

Bel Canto: To what extent is the Germanic school of singing technique the opposite of the Garcian school of singing?

Bel canto is a term widely used, and one surrounded by misunderstanding and controversy. While it saw its culmination in the 19th century with pivotal teachers such as the Spaniard Manuel Garcia II (Stark, 1) and Giovanni Battista Lampert, its roots can be traced back to the North of Italy in the late 16th century to small and specialised groups of singers. It was in these groups “whose vocal prowess eclipsed amateur choristers” (Stark, 190) that singers began to display their virtuosic skills through their ease in coloratura, diction and emotional expression. This gradually developed, over lifetimes of dedicated study and experience, into a more familiar idiom of singing that is well studied (despite easily being approximated [Potter, 31]) and that we take for granted today as the healthiest method of classical singing. While the bel canto operas of Bellini and Donizetti were still flourishing, a radical, new, seemingly irreconcilable school of singing came about in Germany, arguably as a nationalist separation (Whitener, 155) from the Italian tradition that had “no other ambition than to satisfy this shallow audience” (Wagner, 44). While derived from similar fundamental principles as bel canto, this new Germanic school took the muscularity and physicality of the style to new heights and new pedagogy emerged. In order to compare these sometimes seemingly incompatible styles, it is logical to try to break the technique down into individual, manageable parts within a phrase; preparation, onset and phonation. Through this method, one can locate both similarities and differences in small scale vocal physiology while maintaining a somewhat comprehensive image of how each aspect integrates with one another to form a complete technique.

Preparation

In the first part of Manuel Garcia II's *Traité complet de l'art du chant*, he only spends half a page talking about respiration, predominantly the process of inhalation and preparing the voice for phonation. In this succinct passage, Garcia describes the silent breath combining a raised chest with a lowered diaphragm (Stark, 97) as this “allows the lungs to complete all their expansion and to receive all the air which they can contain”. In practice a singer cannot control the diaphragm but instead controls the muscles around the abdomen, for example the abdominal wall must relax during inhalation (in other words the belly must expand). The silent nature of this breath also indicates sufficient pharyngeal space and therefore a low larynx in preparation for onset. By nature, the relaxing of these abdominal muscles and the creating of space in the back of the throat is instinctive and easy to do, as it is very similar to the ‘every-day’ method of breathing (teachers often advocate for a ‘yawning’ position) and is seen even in newborns as they cry for hours on end without vocal fatigue (Cathcart, 26). While in the German school, the importance of the pharyngeal space and low larynx prior to onset is still present, the

action of inhalation is often more muscular and prepares the mechanism for extreme sub-glottic pressure. Despite this, the mechanics of the inhalation are largely very similar, although there are a wide range of theories of breathing. While one might assume that by default a singer would opt for the relaxed and grounded method in the Garcian school, Friedrich Schmitt (1812-1884) advocated the importance of the intercostal breathing, in which a singer would feel as if the lungs were fully dilated (Whitener, 38) and would take a quick and energised breath. The importance of the sensation of the lungs being fully dilated would suggest to modern pedagogues that a singer is over breathing, as teachers today (Marek, 76) would argue that the breath mechanism must remain relaxed and flexible, rather than rigid and muscular as Schmitt suggests. Over breathing can cause problems during phonation due to muscular tension created in the neck and shoulders which will indirectly affect the vocal mechanism, and it also makes it more difficult for a singer to finely control the amount of air being output for a phrase, the balance of which being known as *appoggio* in Italian. Therefore, while both methods rely on similar muscular movements, the Germanic style of singing is somewhat different and arguably less healthy or efficient by today's vocal standards.

Onset

After the singer has set their posture of the proud chest and relaxed upper body, inhaled and prepared the resonators (mainly the pharynx) for phonation, comes the onset. As Garcia II was a pioneer of the more scientific based vocal teaching style, having invented the laryngoscope, he was able to imagine a biologically accurate structure of the larynx and each cartilage or muscle therein. As a product of the hypotheses he had tested using laryngoscopy, several of his ideas were new and controversial. Perhaps most famously, the *coup de la glotte* (meaning "hit/stroke of the glottis") was a cornerstone of Garcia's technique (Stark, 14) and one that sparked controversy and misunderstanding. Fundamentally, the exercise is the practise of the building up of a tiny amount of pressure below the glottis just moments before phonation and onset. As the combined adductive force of all the muscles around the larynx (importantly the interarytenoids) contract and close the glottis space, it sets up the phonation process to be aerodynamically efficient with a brilliant, focussed sound (Stark, 12). The wave of contemporary misunderstandings and criticism was perhaps understandable as the connotations of the word "hit" suggests the violent and pushed action, as subglottic pressure is built up and suddenly released. In fact, Garcia maintained that the *coup de la glotte* "must be the delicate, precise action of the glottis" (Lunn, 21). Modern views on the topic continue to be controversial and polarised (Stark, 20), as many believe it can lead to the so called "hyperfunction" (Froeschels, 63) of the muscles in the larynx, leading quickly to problems such as "paratetic hoarseness" (Froeschels, 63) caused by

the overuse and over tensioning of these fragile but relatively powerful muscles. Others however, agree that, if used carefully and correctly, it is a tool that is helpful for developing cord closure and avoiding breathiness. As the German language contains harder glottal stops (which Garcia II warned against) at the start of some words, it is natural that this is carried over in singing. The glottal stops are further intensified in Wagnerian singing, as the dramatic nature of the characters often calls for harsh plosives with the vocal cords, often signifying tragic helplessness, anger or other powerful emotions. Bel canto is not exempt from this almost melodramatic tradition, as in Verdi especially (which is often sung by bel canto singers), similar glottal stops are used to emphasize the drama on stage. Despite this, the German pedagogy somewhat agrees, follows and sometimes even cites this traditional Italian school (Whitener, 48) as the balanced onset was deemed effective in focussing the sound and activating thin edge function of the vocal cords. This allows the production of the “singers formant” which is one of the most importance mechanisms in either style, as a singer is required to easily project over (in Wagner’s case) a 90 piece orchestra. Thus, despite the coup de la glotte being a traditionally Italian concept, the German school (to some extent) adopted and developed this exercise in onset while making adjustments pertaining to the dramatic nature of the music being written and the demands of the German language.

Phonation

After phonation has begun, the fundamental aim of the Italian teachers was to reach the most efficient method of vocal production while maintaining the smooth tone and seamless transition between registers (Cathcart, 36). As a product of the ideals behind his coup de la glotte exercise, Garcia advocated for a similar idea of “pinching” the vocal cords during phonation (Stark, 38) which produced effects of vibrancy and ease of projection. However, many teachers (to this day) dislike the encouragement of pinching or squeezing in teaching as it may normalize tension around the larynx and contact stress. Contemporary vocal scientist Ingo Titze warns against the tight adduction for fear of “hyperadduction”, very similar to the worries of hyperfunction in reaction to the coup de glotte.

Perhaps more apparently dangerous for the vocal cords, German voice teacher George Armin (1871-1963) created an equally controversial method; a form of “breath damming” that he named “Stauprinzip” (Parr, 67). Stauprinzip relies on the opposition of the air flow towards the larynx and the stopping power of the glottis. The extreme subglottic pressure (and therefore stopping or “damming” power of the glottis) does create very large amplitude, tends to improve breath control and often creates the impression of a ‘big’ voice (Stark, 108). While both the Italianate and Germanic techniques can rely on the “pinching” or “damming” of the glottis, the Germanic school

encouraged this muscular pressing of breath against the larynx which, while effective in volume, not only reduced flexibility in the voice for phrasing and musical delicacy, but also leaves the possibility of vocal damage due to the high demand placed on the somewhat delicate muscles in the vocal folds (Husler and Rodd-Marling, 44-6).

A vital and longstanding concept in the Italian tradition is the *chiaroscuro* description of tone colour that has been held up as the ‘ideal’ sound for soloistic singing. Meaning “bright/clear-dark” in Italian, the term refers to the bright, almost piercing edge to an operatic sound, interacting with the sonorous and pharyngeal resonance, arguably the body of the tone. In practise, a listener refers to the upper partials (between ~2.2 kHz for basses, up to ~3.2kHz for tenors [Sundberg, 15]) created in resonance (largely created in the head spaces such as the sinuses or nasal cavity) when describing the bright element of the voice. As previously discussed, the most common method to achieve this high resonance was through the firm glottal closure, and the use of the thin edge function of the vocal cords. The timbre of the voice (‘light’ or ‘dark’) largely depends on the position of the resonating column or vocal tract. This can be varied in several ways; the lateral width of the pharynx, the vertical positioning of the larynx, the length of the pharynx – controlled by the positioning of the soft palate along with the mechanisms with which vowels are created, such as the tongue or lips (Stark, 38). It is important to note that each of these mechanisms are influenced by one another and in many cases, it is difficult to isolate one without affecting the other. Being one of the only adjustments which is easily visible to a viewer, the position of the larynx or ‘Adam’s apple’ is a common topic in vocal studios, to this day (Stark, 41). In order to achieve the dark resonant element of *chiaroscuro*, the larynx must be low enough so that the singer feels there is sufficient space, without losing cord closure. In *bel canto* singing, the larynx should also be free to move, and should not be locked in place with musculature.

The German pedagogy also talks of a similar balance of timbre within the voice. Heinrich Mannstein (1806-1872) suggested that there were only three “types” of tone; the throaty tone (‘Kehlton’), the nasal tone (‘Nasenton’) and the balanced tone (Whitener, 26). There are clear parallels with the Italian tradition here, Kehlton being close to the ‘scurio’ aspect of the *chiaroscuro*, the Nasenton being related to the ‘chiaro’ aspect, and the balanced tone refers to the ideal mix of these two poles. However, Mannstein aims to reach this goal in a different perspective. A large part of his teachings was his criteria for ‘correct’ mouth position (Whitener, 27). In summary, the mouth should not move between consecutive vowel sounds or a change of note, the upper and lower teeth should be roughly an inch apart and the mouth and lips should be elliptical, with the upper lips not covering the teeth. The movement of the mouth is perhaps less emphasised in other schools, but it aims to release or control any tension in the system that may affect the operation of the larynx, an ideal shared with many other techniques, including the Italian tradition. Some contemporary teachers of Mannstein suggested the teeth (especially the top row) were an important part of the finding of resonance, as the

popular but non-science based method of 'resonance imagery' emerged. This involved 'placing' the sound at different points in largely the upper body, relating to different vowels or points in the register (Stark, 51), something especially relevant in the practical teaching of voices, due to the ease of description and tactility. The instructions on jaw position are perhaps less clear in their intent. Arguably it is designed to help focus the sound, and avoid 'spreading' the sound, and losing upper resonance, however this advice somewhat breaks down when different registers are considered.

Being one of the most studied aspects of singing teaching, the Garcian theory in registers is complex and too convoluted to fully explore in this essay as his thoughts changed and developed with further research and time (Cathcart, 50). However, Garcia was able to practically demonstrate (Stark, 69) his theory of two registers; the chest register and the falsetto-head register (Stark, 68) in 1841. He used his students to show that the chest and the falsetto register overlapped (in an area known as the *passaggio*), however the previously separate falsetto and head registers would not overlap and could be joined up and sung smoothly through the range. Members of the Académie des sciences were persuaded, and his theory is now largely regarded as definitive (Cathcart, 49). As the voice moves up through the registers, the general trend is in the decrease in cord mass, and in the highest notes of falsetto, only the edge of the cords vibrate (Stark, 69). A seemingly universal goal to most (singers and teachers alike), is to unite these registers in order to have free reign over the compass of the voice (Stark, 58). Arguably the most drastic change in technique to accommodate for these registers is in the tenor voice, above the *passagio*. In 1831 French tenor Gilbert Duprez became (in)famous for the first known high C (*ut de poitrine* - literally meaning 'C of chest'). performed on stage in (what appeared to be) the chest register. Prior to this, tenors had resorted to *voce di testa* for high notes – a far cry from that which modern audiences expect (Stark, 58). As this concept was so alien to the pedagogues of the time, Garcia's theories on this technique were somewhat indecisive and cautious. He insists that the idea of mixing registers is biologically impossible as each are distinct positions of the vocal structures. Instead, he suggests two ways to move above the *passagio* (Stark, 74). The first creates a mellow and subtle timbre, using a relaxed pharynx, low larynx, small stream of air and loose glottal closure. One of the few times Garcia advocated weak glottal closure, the sound allows "the piano and mezza voce use of this register in the high tones and thus the dispensation of the excessive use of the falsetto tones" (Garcia, 161-2). This distinctive timbre is incredibly useful for delicate and vulnerable scenes in several genres. For example, Jerry Hadley's 1990 *Dalla Sua Pace* at the Metropolitan, or the *cadenza* at the end of *Una Furtiva Lagrime*. His second suggestion is more familiar to tenors modern singers, and is presumably what Gilbert Duprez is said to have pioneered – known to modern pedagogues as covered singing. Garcia was wary about this new and somewhat radical technique as "exhaustion and paralysis of the organ are the inevitable and unfortunately too frequent result of this procedure" (Garcia, 162-3), a

concern shared by some modern teachers (Stark, 75). This is because it suggests a rather dramatic and vigorous change in the handling of the vocal muscles, when in practise singers should be able to finely adjust their singing with ease. As a singer passes over and above the passagio, they should feel the slight darkening of the vowel, with an increase of pharyngeal space, akin to a yawning sensation. Some teachers choose to focus on the space between the back two molars in the mouth, increasing the resonating space at the back of the throat, but preventing a “spread” sound at the lips. Biologically, these sensations correlate to the movement of the larynx to below or at its resting position by the sternothyroid muscle. As a result, the thyroid cartilage which is attached to the cricothyroid muscle tilts up and backwards. As the cricothyroid muscle controls the elongation (and therefore tension) of the vocal cords, and it is allowed further range than it would normally be in this tilted position, the voice is allowed to continue in ‘normal’ (full) vocal function above the passagio (Sonninen, 80-6). Despite Garcia’s concerns, this concept is constantly used by (largely male voices) to ascend to the highest pitches and is accepted by most contemporary vocal teachers and scientists.

By the time of the Wagnerian German teachers, the concept of carrying the full voice beyond the passagio seemed less alien and radical, beginning to be more widely welcomed and developed on. However, a small amount of teachers (namely aforementioned George Armin) took this concept further, to what they called ‘deckung’ singing (Whitener, 137). Whilst the intention of a darker vowel and a lower larynx remained, some singers interpreted this as artificially pressing the tongue down and back. Not only does this reduce supraglottic and pharyngeal space, but it also causes the locking of the laryngeal musculature which prevents the tilt and therefore Italian ‘covering’ concept. It must be noted however, that this concept was radical and only accepted by a small number of teachers and quickly rejected by others; similar ideas were posited in Italy by the infamous Arturo Melocchi who taught Mario del Monaco and influenced Franco Corelli in the 1930s.

Summary and Conclusion

Through this research, it is clear that Manuel Garcia II was innovative and vital (however somewhat controversial) to the development of the traditional Italian bel canto technique, through his science based techniques – most importantly the coup de glotte. Radicals of the German style around the turn of the 20th century, as a reaction to the demanding and progressive writing of Richard Wagner’s ‘Musikdrama’ genre, resorted to more muscular, extreme techniques. To some extent these were a development of the Italian fundamental principles (as shown, there is much overlap to be found) that had been taken to extreme lengths in order to produce seemingly unnatural volumes and capacity for expression – attempting to fulfil the godly heights of

Wagner's works. It is unclear on Wagner's view would have been had he known these radicals. It is clear he admired the fundamental technique of the Italians, but advocated for his new German school of singing which was supposedly better suited to his work (Fischer, 53-58). It is important to note that these two seemingly opposites of techniques were not taught in isolation from one another. Several Italian singers had successful careers in Wagner roles (Giuseppe Borgatti in 1904 was the first Italian tenor to appear at Bayreuth) and vice versa. Similarly, much of post-Wagner teaching draws from and collaborates with the Italian tradition in order to take vocal pedagogy in a positive direction. Without recording technology available of either era, this debate remains ambiguous to some extent as even canonical texts have moments of vagueness and contradiction. However, through examination of both contemporary and present-day texts and observations, one can argue that the Italian school (namely Garcia's teaching) is fundamentally more natural, efficient and healthy for most voices than the Germanic school.

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