer into the larynx and discover how the voice truly functioned and apply this knowledge to singing. From the use of this innovation, more precise language became used when dealing with teaching the voice, and one was able to identify the specific physical corrections needed to produce a good, healthy singing tone. Today, we are able to specifically address vocal problems more effectively to teach the voice and get results in a more systematic way.

When teaching the voice to conform to *bel canto* technique and ideals, one is looking for a specific sound and end goal for the voice. One must be able to sing with control and execute technically demanding passages with ease and agility, sometimes using florid and fluid vocal embellishments. Also one must be able to sing musical phrases using a pure legato sound where the passing from one note to the next is steady, stable, and clean. The Italian language is particularly helpful in the development of the technique since the language itself is highly phonetic and when spoken, the words flow from one to the next much like what is required in singing (Spinato). Also one must be able to project the tone of the voice forward so that a large hall can be filled without the use of external amplification. All of these conditions are met as the voice attains mastery through years of practice and singing; however, there are only a few specific technicalities that are looked at when one is shaping the voice to be a fine *bel canto* instrument. These are the use of breath, the larynx, jaw, tongue, and the soft palate.

The first thing that is taught to new students and that continues to be reinforced is breathing. Proper breathing is the fundamental base of good *bel canto* technique and is critical for powerful, healthy, legato singing. This type of breathing in singing is different from normal day to day breathing, but in principle is quite simple. Positioning themselves in a relaxed but

solid stance, the singer inhales deeply without raising the shoulders or chest but expands the stomach outward and the ribs side to side. The chest might raise slightly when the inhalation is complete, but it should not be a conscious effect. This type of breathing is most natural as it is how one breathes when they sleep and also how infants breathe when they are born. One principle to keep in mind when inhaling is that nothing should move unless the breath moves it, so the movement of the belly and ribs is not independent of the breath. The singer simply breathes and allows the body to naturally expand. Then during exhalation, the singer must maintain the position of inhalation with the abdominals in order to slow down the release of air so that a steady supply can be used for singing. This also supports the sound with a continuous pressure of air that can be controlled at will for various purposes during singing. Although in principle this kind of breathing is simple, in practice it takes some work to master because incorrect breathing habits need to be changed. The most common types of problems in breathing for new students are “an excess of subglottic air pressure, caused either by compression of the chest, or rigid over contraction of the abdominal muscles” (McCoy). Subglottic air pressure is when there is too much air pressure on the vocal folds and problems associated with this limit the range of the singer and create unpleasing tones. In order to fix them, a few devices are employed. To remove the compression of the chest, the sternum and upper ribs are held down during inhalation to force the breath to go lower and deeper into the body and also to remove the chest from helping to support the breath during exhalation. To relax the extreme abdominal contraction, the hips can be rocked back and forth when vocalizing which makes it impossible to rigidly contract the abdominal muscles. This also takes the attention away from actively relaxing the abdominals because actively thinking about relaxing might instead introduce that tension (McCoy). The students then continually work to re-establish proper breathing from time to time when the body

loses focus on those basic systems, and when connection to the breathing mechanism is established properly, then they are able to move on to address the other problems that hinder good singing.

The remainder of the focus when teaching singing after breathing is on the head and neck. Specifically the focus is on the larynx, jaw, tongue, and soft palate, and how to remove tension and nasality, and create a space for proper resonance. Coordination of these areas of the vocal tract allows the sound to be produced freely and beautifully and the voice to be used to its full potential.

When there is tension due to a raised larynx, one can use a panting breath exercise to lower the larynx to a more neutral position. While panting like a puppy, the sound is altered from a small dog to a big dog and vice versa. Once it is established that the pitch changes based on the position of the larynx, the student may sing a short scale of three notes, preceded by a low panting breath. The exercise slowly continues up the singer's range as they learn to keep a relaxed larynx while singing. During the exercise, the students' internal perception of their voice may differ from the external perception because of the lowered larynx and this darker sound produced by the lower larynx may seem artificial to the student; however, they must be assured that the sound coming out is still their voice. A simple trip to a really resonant space like a bathroom will show the student that their voice is still fundamentally the same and in fact the neutral larynx now allows the student to sing with more freedom and a more full vocal color. After the larynx is addressed, one is able to move on to removing tension in the jaw.

When there is tension in the jaw due to the chewing muscles being engaged and tight during singing, one may use a jaw-wiggle maneuver to relax the jaw. As the student sings up and down a scale, the jaw is wiggled quickly side to side. One might find that as the singer

approaches the upper notes of their range, the jaw will either slow down or completely stop. At this moment the student must be reminded to maintain the wiggle without muscular resistance. Over time the jaw will lose its tension and the singing becomes freer and easier. Usually when the tension in the jaw is removed, so is any tension in the tongue, as these two are intertwined. However, if the tongue is still set with tension after the jaw is addressed, a tongue twister and vowel exercise can be employed. Starting with an exercise that only addresses two vowels (like [u] and [i]) one can sing scales to free up the tongue between those two vowels. Then one can introduce more vowels and patterns to get the tongue and lips moving and free of tension. Over time the student will be able to sing those exercises multiple times in a row without getting tongue tied and the tongue will be tamed. After settling the tongue and jaw, to address nasality and to create a proper resonating space, the soft palate can be addressed.

Nasality happens when the soft palate is lowered and air is allowed to escape through the nose when singing. Also the sound is left dull and unable to resonate and project when the soft palate is dropped. In order to teach the student how to raise their soft palate various techniques can be employed. One such technique is sustaining the unvoiced consonants [s] or [f] for as long as possible. The palate will be raised and will not allow any air to leak through the nose. Another technique is to sing scales on the voiced consonants [z] and [v]. Both techniques will teach the student how to raise the soft palate at will without introducing new tension and will effectively create a more resonant non-nasal sound (McCoy). Using all these previous methods and many more depending on individual student needs, the voice is taught the *bel canto* technique.

When one learns to sing *bel canto*, one learns to sing in a specific and healthy way. The reason why classically trained singers sound the way they do is because the training is focused on unifying the vocal registers (noticeable divisions in the tonal quality of an individual's voice),

singing with pure vowels, and allowing it to project into a large hall or auditorium without the use of amplification equipment. All of these serve to give the voice that big “classical” sound. The singing is healthy because it is without tension and on the breath, rather than through a pressed throat, relying on the throat to project the sound. Specifically, there is a certain mechanism and certain muscles involved in healthy singing that classical singers learn to use.

The mechanism involved in healthy singing has to do with the aforementioned registers. The division and labeling of those registers has been a subject of dispute since the beginning of singing. In the twelfth century, voice pedagogues divided the voice into chest voice, throat voice, and head voice, although these descriptions were associated with low, medium, and high voice categories in general, and were not intended to describe changes in an individual’s voice. By the fourteenth century, it was found that an individual voice had two common qualities, the chest voice and the falsetto, and the difference between the qualities was described as the sounds produced from a yodel. By the eighteenth century, terms related to the voice registers were modified to fit the Italian language and began to be called *voce naturale* (natural or full voice) and *voci finte* (false voices or falsetti) and even sometime later, Monteverdi substituted *petto* (chest) for *naturale* and held on to the much older terms of *gola* (throat) and *testa* (head) as tonal characteristics; however, the concept that there are basically two distinct registers (chest voice and falsetto) was not changed. During that time period, Francesco Tosi wrote the first discourse on systemic technical voice training, and mentioned that the sound of a voice containing distinct registers was not desirable. Instead he said that both chest and falsetto were “integral parts of a complete singing tonal quality, healthy parts potentially capable of being blended into a unified whole” (Reid); therefore, a beautiful, healthy voice was one that had no noticeable registers or

breaks within it and yet used both chest and falsetto registers to accomplish this task of a unified voice. This is the concept that is used today to train the classical voice.

Singers throughout the centuries used this type of training without knowing the actual physiology behind their singing until the laryngoscope was invented. With the laryngoscope, one was able to peer down into the throat and directly see the voice muscles involved in producing healthy singing. These two intrinsic muscles of the larynx, the thyroarytenoid muscles (TA) and cricothyroid muscles (CT), serve in creating pitch and register adjustments in the singing voice. Specifically, the TA muscles shorten and thicken the vocal cords and are used when singing in the chest register, and the CT muscles lengthen and thin the vocal cords and are used when singing in the falsetto register. When singing in a healthy way, these two muscles are being used properly without strain to create the desired pitches; therefore, since healthy singing is related to the musculature of the voice, it stands to reason that it is not confined to a specific style, and one can sing healthily in many different ways. One is able to move away from the *bel canto* style and yet retain healthy singing. In fact, Robert Edwin, *Journal of Singing* associate editor and renowned singer and teacher, recommends that singers train both muscles to develop a healthier, better balanced and coordinated instrument. Classical and Contemporary Commercial Music (CCM) singers who have a more CT-dominant register should exercise in their TA-dominant register and Classical and CCM singers who have a more TA-dominant register should exercise in their CT-dominant register (Edwin). This would allow both groups of musicians to sing with healthy voices and not fear damaging their vocal instrument.

In CCM styles, there are different requirements and sounds that are sought after than in the *bel canto* style. The repertoire has stylistic requirements which are often chest-voice dominant, use an extremely bright timbre (belting), use vibrato sparingly or not at all, separate

the voice registers, deliberately induce noise or breathiness, etc. (American Academy of Teachers of Singing). These sounds and uses of the voice can be much harsher on the vocal mechanism than the traditional *bel canto* use; however, if CCM singers use these different sounds and stylistic requirements with correct muscle engagement, there should be no issue with singing in these styles in a healthy way. For example, if one understands the concepts of registers and how to teach the voice to use the throat muscles properly, one can use belting effectively and healthily. Many teachers believe that belting is the “practice of driving the chest register beyond its intended tonal range” (Lokos as quoted by Spivey). If this accurately described belting, then indeed it would be unhealthy, as the vocal mechanism would be used improperly, and the continual use of the chest register outside of its proper limits would wear the voice down and at best make it unusable in later years, and at worst create vocal nodules that need to be surgically operated on and removed. However, many teachers that teach belting state that “Belt is not chest voice nor is Belt an extension of the chest voice into the higher register” (Sullivan, as quoted by Spivey) and “‘Belt’ or ‘belt-mix’ . . . refers to an informal, chiaro (treble) intensified, speech-level style of singing . . .” (Edwin, as quoted by Spivey). If this is the case and the registers are acknowledged when teaching belting, then it is a perfectly healthy and viable vocal technique and must be taught correctly in order to sing without damage to the vocal instrument.

Systemic singing has been around for a very long time and has formed through the growth of knowledge about the singing voice. As the times progressed forward, the *bel canto* technique became an established way of singing that was both beautiful to the ear, and practical in that it allowed singers to be heard without amplification, and to sing healthily into old age. As new inventions came into being and less resonance was required from the voice thanks to amplification, CCM styles arose and as their popularity grew, became used all over the world.

Alongside the growth of these new styles arose more scientific knowledge about how a healthy voice truly functions, enabling the singers of today to perform many different styles of music in a healthy way. As we continue to move into the future and learn even more about the mysteries of the human voice, the art of vocal pedagogy and teaching good healthy technique will continue to evolve and change, enabling the next generation of singers to meet the demands of the day with balance and ease. This will produce fabulous artists that will continue to carry on the legacy begun from ancient times by further refining the use of the most natural and marvelous of instruments: the human voice.

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