

The Road to Bel Canto

On my re-training to Chiaroscuro

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Abstract

I am a practising classical soprano. After more than 20 years of professional singing, I re-trained my voice according to the principles of the old Italian school of singing. In this essay, I examine the origins and principles of bel canto, with special focus on appoggio and chiaroscuro, two key ingredients in the bel canto tradition. I explore the relationship between science and the craft of singing, and what modern voice research has to say about the efficiency and health aspects of this technique. I also describe the profound effect it has had on me as an artist.

Keywords: bel canto, chiaroscuro, appoggio, singing, opera, vocology, vocal health, vocal efficiency

Preface

First of all, I would like to thank Bengt Nordfors for taking me on this journey.

I wish to thank Ingela Tägil, my supervisor, for taking the time to bring order to this thesis.

Warm thanks to Lena Johnson who accompanied me in the Bellini aria (see attachment).

Thanks to all my classmates who inspired me with their enthusiasm in many lively discussions throughout the year. Thanks also to Professors Christer Bouij and Gunnar Ternhag for expanding my horizons.

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Last, but not least, my love and gratitude to my husband Ulf Wiger, who supported me with his research skills, patience and enthusiasm, helped me find valuable literature and translated the thesis into English.

This version of my thesis is a translation of the Swedish version. The referenced material is the same as in the Swedish thesis. Some of this material may exist in English translation, in which case page numbers and exact wordings are likely to differ somewhat.

Attachment

The attached CD contains demonstrations of the tone quality of *chiaroscuro* by Prof. James Stark, Bengt Nordfors and Katarina Pilotti, and also includes a *bel canto* aria, corresponding music excerpts which demonstrate *portamento del voce* and *messa di voce*, and the whole aria.

Tracks on the CD:

Elvira's scene and aria: *Qui la voce sua soave* (act 2) from *I Puritani* by Vincenzo Bellini. **Katarina Pilotti**, soprano & **Lena Johnson**, piano.

Excerpts demonstrating *portamento*. **Katarina Pilotti**.

Excerpts demonstrating *messa di voce*. **Katarina Pilotti**.

Deepening of the vowel 'i'. **Katarina Pilotti**.

Transition, light-*chiaroscuro*- light on 'i'. **Bengt Nordfors**.

Transition, light-*chiaroscuro*-light on 'o'. **Bengt Nordfors**.

Transition, light-*chiaroscuro*-light on 'a'. **Bengt Nordfors**.

Scale on the vowel 'i', light voice. **James Stark**.

Scale on the vowel 'i', dark voice. **James Stark**.

Scale on the vowel 'i', *chiaroscuro*-voice. **James Stark**.

The material is also available on mp3 format:

<http://www.katarina-pilotti.com/mp3/2009/d-uppsats-demo/>

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2 Introduction

In recent years I have become interested in *bel canto* singing and what it stands for. I am a classical soprano with an extensive education: soloist-, diploma- and opera education in both Stockholm and London. Altogether 10 years of education and 25 years experience as a professional singer. One of my abilities is my talent for singing coloratura – fast runs – and I have also always been well versed in various means of indicating feeling and expression. The problem was that I have seldom been able to reach the deepest level of expression I have known was inside me, without damaging my voice. I have been busy singing ever since the beginning of my career, but frequent engagements during my early education in Stockholm sometimes led to hoarseness and tracheitis, problems which were practically eliminated during my studies in London. My love of singing kept me going, but finally my motivation disappeared. The joy of singing was replaced by a sense of duty. I was about to quit singing professionally when I was rescued by my singer colleague and old friend Bengt Nordfors (1957-). He was already giving lessons, with obvious good results, to my husband, a tenor. I decided to take a chance and take a few lessons from Nordfors. Nordfors' technique is based on the *bel canto* tradition and takes a long time to learn. I started retraining my voice with his help and immediately felt a dramatic difference. This year, 2009, it is my fifth under Nordfors' tutelage.

More and more, it would seem, that today singers are concerned with the production of a preconceived sound, often taken from a recording – itself artificially adjusted to be as close as possible to a generally accepted, international, bland, easily recorded sound – rather than permitting the sound of their voice to be the result of the body's reaction to the working of internal feelings, imagination, and the higher human faculties. Adjustments and 'improvements' are attempted at the purely physical, mechanical level, rather than at the level of the imagination and the intention. In the process, individuality and spontaneity are lost, and the direct connection between the musical sound and human experience – something unique to singing as it has developed in our culture – is broken.

(Hemsley 1998 p 22)

A few years back I started looking for recordings on the Internet, where one can listen to a variety of music and singers from past to present time. I found video clips of Maria Callas, Franco Corelli, Carlo Bergonzi, a young Pavarotti etc., and what struck me was that I was moved to the core despite ‘old’ sound technique, whereas today I hear so many established singers who leave me cold...

I believe ‘good singing’ grows from a technique that makes it possible to express oneself and communicate to the full. Nordfors presented a singing technique that is both powerful and healthy, and he is of the opinion that because it is healthy it also allows you to have a longer career. Today, there seems to be a widespread opinion that you can be a successful singer without much effort – you simply ‘have it’ – a singing ideal that in my opinion demands little of both the singer and the audience. The frequent use of microphones could be a contributing reason why so many singers today sing ‘without body’. Unless you can approach singing as a purely physical activity, you are missing a fundamental aspect. For singers at a high professional level, the precise muscle control required is comparable to that of a dancer or an athlete (Sandgren 2005 p 68).

Whatever you do, don't seek some quick fix. In the words of Bevely Sills: “There are no shortcuts to any place worth going”¹.

Classical singing is based on knowledge that has been passed down through centuries from master to apprentice, and learning the craft is hard work. The music conveys a message perhaps left hundreds of years ago, and we musicians interpret and animate it through our knowledge and the experience that has grown from that knowledge. In this thesis, I wish to illustrate, partly based on my own experience, what value the ancient principles may have for practising singers of today.

I do not claim to be a researcher or singing teacher. My perspective is that of the practising singer. I have worked as a singer for 25 years, the last four years of which I have spent re-training my voice. I have practical experience from two different schools of singing, and thus two perspectives on singing and its

¹ An oft used quote by Beverly Sills (1929-2007), here taken from a post on the Internet by the singer and pedagogue Jean-Ronald Lafond. Sills was a student of Estelle Liebling (1880-1970) from the age of 7. Liebling herself was a student of Mathilde Marchesi (1821-1913). Sills has said that she later understood that the whole basis of Liebling's training was breath control (Hines 1982/1984 p 303, 308).

possibilities. I hope to show in this thesis how to apply today principles that I mean stem from the Old Italian School of Singing.

Limitation

This is a thesis with artistic alignment. I have chosen to focus on two terms, *chiaroscuro* and *appoggio*, which I view as central for the tonal ideal of the bel canto tradition. Using this perspective, I present a historical background in order to trace the origin and context of these definitions.

Purpose

In this thesis I will apply a scientific method to highlight and clarify certain principles with roots in the Italian bel canto tradition. These principles have come to greatly influence the way I sing today. Based on my experience of re-training my voice from a 'modern' singing technique to a technique based on these principles, I wish to give a historical background and relate these concepts to modern vocal science. I will also illustrate how the re-training has changed my relationship to singing. I hope this will inspire readers and clarify how ancient methods can be applied in a modern context.

My account is based on the journey I have made in mind and body. As a singer, I *am* my instrument. Because of this, I may be closer, intuitively and emotionally, to my object of study than is perhaps common in traditional research. I realise that this is both a strength and a challenge. I have chosen to include anecdotes and colourful quotes, in order to create an atmosphere. My ambition is to maintain a respectful attitude towards the singing tradition.

Problem areas and questions

What drove me into this process was the longing for a deep and rich expression in my singing. Being limited to singing only pretty notes was ultimately so frustrating that I considered giving up singing professionally. The fundamental change caused by the re-training sparked my curiosity to begin exploring the history and tradition behind this method of singing. Could I find evidence to back my intuition that the *bel canto* tradition is relevant even today? During my search, I found unexpected support in modern voice science, and this expanded my query: Can an exploration of historical facts and natural science lead to a deeper and stronger artistic expression, and how can we practising singers contribute?

Method

The method I have chosen is hermeneutics. My thesis is about interpretation, and hermeneutics is the theory of interpretation. My basis is Per-Johan Ödman's

book, *Interpretation, Understanding and Knowing – Hermeneutics in Theory and Practice*² (Ödman 2001). Interpretation has a clarifying function, through dissertation, argumentation and discourse (Ödman 2001 p 74). To interpret is to uncover and assign meaning. The meaning is not predefined, but involves a subjective act, always from a certain aspect.

Interpretation should be based on knowledge and previous interpretive experience. We discover that that which is interpreted can be viewed from different angles. Aspect awareness is required in order to make our interpretation less prejudiced (ibid p 71).

In *Wahrheit und Methode* (1972), Gadamer argued that our attitude towards that which we interpret should be formed by the question: “Is it this or that?” (Gadamer 1972 p 344). Our relationship to the question must colour all investigation: “In order to ask, one must want to know, in other words, know that one does not know” (Ödman 2001 p 105). When we begin to interpret, we must first of all realize our lack of knowledge, and expect to be changed by the answers given by the material. This risk-taking is required in order to allow the material to ‘speak for itself’. We also need to discover the questions that the material asks of us. Questions can be unwieldy at first, but they give direction to the search, which later can change course as new aspects are uncovered. The vague notion of an initial context successively evolves, and the individual parts can be given an increasingly clear meaning. Through this process, the bigger picture emerges (Ödman 2001 p 106). It can be likened to solving a puzzle. We move from individual parts to the whole, and from the whole to individual parts. Aristototele argued that one of the most important purposes of interpretation was to convey a message that makes it possible to grasp a previously unknowable reality (ibid p 75).

At the same time, one must be careful not to slip into *subjectivism*, especially when one is emotionally involved in the question. It is easy to interpret the material based on what one wants it to show, thus ignoring aspects that might falsify the interpretation that seems to emerge. It is important to carefully observe the difference between preliminary interpretation and what is actually taking place (ibid p 63-64). The reality that forms my interpretation is my long and thorough experience as a singer, and not least the re-training of my voice.

Parts of my thesis are based on natural science. Researchers trained in the natural sciences study the singing voice in laboratory experiments, using tools like spectrum analysis, high-speed cameras, x-rays, pressure gauges, etc. Some of the proponents of this method are Miller, Sundberg and Titze. Natural science approaches the ideal of ‘good singing’ from that which can be proven in this

² Tolkning, förståelse, vetande – Hermeneutik i teori och praktik.

context, with the utmost respect for the fact that many secrets of the singing voice yet remain unexplained.

Many of these scientists, e.g. Sundberg, actively strive to create a concrete common language, where scientists, singers and singing teachers can meet³.

The critical method is to seek a rapprochement between historical and scientific views of good singing – that is, to extrapolate backwards in time our current understanding of the physiology, aerodynamics, and acoustics of singing as a means of reinterpreting historical vocal practices. Musicologist Carl Dahlhaus defined history as ‘memory made scientific’ [...] fellow musicologist Leo Treitler said, “understanding takes place in the fusion of the horizons of present and past” [...].

(Stark 1999 Preface)

For example, we know today that tone production is based on the vibration of the vocal cords. Some centuries ago this was far from obvious – or even suggested as a possible explanation. It was discovered as late as 1741 by Antoine Ferrein (1693-1769), and then started to replace a theory put forth in the 2nd century by Galen (130-200), physician to Roman emperors and gladiators (Duey 1951 p 14, 17). One interesting aspect of singing research then becomes that some of the ancient principles fit better with modern scientific knowledge than with the science of the time. This illustrates how far intuitive knowledge can take us.

The challenge to unite different aspects is not only philosophical, but also typical for the practising singer: the singing should be beautiful and expressive (subjective), but also concretely effective, in the sense that it must be heard clearly. In addition, the voice should not tire noticeably during performance, and must last for many decades.

³ Discussion with Johan Sundberg in connection with the course 'Function of the singing voice' (KTH DT 211 V, 2007). James Stark also expresses this in his keynote speech 2002 (see p 38). See also e.g. article on Sundberg <http://www.fotnoten.net/default.asp?ArticleID=221573&ArticleOutputTemplateID=88&ArticleStateID=2&CategoryID=3788&FreeText=kulning>

Literature and sources

The literature I have used the most is:

James Stark's (1938-) book *Bel Canto, A History of Vocal Pedagogy* (1999), which deals with the history of *bel canto*, and also puts much emphasis on clarifying the terminology and arguing for what unites the different schools, and finally discusses how *bel canto* can be used today.

Richard Miller's (1926-2009) book *National Schools of Singing* (2002), where he conducts a very thorough study of English, French, German and Italian schools of singing, their evolution and influence on the International School of Singing of today.

Juvas Marianne Liljas' (1956-) PhD thesis *What Might Become of These Children?*⁴ (2007), gives a good overview of the history of *bel canto* and the different schools of singing – not least the Swedish.

I have also interviewed my singing mentor Bengt Nordfors and kept a diary of my own work in learning a *bel canto* aria. I compare the empirical material with what these authors and Nordfors have to say, in order to describe how I approach the technique and apply it to my own singing.

⁴ Vad månne blifva av dessa barnen?

3 History of Bel canto

Late 16th and 17th century

Solo singing began to take form at the end of the 16th century, with virtuoso singers emerging from choirs, and the dominance of polyphonic singing was weakened. Gulio Caccini (1551-1618), himself a famous singer and composer, published in 1602 *Le nuove musiche* – a book of solo songs together with detailed instructions on how they should be performed. Caccini also described voice quality in a clearer way than had been done before. Previous descriptions had been vague and subjective, such as 'sweet', 'clear', 'lovely' or 'tasteful'. Caccini argued that one should sing with a 'full and natural voice' (*voce piena e naturale*), or chest voice avoiding falsetto (*le voci finte*). He felt that solo songs should be transposed so that the voice was kept within the comfortable range of chest voice, which he preferred to the falsetto, with its breathiness and inability to create strong contrast between loud and soft. The singer should not be 'constrained to accommodate himself to others'. Lodovico Zacconi (1555-1627), a singer and composer (*maestro di capella*) in Venice, remarked in his treatise *Prattica di musica* (1592) on different types of voice quality. He shared Caccini's preference for the chest voice. Zacconi differentiated between voices that were 'dull' and voices with 'stinging' and 'biting' quality, of which he preferred the latter. He related the different voice qualities to different registers. The lower register was called chest voice (*voce di petto*) and the higher register was called head voice (*voce di testa*) or falsetto (Stark 1999 p 34-35, 58-60).

Among all voices one must always choose... the chest voices, and particularly those which have the above-mentioned delightful biting quality which pierces a little but does not offend; and one must leave aside the dull voices and those which are simply head voices, because the dull ones cannot be heard among the others, and the head ones are overbearing.

(Zacconi 1592 translated by Stark 1999 p 35)

Caccini became influential not least through the *Florentine camerata*, a group consisting of some of the most celebrated singers, poets and theorists at the end of the 16th century. During this time what is now called *the Old Italian school of singing* was established (Stark 1999 p 157).

The term *bel canto* is sometimes used as reference to the *cantabile* style of Venetian and Roman operas and cantatas from the 1630s and 1640s (Haas 1929, Bukofzer 1947 referenced in Stark 1999 xix).

Opera came relatively late to Naples compared to Florence, Rome and Venice. The first opera performance in Naples was Cavalli's *Veremonda*, which premiered 1652. During the 18th century, Teatro San Carlo became the centre of Neapolitan opera, but works by composers such as Gluck and Mozart were also performed there, which was unusual for an Italian stage in those days. The term *Neapolitan school* usually refers to the style of opera which was taught at the Neapolitan conservatories in the second half of the 17th century, and which flourished in the 18th century. Alessandro Scarlatti (1660-1725) summed up the development in opera, oratorio and cantata. Francesco Durante (1684-1755) and Niccòlo Porpora (1686-1766) are considered among the finest representatives of the school. The Neapolitan style was perfected in Händel's (1685-1759) 'opera seria' in England, and in Mozart's Italian buffa operas near the end of the century. During the 19th century, Teatro San Carlo became one of the leading opera houses in Italy, and attracted composers such as Rossini and Donizetti (Åstrand 1977 p 692-693).

18th century

The Harvard Dictionary of Music (Apel 1969) equates *bel canto* with eighteenth-century opera in general and with Mozart in particular. The 1986 edition (Randel 1986 p 87) maintains that the *golden age of bel canto* lasted from the middle of the 16th century to the beginning of the 19th century (Stark 1999 p xix).

Foremost among singing teachers in the 18th century were perhaps the castrato Pierfrancesco Tosi (1647-1727) and Giambattista Mancini (1716-1800). They did not agree on the number of registers in the human voice, but both aimed at blending the registers so that they were united into one. They preferred the chest voice, which they regarded as more expressive, and possessing qualities such as sonority, strength and clarity. Their respective singing schools were highly influential in the vocal cultural peak that the era of the castrato represents. In singing, the castrati were educated in the same way as other singers, and differed mainly in terms of their greater physical possibilities combined with extreme vocal exercise. The result was a striking vocal flexibility due to extended lung capacity and masterly breath control (Liljas 2007 p 76; Duey 1951 p 113-115).

Niccòlo Porpora was a composer and prominent singing teacher who, by reviving and developing Giulio Caccini's singing pedagogy, became a master in the *bel canto* tradition. Farinelli and Caffarelli were among his students. A young Franz Joseph Haydn (1732-1809) took lessons in composition from Porpora in Vienna, in exchange for doing work as a servant and as accompanist during singing lessons (Wikipedia; Åstrand 1976 p 369). According to Schoen

Rene, Porpora was so impressed with Haydn's voice that he urged him to pursue a singing career (Rene 1941 p 93). It is well known that Wolfgang Amadeus Mozart (1756-1791) and Haydn were close friends and influenced each other artistically (Åstrand 1976 p 370).

Mozart and Haydn both carried on the old *bel canto* tradition (Rene 1941 p 89).

Wagner wrote "you always feel that the singer is cultured and refined when he or she can sing Mozart with understanding. An uncultured character could never express Mozart's highly idealistic compositions" (Rene 1941 p 93).

19th century

Two schools stood out during the 19th century, and flourished side by side: the Garcia School and the Lamperti School.

The founders of these schools were pioneers in the art of singing. Both schools have traditionally been thought to represent different vocal ideals, but most importantly different philosophies. According to many sources, Francesco Lamperti strived to preserve the old Italian vocal tradition. The Lamperti School has also been seen as a modern exponent of the Italian tradition in regard to the vague terminology (Liljas 2007 p 96). The younger Garcia (II) on the other hand, primarily wanted to reproduce the method of singing developed by his father, "by trying to reduce it to a more theoretical form and by attaching the results to the causes" (Garcia II quoted in Radomski 2005 p 8).

The Lamperti School

Francesco Lamperti (1813-1892) was the founder of the Lamperti School. He was the son of an Italian prima donna and enjoyed a long career as singing teacher, primarily at the Conservatory of Milan. He attracted students from all over the world and produced many first-class singers. He wrote many singing manuals, but unlike Garcia, Lamperti was content to leave the physiological aspects to others. His son, Giovanni Batista Lamperti (1830-1910) studied with his father, and acquired the art of teaching from him, without initially having desired the profession. He spent much time accompanying his father's students, and evolved into a master of singing. He originally wanted to become an actor, but eventually started teaching opera singers with great success. The Lamperti School was successful in Milan, Paris, Dresden and Berlin. Giovanni Battista Lamperti followed in his father's footsteps and produced many singing manuals, also without focusing on physiological aspects (Stark 1999 p 43; Liljas 2007 p 104-105). The knowledge was passed on from master to pupil. The Lamperti School is said to reflect the art as taught by the great masters of old. There is no *bel canto* system of teaching, according to G.B. Lamperti. The old Italian tradition was passed on as good advice from teacher to student. According to Francesco Lamperti, "the pupil, under careful supervision, will learn what is the true character and the capabilities of his own voice; he will know what music to

sing, how to render his singing elegant, and remedy defects of intonation. In this, in my idea, lies the great secret of the art of singing” (Francesco Lamperti quoted by Stark 1999 p 101).

F. Lamperti included in his manuals extracts from *Hygiene de la voix* (1876) by the French physiologist Dr. Louis Mandel. In this work, Mandel introduced a new term – *la lutte vocale* – in reference to the breath control used in singing (Stark 1999 p 99) (see Appoggio p 20). Regarding Lamperti’s pedagogy, there is testimony from the Swedish singing teacher Hugo Beyer. In the Summer of 1886, Beyer visited William Shakespeare, student of F. Lamperti, at the Royal College of Music in London. Beyer wrote that the exercises were few. The secret was rather in the way in which they were performed: “Rather short preparatory exercises were used, diatonic and chromatic, but with specific focus on performing them well. The occasional *solfeggio*, but used sparingly” (Liljas 2007 p 108-109, my transl).

To Francesco Lamperti, *appoggio* (see Appoggio p 20) had a broader meaning, beyond describing the balance between inspiratory and respiratory muscles. He also related it to vocal onset, glottal closure, the position of the larynx, the air flow, *legato*, *messa di voce* and even good intonation. His son, Giovanni Battista Lamperti continued the tradition and, like his father, referred to Mandel in promoting diaphragmatic breathing as the primary means of taking in breath. He put much emphasis on elevated subglottal breath pressure and *appoggio*, which he described as the steady air pressure on the vocal cords during tone production (Stark 1999 p 99-103). The other key component of the Lamperti School was *chiaroscuro*, a tone quality blending bright and dark colours. *Chiaroscuro* was coupled with the onset of the tone in the back of the mouth, the position of the larynx and the expansion of the pharynx (Liljas 2007 p 111).

Signe Hebbe (1827-1925) was a Swedish actress, opera singer and teacher. Both as actress and singer, she was regarded by many of her contemporaries as the heiress of Jenny Lind. Signe Hebbe’s voice had an unusually beautiful timbre and came “from the heart”, just like her acting (Lewenhaupt 1988 p 249). Hebbe was probably the one who brought Lamperti’s principles of singing to Sweden. She studied at the Paris Conservatory in the mid-1850s, but did not receive the kind of engagements that were expected to follow. She had no income to speak of. Her hopes of studying for Garcia were not realised. It wasn’t until nine years later, in the spring of 1869, that she was given the chance to improve her voice. During a guest performance in Geneva, she travelled to Milan and visited Francesco Lamperti at the Milan Conservatory. Hebbe’s somewhat mediocre voice then went through a metamorphosis. When she returned to the Royal Theatre in Stockholm 1870-71, the response from the critics gave a clear indication that her studies with Lamperti had been successful. They spoke of “the varying timbre”, “the fine and tasteful nuances of the phrasing”, “the precise coloratura” and of musical phrasing with glowing

accents “whose beauty are never disrupted by forcing of the voice” (Lewenhaupt 1988 p 64; c.f. Liljas 2007 p 147-148). Thus, Signe Hebbe had found a method particularly well suited to her voice. Hebbe’s teaching methods had much in common with Lamperti’s (Lewenhaupt 1988 p 59-65).

The Lamperti-trained Hebbe was fiercely critical of the teaching of Prof. Julius Günther⁵ at the Swedish Royal Conservatory. As drama teacher at the Royal Theatre, Hebbe received many of his students, and thought they sang so badly that it interfered with her own teaching. She lauded the Italian *bel canto* tradition and opposed the contemporary ideal of singing more loudly. She also rejected the anatomical studies that were gaining popularity, arguing that no one sings better because they know what a larynx looks like. Among the singing students in Stockholm, Hebbe became known as someone who could fix voices (Liljas 2007 p 148-149). Towards the end of her life, she was regarded as something of an oracle. She never received any awards, but several of her students were awarded *Litteris et artibus*⁶ (Lewenhaupt 1988 p 221-222). It would be interesting to follow the trail of possible Lamperti influences through Hebbe in our time. Calle Flygare, student of Anna Norrie (Hebbe student), founded the famous “Calle Flygare Music and Theatre School”⁷ 1940. Although Flygare died in 1972, the school remains successful. Kerstin Meyer, student of Ragnar Hyltén-Cavallius (Hebbe student), enjoyed a long opera career and then became headmaster of the Opera Academy in Stockholm 1984-1994. Among students of students, we find many of Sweden’s finest artists: Helga Görin, Hjärdís Schymberg, Birgit Nilsson and Elisabeth Söderström in opera; Gunn Wållgren, Ingemar Bergman and Jarl Kulle, just to mention a few within theatre and film (Lewenhaupt 1988 p 248).

The Garcia School

The Garcia School of singing is associated with Manuel Garcia II (1805-1906). It was founded by his father, Manuel del Pópulo Vicente Garcia (1775-1832), an exceptional opera singer and singing teacher in the old Italian tradition. He was also Rossini’s favourite tenor, as well as an accomplished composer with more than 50 works to his name. He instructed his children: Maria Malibran (1808-1836), Pauline Viardot (1821-1910) and Manuel Garcia II. At the age of 10, Garcia II was also sent to Naples for ‘informed lessons’ with Giovanni Ansani (1744-1826). Ansani is assumed to have been a student of the teacher and

⁵ Julius Günther (1818-1904), Professor of Singing at the Royal Music Conservatory.

⁶ Lat. *Science and Art*, a royal medal awarded for excellence in the arts. Among Hebbe students who have received the medal are Carolina Östberg (1871-1953), John Forsell (1868-1941), Hilda Borgström (1871-1953), Julia Håkansson (1853-1940).

⁷ Well-known acting school in Sweden. Among its more famous students are Harriet Andersson, famous from Ingemar Bergman films, and Lars Ekborg.

composer Niccolò Porpora (see 18th century, p 8), and Ansani himself was also a singer well grounded in the old Italian school of singing (Liljas 2007 p 97-104; Stark 1999 p 3-4). Garcia II also accompanied, from the piano, his father's lessons. He stopped singing at the age of 24, partly due to having sung too demanding roles too soon. He later worked in a military hospital, where he had the opportunity to study the larynx on people with neck injuries. This may have stimulated his interest in vocal anatomy. When his father died, he took his place as head of the school and teacher of his sisters Maria Malibran and Pauline Viardot, who both became famous mezzo sopranos under their married names (Stark 1999 p 3-4).

Garcia II eventually took an interest in research on the singing voice. His efforts to study the vocal cords during phonation (voice production) led him to construct a laryngoscope (1855) – a mirror on a shaft with which he could observe what happened in the larynx during singing (Liljas 2007 p 98; Stark 1999 p 5). *Coupe de la glotte*, 'firm glottal closure' was the basis of Garcia's method. "One should insist on this first lesson, which is the basis of the teaching" (Garcia 1847 p 1:26). No one before him had put so much emphasis on the beginning of the tone. *Coupe de la glotte* contributed to a bright and efficient tone quality (ibid p 14).

I was in the presence of the great Manuel Garcia!

Meekly I handed him my letter of introduction from his famous sister. Reading it, he invited me into his studio, a very large room with a glass door opening out on a lovely typically English flower garden. He seated himself at once at the piano, and turned to question me: "And how is my precious sister? She has already written something about you. And why are you coming here? You know, do you not, that you are a pupil of the real musical genius of our family?"

"Including you and Malibran?" I asked shyly.

"Yes," he answered solemnly, "and the equal of our father."

(Rene 1941 p 103)

Pauline Garcia Viardot was a prominent singing teacher in Paris and Baden Baden, in addition to being a famous singer. She also composed several volumes of song, but was reluctant to publish them (Rene 1941 p 134; Liljas 2007 p 102). Viardot became interested in teaching when she replaced her brother during a long period of illness (1842). After his recovery, she decided to continue helping young artists. She established herself in Baden Baden, home for some of the greatest artists, such as Brahms, Robert and Clara Schumann and Anton Rubinstein. Later, Kaiser Wilhelm I, Bismarck and royalties primarily from France and England journeyed there. Surrounded by an elite group of students, Viardot settled on an estate there. She built a theatre to use for her teaching six months of the year (Rene 1941 p 138). After having studied the piano with Liszt for a short while, Liszt wrote to her father, "Soon I will be the pupil and she the teacher." Saint-Saëns heard her play in a two-piano recital with Clara Schumann, and wrote that the critics were undecided as to which of the two deserved the highest praise (ibid p 123).

Viardot met Chopin at the house of French author George Sand (a pseudonym for Amandine Aurore Lucile Dupin), who had great influence on Chopin's career. Viardot and Chopin used to play four-handed piano together, and made Sand's house into a musical centre. Rossini, Heine and other prominent musicians used to come there and listen (ibid p 165).

"Go to Viardot", Wagner would say to his singers, "and learn how to sing Mozart. You will then be able, without harm to your voice, to sing my operas."

(Rene 1941 p 71)

Garcia's method spread to America through Anna Schoen Rene, student of Viardot for 18 years. In 1901 she received the blessing of the Garcia family, in the form of a certificate (Rene 1841 p 101, 107-109), to teach according to the Garcia method. She made a great pioneering feat, primarily in the Midwestern U.S.A., where she helped start the music department at the University of Minnesota. After that she engaged opera companies with great singers, musicians and conductors from Europe, reasoning that "if the students were exposed to the best, they would learn to separate the good from the bad" (ibid p 39, 40). From 1925 on, she worked as singing professor at Juilliard, together with Marcella Sembrich (1835-1935) (ibid p 186, 181).

Rivalry between the schools

It is commonly thought that the two schools represented different vocal teaching ideals. G.B. Lamperti, for example, criticized Manuel Garcia II directly and indirectly (Brown 1957 p 21, 67).

G.B. Lamperti claimed that when the young Jenny Lind lost her voice and came to Garcia for help, he was unable to help her, and she had to go home and "figure it out" by herself, and went on to become one of the greatest singers of her time. Lamperti professed his dislike for "voice doctors" who, by teaching tricks piecemeal, undermined the singer's own power and control that were bestowed on her by nature (G.B. Lamperti referenced in Brown 1957 p 21). It is safe to assume that he was referring, among others, to Garcia II.

However, regarding Jenny Lind's studies with Garcia II, the singer herself tells the story differently. Garcia told her to rest her voice for some weeks, and then return for further counseling. After a few months of study, she wrote home:

My voice has in this short time changed so significantly for the better that it borders on the incredible. In such a short time, you see! [...] I am delighted beyond words with Garcia's care of both me and my voice that I have developed a quite healthy desire for singing.

(Jenny Lind quoted by Franzén 1982 p 62)

One possible interpretation of Lamperti's criticism of Garcia is that it was motivated by rivalry between the schools. When I look at some of the female representatives of the schools, I find no signs of incompatible ideals or hostility. Marcella Sembrich (Lamperti student) and Anna Schoen Rene (Garcia-Viardot student) were lifelong friends and colleagues, and came to work side by side at the Juilliard School in New York. They enjoyed a profound friendship, mutual respect and fruitful cooperation.

Early 20th century

Towards the end of the 19th century there was a reaction mainly against the Garcia school and its *coupe de la glotte*. The pendulum which had moved voice pedagogy towards science now swung the other way. Henry Holbrook Curtis, throat doctor to opera singers at the Metropolitan Opera in New York, was one of the main detractors of the ‘Garcia method’. This resulted in “*The modern local school of singing*” and “*No effort school*”, which continued to flourish after the turn of the century. These schools rejected all forms of control of the voice organs, and argued that the throat and the vocal cords should be left alone. Blanche Marchesi made a fierce counter-attack against the detractors of the Garcia-Marchesi school. She called their method “*The nasal method*” (Liljas 2007 p 151-153). The debate over *coupe de la glotte* and other forms of vocal onset has raged on into our time (Stark 1999 p 20).

One clear trace of Italian *bel canto* singing in the United States in the early 20th century was the founding of the Juilliard Graduate School 1920, where the first prominent singing teacher was Marcella Sembrich, successful coloratura soprano and student of Francesco Lamperti. At the beginning of her career, Sembrich received a letter of recommendation from Verdi to go to Viardot for advice regarding her continued career. According to Verdi, there were no decent opera houses in Italy at the time, with the exception of Milan. Viardot was deeply impressed with Sembrich’s beautiful voice and technique, and took her under her wing (Rene, p 179-180). Marcella Sembrich and Anna Schoen Rene came to teach side by side at Juilliard Graduate School on Sembrich’s recommendation (ibid p 186).

Late 20th century – today

According to Richard Miller, in his book *National Schools of Singing* (2002), the historical Italian school of singing is nowadays best represented in North America. Miller claimed that the Italian school of singing is practically the most universally appealing of all national schools of singing (Miller 2002 p xv). However, he is critical of the current state of vocal pedagogy in Italy.

Indeed, my advice to the professional singer who wishes to be vocally acceptable in Rome, Paris, London, Vienna, Berlin, Tokyo, New York, Sydney, or Moscow is to search for the principles of historic international vocalism that so clearly characterized the art of singing in decades of the not-so-distant past. This is best accomplished not by flying to the Italian peninsula for vocal instruction but by continuing to study on the North American continent. It is here (apologies to many fine European colleagues) that internationalism in vocal pedagogy has made its firmest, but hopefully not its last, stand.

(Miller 2002 p xxix)

There are indications of a trend in voice science that is beginning to show that the Italian singing tradition is both very efficient and healthy. See Johan Sundberg's research into the singing formant in his book *The Science of the Singing Voice* (1986), James Stark's *Bel Canto* (1999) and Richard Miller's *National Schools of Singing* (2002).

In my research it is primarily Bengt Nordfors who represents today's, 20th and 21st century, *bel canto* technique, since the impulse and starting point of my research was my re-training under his guidance.

Bengt Nordfors (1958-) was trained as a lyrical baritone, but finally changed into a lyric-dramatic tenor when he began studying with the American tenor Berle Rosenberg⁸, who in his turn once studied with Carlo Bergonzi⁹.

Nordfors studied with Rosenberg for five years, three times a week during the first three years, then twice a week for the remaining two years.

⁸ Berle Rosenberg (1951-) born in New York, Italianate tenor. Made his debut in Europa 1986 as Rodolpho in *La Bohème*; studied six years with Carlo Bergonzi and fundamentally changed his technique.

⁹ Carlo Bergonzi (1924-) Italian opera tenor. Even though he performed and recorded many *bel canto* and veristic parts, he is primarily associated with Giuseppe Verdi's operas. Bergonzi was a *lirico-spinto* tenor and was particularly known for his beautiful diction, smooth legato, warm timbre and elegant phrasing (Wikipedia).

4 Interpretations of the term Bel Canto

Bel canto is an ambiguous term. It can refer to an époque, the castrato era, a virtuoso style of singing, or to certain composers and their styles of composition. My interpretation is that it is a singing technique with roots in the old Italian singing tradition. Certain principles such as *appoggio* and *chiaroscuro*, can be drawn upon in all styles of singing, but primarily within concert- and opera singing today. I will use the definition of *bel canto* given by Stark at the end of this chapter.

Many listeners today associate *bel canto* primarily with Rossini, Donizetti, Bellini and perhaps early Verdi. Erna Brand-Seltei (1972) extends the period to the threshold of the 20th century with Garcia II and his students.

The 17th and 18th centuries were characterized by several trends in the cultivation of the voice. During this époque the specific Italian singing style was shaped, which later came to be understood as *bel canto*, a singing ideal characterized by vocal control and an evolution towards exquisite art of ornamentation (Liljas 2007 p 10). The Italian music critic Rudolpho Celletti focuses in *A History of Bel Canto* (1991) on the very extravagant Italian opera aesthetic of the Florentine era up to G.F. Händel, and draws the *bel canto* line all the way to Rossini (1792-1868) as the last exponent of the style. Celletti excludes music from the Romantic period, and hardly discusses at all the existence of *bel canto* outside Italy. Viktor Fuchs discusses in *The Art of Singing and Voice Technique* (1963) a few misunderstandings around *bel canto* from a historical perspective. Fuchs argued that the real core of the art form disappeared with the castrati and that any attempt to recreate the extravagant singing style only reflected the external conditions, since the context in which the art form was cultivated was forever gone (Liljas 2007 p 84).

According to Richard Miller there is vocally no clear demarcation between Mozart and the so-called *bel canto* literature of the 19th century by Bellini, Rossini and Donizetti (Miller 2002 p xvi).

The question is not one of style and literature but of vocal technique, because vocal freedom is essential to all styles and literatures. One does not sing Bach and Puccini with the same degree of vibrancy or vocal coloration, but one does not need two different singing techniques to accomplish both literatures. The physiology and the acoustics of the vocal instrument are unalterable givens.

(Miller 2002 p xviii)

The term *bel canto* did not enter the common vocabulary until the late 19th century, when it arose from the sulphurous odour of pro- and anti-Wagner invective (Stark 1999 p xviii). It was primarily a reaction to the declamatory style of Wagner that made the Italians rally behind the term *bel canto* and it was that struggle that made the term famous (Duey 1951 p 7-12).

One of the most vocal critics of Wagner and his music was Francesco Lamperti. In his essay *On the decadence in the art of singing*, he argued that “modern music is altogether unfitted for the cultivation and preservation of the voice, and to its use we may in a great measure attribute the dearth there is of good singers” (F Lamperti 1916 p 27). Many with him saw this as the ruin of the Italian tradition of singing, among them critics like Eduard Hanslick and Henry Chorley (Stark 1999 p 221).

Enrico Caruso (1873-1921), one of the first great singers of the record era, was criticized by music critic Henderson for cultivating the Big Tone like other Germans and Italians and “following the downward path that leads to mere noise (Henderson referenced in Stark 1999 p 221).

G B Lamperti did not share his father’s negative view of the ‘decay of singing’ or the harmful effects that the music of Wagner and Verdi was said to have on the human voice. In *The Technics of Bel Canto* (1905) he focused on the necessity of developing a stable technique as the way to preserve good singing. Lamperti argued that by sticking to traditional voice training, the singer could adapt to any style. Lamperti also argued that singers should not take on any music without “possessing the necessary ability”. In other words, it was due to the uncultivated voice, not to the music of Wagner or Verdi, that singers harmed their voices, according to Lamperti (Stark 1999 p 222). Many singers, among them Lilli Lehmann who was known for singing Mozart or Wagner equally well, confirmed that singers need to use their voices well in order to sing Wagner (ibid p 223). Blanche Marchesi who also sang Wagner denies that it was Wagner’s music that ruined voices. Rather, she blamed the singers themselves for their vocal problems (ibid p 223).

When Verdi spoke at the Congress at Naples on the decadence of music, he said that it was absolutely necessary to return to the serious study of former times.

Wagner himself said “the voice should not be characterized by force, but by a good Italian cantabile style”. Here is Wagner sounding very much like the defenders of *bel canto*. 1887 Wagner invited Manuel Garcia II to train the singers for the first Bayreuth Festival (Stark 1999 p 222-224).

Wagner was a great admirer of Viardot. He called her “the greatest artist and musician of the century” (Rene 1941 p 68).

Viardot noticed some music under [Wagner’s] arm and asked him what it was. He handed her a score, saying, “This is my favourite composition, ‘Tristan und Isolde.’ I am eager for you to be the first to sing it; but to begin with, let me hear your opinion of it”. She took the score and seating herself at the piano on the stage, sang most of the first act, and Isolde’s ‘Liebestod’, in the last act, with such pathos and beauty of voice that Wagner, tears in his eyes, kissed her hands and begged her to be the first Isolde.

(Rene 1941 p 69)

According to Stark, musicologists, singing teachers and scientists appear to agree that the 17th and 18th centuries were characterized by an extraordinary use of the voice, which departed from simpler forms of vocalism and amateur singing (Liljas 2007 p 11). It appears clear that the term *bel canto* refers to a multitude of historical periods and styles (Stark 1999 p xix). James Stark’s own definition of *bel canto* is that it is “a concept that takes into account two separate but related matters. First, it is a highly refined method of using the singing voice in which the glottal source, the vocal tract, and the respiratory system interact in such a way as to create the qualities of *chiaroscuro*, *appoggio*, and register equalization [...] Second, *bel canto* refers to any style of music that employs this kind of singing in a tasteful and expressive way”. He goes on to say that “historically, composers and singers have created categories of recitative, song, and aria that took advantage of these techniques [...] As musical epochs have changed, the elements of *bel canto* have adapted to meet new musical demands, thereby ensuring the continuation of *bel canto* into our time” (Stark 1999 p 189). This is the definition that I subscribe to.

5 Two central concepts

Two constantly occurring concepts in my description of *bel canto* are *chiaroscuro* and *appoggio*. In order to make my essay easier to understand, I will explain these and some related concepts.

Appoggio

Appoggio is a term that sums up the muscle coordination on which the Italian system of breath management is based. Appoggiare means to lean against, and begins as a postural attitude (see Posture p 23) and embraces a total system of singing including both support and resonance factors (Miller 2002 p 41). Caccini also meant that the most important requirements of expressive singing were a good voice and good breath control, which when combined made it possible for the singer to produce all the devices of affected singing (Stark 1999 p 156-158). “[Caccini] advocated breath economy, advising singers to avoid falsetto and the wasting of breath [...] with the breath used only to demonstrate mastery of all the best affects necessary for this most noble manner of singing” (Stark 1999 p 95). Mancini also stressed breath economy. “The most necessary thing for success, is the art of knowing how to conserve the breath and manage it” (Mancini 1967 p 62 quoted by Stark 1999 p 95).

Diligent practice will produce the advantage that the breath will hold out longer than usual, when the inhaled air is not let out at once nor too liberally, but sparingly, little by little, being careful to hold it back and save it. This is the art by which one singer can surpass another and which the Italian artists know to perfection, while other peoples pay little or no attention to it.

(Mattheson 1739 quoted by Duey 1951 p 79)

It was probably Francesco Lamperti who was responsible for establishing the concept of *appoggio* in the pedagogical literature (Stark 1999 p 101). “By singing *appoggiata*, is meant that all notes, from the lowest to the highest, are produced by a column of air over which the singer has perfect command, by holding back the breath, and not permitting more air than is absolutely necessary for the formation of the note to escape from the lungs” (F Lamperti 1916 p 22). This could be achieved through a special form of onset, where “the sound is to be attacked with a slight back-stroke of the glottis, almost as if one continues to take in breath”. The same breath control applied to *legato* singing (F Lamperti 1884, p 1321; 1916 p 22).

G B Lamperti expressed it this way; “When one sings well, one has the sensation of drinking” (Stark 1999 p 101). Lamperti credited *appoggio* with many of the attributes of good singing. He concluded: “It is by singing with the voice well *appoggiata*, that the pupil, under careful supervision, will learn what is the true character and the capabilities of his own voice; he will know what music to sing, how to render his singing elegant, and remedy defects of intonation. “In this, in my idea, lies the great secret of the art of singing” (F Lamperti 1916 p 14 quoted by Stark 1999 p 104).

In *Hygiène de la voix* (1876) Dr. Louis Mandel, a Paris physiologist, whose work was absorbed and cited by the Lampertis in their manuals, offered a new term for breath control – the term *lutte vocale* – to describe the ‘vocal struggle’ between the inspiratory and expiratory muscles (Stark 1999 p 99). Garcia II devoted only half a page to breathing in his *Traité* (1841). Stark’s interpretation of this is that the focus of Garcia’s method was not how to take in air, but ‘singing itself’. From Jenny Lind’s letters, it is evident that she considered breathing to be the most important in Garcia’s teaching: “...that he was so particular about the breathing – because skillful handling of the breath is everything” (Jenny Lind quoted by Franzén 1982 p 64). Garcia advocated silent breathing, by combining a raised chest with a lowered diaphragm (Stark 1999 p 97). “The quiet breath is a mark of identification for the singer who uses the *appoggio* technique of the Italian school” (Miller 2002 p 43).

Garcia’s teaching was carried into the 20th century by Hermann Klein (1856-1934), an English writer and student of Garcia who helped him write *Hints of Singing* (1884). He maintained that silent breathing brought the larynx to a favourably low position for singing, whereas noisy breathing indicated an elevated larynx. He advocated a high chest, abdominal breathing and ‘compressed breath’ (Klein 1923 p 21-4 referenced by Stark 1999 p 99).

Johan Sundberg has studied a phenomenon called *tracheal pull*, which simply means that when the diaphragm is lowered, gravity forces the lungs to follow, and with their weight pull the larynx downward (Sundberg 1988). Among other things, Sundberg notes that the tracheal pull produces an abductory (opening) force on the vocal cords, which seems to have several consequences: increased activity in the muscles surrounding the vocal cords; a reduced risk of *pressed phonation*; and an increase of the air flow through the glottis. The latter may help to explain Garcia’s observation about silent breathing (see above).

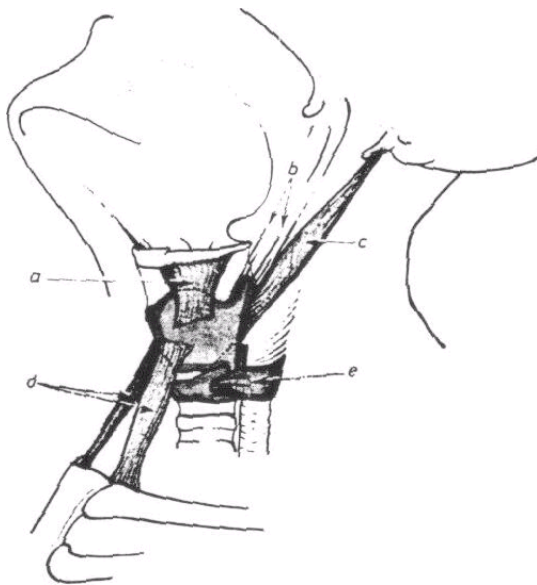


Fig 1. “Suspensory mechanism—elastic scaffolding, (a) *M. thyreo-hyoideus*: elevator, (b) muscles of the palate: elevator, (c) *M. stylo-pharyngeus*: höjare, (‘raises and widens the pharynx’—Quiring), (d) *M. sterno-thyroideus*: depressor, (e) *M. crico-pharyngeus*: depressor” (Shore 1990-1993 p 49).

The laryngologist Dr van Lawrence argues in *Vocal Health and Science* (1991) that the muscles that anchor the larynx to the collar bone (e.g. the sterno-thyroid muscles, see fig 1 (d)) seem to play a greater role in the production of high notes than previously believed. “These muscles seem to be necessary for stabilizing the main firm structures of the larynx, so that the smaller and more delicate intrinsic laryngeal muscles can function optimally” (Titze 1991 p 49). Shore references Sundberg’s finding that the *tracheal pull* also activates the sterno-thyroid muscles, and also notes that this stabilizing effect works best when the singer tilts her head back slightly as if singing to the balcony¹⁰, thus creating more room for the depressor muscles to create a downward pull on the larynx (Shore 1993 p 49-59). Another advantage of a stable low larynx is that the resonance chamber above the larynx (‘the vocal tract’) maintains a more stable shape, and thus contributes to more even resonance characteristics (ibid p 26).

Stark argues that the term *appoggio* has two applications. The first refers to the muscular antagonism between the inspiratory and expiratory breathing muscles during singing. The second refers to the role of the larynx in ‘holding back’, or ‘damming’ the breath by means of glottal resistance, and by the intentional lowering of the larynx against the upward-bearing pressure of the breath. This principle, *appoggio*, evolved slowly and wasn’t fully formed until the 19th century (Stark 1999 p 93).

¹⁰ To ‘sing to the balcony’ is common advice to singers, but usually on the grounds that the sound “projects” better.

L'impostazione della voce is the Italian term for the placing of the voice. *L'impostazione della voce* is inseparably tied to vowel formation and *appoggio*. The term *appoggio* includes the concept of breath control, but also refers to resonance sensations in the chest, in the head, or in both simultaneously. *Imposto* means 'placement' (Miller 2002 p 78). In the Italian school of singing, focus of the tone (placement) and control of breath are regarded as *one action*. "The desire to feel the 'touch' of the point of tone, becomes the objective guide to the breath" according to Giovanni Battista Lamperti (ibid p 79).

Appoggio according to Nordfors

Appoggio is, to the extent that I use the term, the readiness before, during and after phonation, that comes from the contraction of the diaphragm, and the effort to maintain that contraction.

(Interview with Nordfors)

Artistic application

The artistic application of *appoggio* is difficult to describe, since it affects everything. The most notable effect is a sustained legato and sustained phrasing, which seem even more sustained through the use of silent and very quick inhalation. Since *appoggio* also clearly affects tone quality and the intensity of the expression, the artistic consequences of *appoggio* are immense.

Posture

Miller argued that posture is fundamental for the execution of *appoggio*. Proper posture is achieved by raising your arms above your head and then lowering them along the sides of your body; at the same time, the shoulders should be relaxed, and the chest must neither collapse nor rise. "This noble posture is perhaps the most characteristic trait of the Italian-trained singer" (Miller 2002 p 41). The term 'noble posture' is often used to describe the desired posture for *bel canto* singing.

"Do not become rigid! But never relax". So spake Lamperti. "Because of co-ordinate action, which intrigues the whole personality, muscular effort and will-power seem in abeyance. This gives rise to a feeling of ease so insidious that a singer begins to rely on relaxation of mind and muscle - a quicksand that brings disaster".

(G B Lamperti quoted by Brown 1957 p 116)

If 'good singing' is always a reaction, the ability to react is the first thing the singer must learn. This primarily requires good posture – to be in a state of constant readiness. According to Thomas Hemsley (1927-), a significant proportion of the exercises given to singing students is in fact an attempt to compensate for bad postural habits. These tricks often result in tension, which in its turn is compensated with new tricks, and so on ad infinitum (Hemsley 1998 p 27).

Tension is the result of lack of balance or poise. The cure for tension is not simply relaxation, but the recovery of poise. Misguided attempts to relax while singing (a very energetic activity) are probably, in the end, responsible for many more vocal problems, more unhealthy tension, than any other source.

(Hemsley 1998 p 78)

Posture according to Nordfors

Proper posture does not lend itself to theoretical description, but is a dynamic, and not least a deeply pragmatic, function. Often, and especially in a more lyric-dramatic context, a less 'noble', and more 'boxer like' posture can be more useful.

(Interview with Nordfors)

Here, Nordfors expresses a similar attitude towards posture as does Hemsley:

Watch an athletics race on your television screen, and observe how the very best runners move. Their legs and arms are moving quite freely, and their heads and bodies appear to be quite still, moving forward as if on wheels. Singers can learn much from watching top-class athletes in action.

(Hemsley 1998 p 37)

In practice, Nordfors works continuously with posture, correcting it as needed. A special detail that he pays special attention to is that the singer does not depress the chin, often unconsciously in order to try to lower the larynx. One trick he sometimes uses to correct the problem is to put the music stand on a chair, thereby forcing the student to look up while singing.

Artistic application

Good posture is not something that you just assume when getting ready to sing. It must become fully integrated – a habit.

Chiaroscuro

This vibrant resonance is an essential quality of the Italian School; the complete sonority of the voice, at whatever dynamic level, is characteristic of the best in Italian singing. Vitality of tone remains constant, even in pianissimo singing, in both male and female voices.

(Miller 2002 p 81; Liljas 2007 p 112)

The term *Chiaroscuro* simply means light-dark. One of the most prominent and characteristic traits of classical singing, is the voice quality, with its special expressive power. *Chiaroscuro* is such a distinct voice quality that even a casual listener associates it with opera singing just by hearing a single note. Caccini refers to this quality as ‘the noble manner of singing’, which he meant involved singing with a full and natural voice. He preferred the chest voice to the head voice. Later authors have described this quality as *chiaroscuro*, register equalization, *appoggio* and vibrato (Stark 1999 p 163).

Chiaroscuro as an ideal was not fully formed from the start, but has evolved over a long period of time. Attempts to describe voice quality with words have naturally ended up vague and subjective (ibid p 34-35). During the 18th and 19th centuries, the characterization of good voice quality took a great leap forward with the concept *chiaroscuro*, or ‘light-dark’ tone (ibid p 33).

Chiaro is used to describe the brilliant light quality, and *oscuro* the simultaneously dark and round quality of the tone. The word is borrowed from painting, where the contrast between light and dark was often striking and dramatic (see e.g. Goya, Rembrandt, Caravaggio, Rubens). The tone should thus be brilliant and dark at the same time, in balance (ibid p 42-43). Mancini used the term *chiaroscuro* already 1774 in his influential *Pensieri e riflessioni pratiche sopra il canto figurato*, where he gave instruction on how to achieve this quality through singing slow scales. “This exercise will make [the singer] master of coloring at will any passage with that true expression which forms the cantilena

colored with *chiaroscuro*, so necessary in every style of singing” (Mancini quoted in Stark 1999 p 33).

Stark has studied at depth what sort of ideal Garcia may have had in terms of voice quality. Garcia wrote that clear and dark timbre could borrow from each other, resulting in an endless number of vocal colours. He noted that a low larynx affected all vowels, making them darker, but the vowels needed to be modified in the same proportions. He also claimed that the purest tone is the one that has both *éclat* (‘brilliance’) and *rondeur* (‘roundness’). This voice quality combined the brilliance resulting from firm glottal closure and the roundness resulting from a lowered larynx and widened pharynx (Garcia 1847 p 1:16; 1984 p 37, 46). While Garcia did not use the term *chiaroscuro* to describe this voice quality, Stark means that his vocal ideal is consistent with definitions of *chiaroscuro* found, among others, in manuals by Mancini and G B Lamperti (Stark 1999 p 39, 40).

Garcia described it well when he said that the timbre (the colour, the richness of resonances in the voice) and breathing create a form of unarticulated language, composed by tears, exclamations, cries, sighs, etc., which one might call the language of the soul (Stark 1999 p 163). “The tone which [the pupil] should seek to adopt as preferable from the standpoint of instrumental beauty is that which is round, vibrant, and mellow (*moelleux*); that is the important result which the teacher and student should seek together” (Garcia 1948 p 37 quoted in Stark 1999 p 168).

Miller meant that characteristic of balanced resonance is that which gives the professional voice a perfect timbre throughout the vocal range. In the historic international school, this quality is known as *chiaroscuro* tone, and is consistently displayed by first-class singers trained in classical voice techniques (Miller 2000 p 70). “The singer has to ensure a relatively low position if he is to solidify the *chiaroscuro* phenomenon” (Miller 2008 p 102).

In the Italian school artificially depressing the larynx is completely avoided. Richard Miller meant that primarily the German school has come to be characterized by a distinct lowering of the larynx, independently of the breathing apparatus. He argued that this interferes with the natural function of the larynx, and claimed that the silent breathing of the Italian school, a characteristic trait of *appoggio*, naturally gives a relatively low and stable larynx (Miller 2002 p 83-91).

How low is the low larynx? It all depends. Learn to use the breath properly, form the vowel properly and adjust the vowel properly according to the tenets of Appoggio and your larynx will remain relatively low throughout the well managed breath cycle. Let the voice scientists measure it. Let the singers just sing!

(Shore 1991)

With regard to tone production, both Francesco and Giovanni Battista Lamperti advocated starting with a dark tone associated with a widened pharynx, and then gradually brightening the tone until the quality is *chiaroscuro* (Stark 1999 p 45; Liljas 2007 p 112). *Chiaroscuro* also remained the ideal to Giovanni Battista Lamperti; “Although you may acquire a wide range of voice, you cannot modulate the sounds until the resonance of your tone becomes round and rich, *chiaroscuro* ... The ‘dark-light’ tone should always be present” (Brown 1957 p 38-39 quoted in Stark 1999 p 33).

The Singer’s formant

Nordfors often stresses during lessons that the brilliance in the voice is not produced the way you think. Traditionally, ‘forward placement’ has been stressed as a means to lift the resonance ‘into the mask’, thereby creating brilliance. Pedagogical devices to ‘secure the resonance in the mask’ often rely on opening up the passage to the nasal cavity, or ‘placing the voice’ towards the sinuses. This is likely a result of misunderstanding regarding how sound is propagated and amplified (Miller 2000 p 94).

Here, we first need to introduce a scientific term, *formant*, or *formant frequency*, meaning the harmonics¹¹ that are best amplified in the vocal apparatus, in other words, a resonance in the vocal tract (Sundberg 1986 p 21, 103). The formants that are emphasized in singing research are usually numbered: the first (mainly affected by the jaw aperture) and second formants (mostly the shape of the tongue) shape the vowel. The third formant (the cavity behind the teeth in the lower jaw) and higher formant frequencies (vocal tract and larynx height) affect the timbre of the voice.

Johan Sundberg showed that if the larynx is lowered, thereby widening the pharynx to at least six times the size of the larynx opening, the larynx is

¹¹ Lots of harmonics – overtones – are created in the voice source, some are amplified and some dampened (Sundberg 1986 p 30-31).

acoustically de-coupled from the pharynx and becomes its own resonator – an ‘extra’ formant is created around 2-3 kHz¹².

Fig 5.18 The effect on the spectrum contour of an /a:/ when a higher formant is adjusted to lie close to the third formant: a resonance effect raises the spectrum level by ca 20 dB at this formant (from Sundberg, 1978a) [my transl]

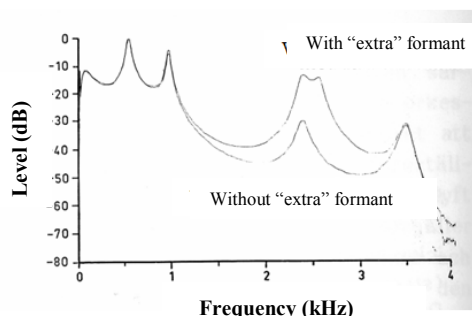


Fig 2. Illustration of the Singer’s formant which can give an amplification of around 20 dB in male singers (Sundberg 1986 p 126).

Sundberg called this phenomenon “the singer’s formant”, and argued that the main purpose of the singing formant is for the singer to be heard over the orchestra. It is most prominent in male voices and in some mezzo sopranos, while the same dramatic effect cannot be heard in soprano voices. According to Sundberg, sopranos have other ways of making themselves heard (Sundberg 1986 p 133-135), and would, according to this theory, not need the extra formant.

For the purposes of our discussion, we observe that by deepening the voice, you acquire a bigger and darker quality, and in the same action, amplify the brilliance of the voice. You increase both the depth and the brilliance of the voice at the same time.

I can personally add that in my voice teaching, using an acoustic spectrometer during teaching, I have seen Sundberg’s conclusions confirmed consistently. It is also interesting to me, as a singer trained originally in Bel Canto, that the ‘chiaroscuro’ test of Bel Canto may be interpreted as matching Sundberg’s conclusions: the lowering of the larynx lowers the vowel formants – giving the ‘oscuro’ – while at the same time giving us the spectrum peak from the singer’s formant—the ‘chiaro’.

(Shore 1994)

Miller argued that sopranos should strive to balance the formants, with low and high formants in balance with the fundamental, and that this is what

¹² This is not really correct, since it is not possible to create new formants in a resonator, but Sundberg uses this phrase (within quotes), since it describes the phenomenon rather well.

characterizes *chiaroscuro*. He advocates a lowered larynx as a fundamental component (Miller 2000 p 70). To what extent the 1:6 ratio plays a part for sopranos is still subject to debate (Shore 1990-1993).

Titze meant that the quality that can be described as ‘sob’ and ‘cry’ are associated with a widening of the pharynx by lowering the larynx. This widening is thought to lower the impedance (meaning less force is needed) and contribute to more efficient air flow. This quality seems to be related to the soft, floating quality of sopranos at high pitches (Titze 2002).

Spectrum analysis

Spectrum analysis is a valuable tool in voice science in order to illustrate the propagation and power relationship between resonance frequencies. It can be seen as a ‘shadow image’ of the voice.

Modern spectral analysis verifies the validity of the age-old pedagogic assumption that beautiful singing should result in timbre characterized by components that are “light and dark”, that have “height and depth”, “brilliance and warmth”, “ping and velvet”, and “ring and richness”.

(Miller 2000 p 72)

Spectrum diagrams can be drawn in different ways. One common variant is shown below, where the resonance frequencies appear as white on a black background (figures 3 and 4) or black on a white background (figures 5 and 6). Here we can see that it is not always so easy to identify the formants described earlier (see p 27). In fact, they can easily hide in a blur of resonance frequencies, and also change frequencies depending on what we do with our jaw, tongue, palate, etc.

Voice scientists learn to read spectrum diagrams much like physicians read X-ray images. For best accuracy in the analysis, the diagrams should depict sounds recorded under the same circumstances, and with the same content (the same passage) – ideally, they should also come from the same singer! Especially the latter creates problems when trying to compare different singing techniques: since so much of the muscle work while singing is guided by reflexes, it is very difficult to master several different techniques at a high level¹³.

In this case we are dealing with rather rough comparisons, so it shouldn’t matter that much if the diagrams have been produced under very different

¹³ While one can imagine that one singer can master different music styles, it is however very hard to imagine one who can sing e.g. opera as skillfully using different techniques.

circumstances.

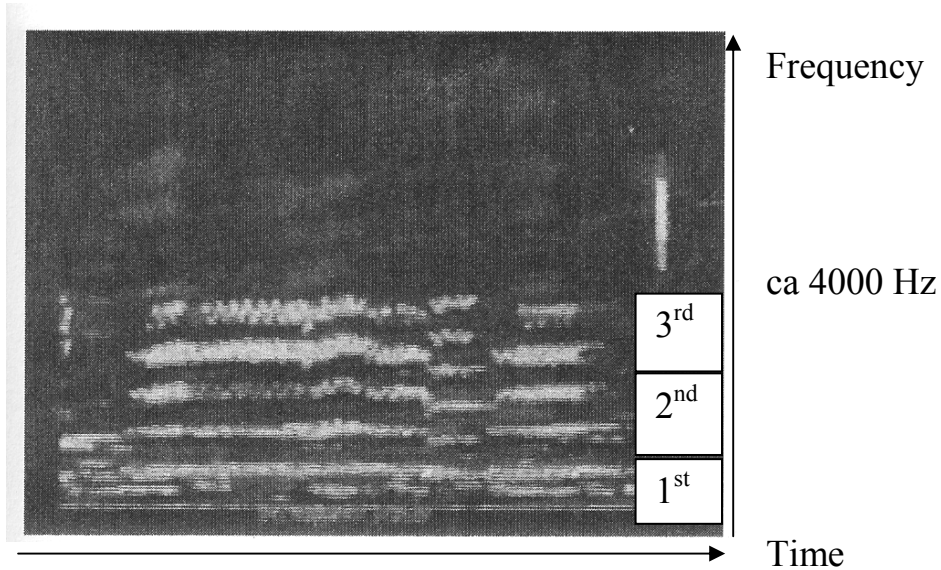


Fig 3: Frequency analysis of Renata Tebaldi's¹⁴ voice (1922-2004). The first formant is seen at the bottom part of the diagram, the second formant, which together with the first formant shapes the vowels, in the middle, and the third formant lies on top, in the area between 3000 and 4000 Hz. Wavy lines indicate vibrato (Miller 2002 p 73).

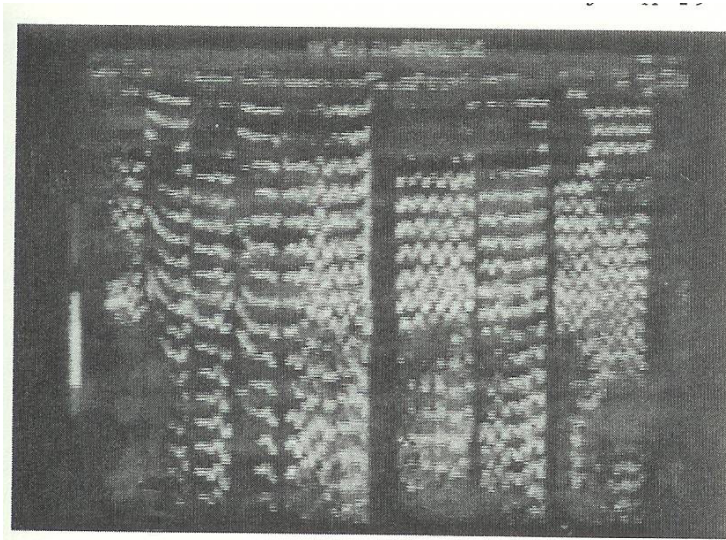


Fig 4: Frequency analysis of Ethel Merman's voice (1908-1984, American musical singer). The resonance frequencies are spread across an area up to 10,000 Hz (Miller 2002 p 74).

¹⁴ Renata Tebaldi was active at the same time as Maria Callas. Both had ardent admirers who passionately declared their idol as being the greatest *bel canto* singer of her time (Wikipedia).

In the figures above, it is clear that a classical opera voice and a musical singer's voice give very different imprints. The images thus represent different vocal ideals.

Using the analysis program Praat¹⁵, I generated a frequency diagram from part of Elvira's aria "Qui la voce sua soave" (see attachment), and compared it with the same part sung by Maria Callas (1923-1977), see below.

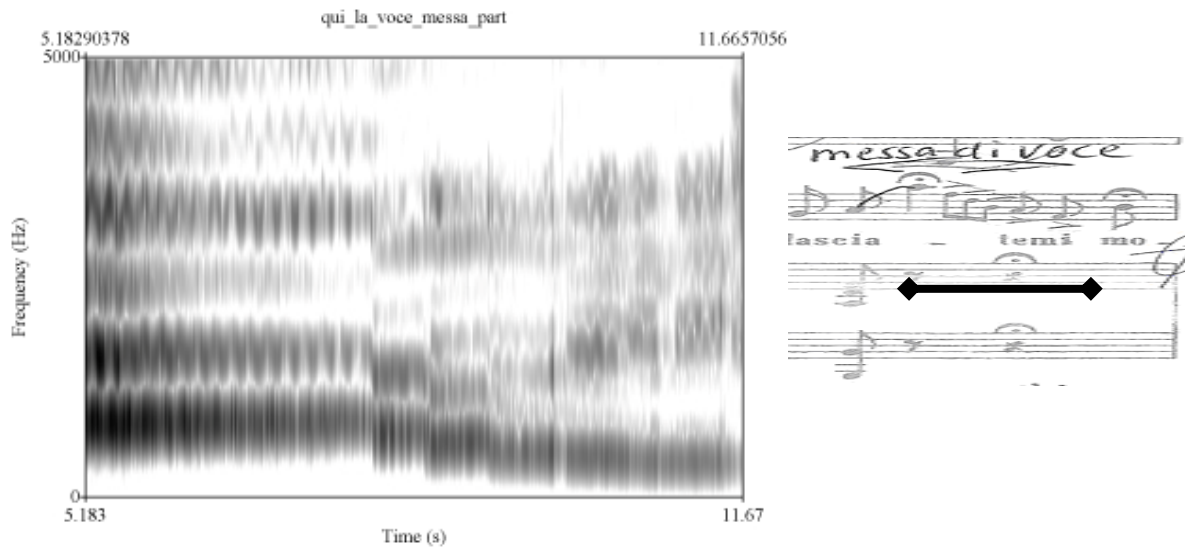


Fig 5. Frequency analysis of Katarina Pilotti's voice, *messa di voce* passage from Elvira's aria (attached CD, track 3).

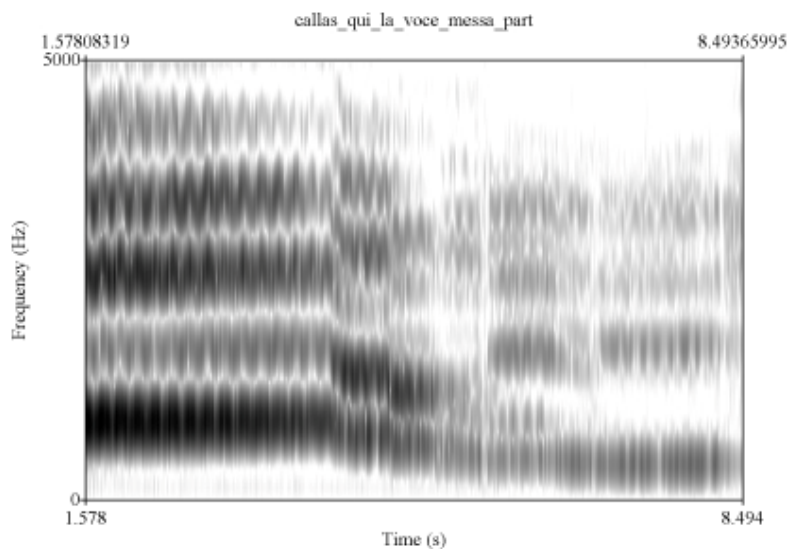


Fig 6. Frequency analysis of Maria Callas' voice, same passage as in Fig 5 (EMI 1953).

I interpret these figures as a slight indication that Callas and I have similar vocal ideals, which in part is explained by the fact that she is my greatest role model.

¹⁵ <http://www.fon.hum.uva.nl/praat/>

While studying Elvira's aria, I listened to recordings of it on Youtube¹⁶ with Marcella Sembrich (recorded 1907) and Maria Callas. They differ in several interesting ways. Sembrich used ornamentation to a degree that today feels excessive and distracts from the expression in the aria, whereas Callas had a more naturalistic, simple style, which is much closer to my own ideal.

A listener in the 19th century may well have experienced the two completely differently! The voice qualities of the two singers are very similar, however, and they appear to sing with fundamentally the same technique. I would very much like to put forward Maria Callas' 1953 recording of the opera *I Puritani* (EMI, remastered 1997) as a nearly perfect display of modern *bel canto*.

Nasality

It is possible to produce acoustic phenomena similar to Sundberg's singer's formant through different means. One common approach is to introduce nasal resonance.

Sundberg himself has shown experimentally that it is possible with the help of nasal resonance to produce something similar to a singer's formant, by significantly dampening other formant frequencies, at the same time as the formant frequencies around 2-3 kHz are slightly amplified (Sundberg 2004).

"The mechanisms are completely different, however. In one case (nasality) we lower the low frequency prominence of the oral and pharyngeal resonance by creating an acoustical leakage through the nose; and in the other (vocal ring) we raise the high frequency prominence of the oral and pharyngeal resonance by creating an additional resonator *in the larynx*.

Clearly then, the effects of nasality on the vowel are *not* the same as vocal ring."

Titze continues: "Returning to nasality... it is known that nasalized vowels have an enhanced widened first formant region, but the effect of the higher partials varies a lot from person to person. Perceptually, there seems to be a 'honk' and a 'twang'. The honk often heard in speech of the deaf and those having cleft palates, is related to the low portion of the frequency spectrum. This is not the quality the singer is trying to achieve."

(Titze 1991 p 243-245, quoted by Shore 1990-1993)

¹⁶ Youtube is currently one of the biggest sources on the Internet for listening to recordings..

Garcia had this to say about nasality: “The nose is a waste-basket of the brain but not considered for resonance” (Rene 1941 p 110). Nordfors notes that “the presence of nasality is often an indication of vocal problems” (interview with Nordfors).

Chiaroscuro according to Nordfors

Nordfors’ pedagogy is based on the voice quality *chiaroscuro*.

It is a concept that I mostly associate with 17th century painting, which is also called light-dark technique – a technique where for example the white can appear ‘whiter than white’ in a seemingly unexplainable way – the value of the colour is determined in relation to the darkness in the same painting that frames the light source. Translated to singing technique, the high, brilliant frequencies assume their proper value in relation to the lower, darker frequencies. A tone is not correctly placed until it has all the harmonic ingredients mixed in the right proportions.

It is important to stress that each expression has its own laws, and its own mix of light and dark colours. The main technical difficulty is not to produce the higher frequencies, but the lower. The prerequisite for the lower frequencies is ‘an open throat’, a lower position of the larynx, which in its turn requires appoggio, in the sense that I use it, namely a contracted diaphragm.

(Interview with Nordfors)

Artistic application

In practice, the *chiaroscuro* quality has far-reaching consequences for both tone and expression. I feel that I can give everything without worrying about hoarseness or injury. As the voice becomes ‘bigger’, the pressure to sing loudly is reduced, and the voice generally feels more flexible and responsive to my shifts in emotion. This makes singing itself immensely more rewarding. At the same time, the technique demands my full concentration and intense muscular work which makes me more focused and communicates in itself a sense of awareness and intensity to the audience.

Vocal onset

Great importance is put on vocal onset, since it largely determines the quality of the following tone. An important reason for this is that it is only during the preparations for vocal onset that one can consciously control the muscles surrounding the larynx. After onset, reflex-guided processes (auditory feedback system) take over, greatly reducing the ability to control the quality of the tone (Stark 1999 p 30).

There are different forms of vocal onset. There are mainly three distinguishable sounds, or ‘attacks’: the hard attack is associated with a light cough, and is the result of audible pressure against the closed glottis. The second sound is produced with an aspired (h), so-called soft attack. The third attack, firm onset, attempts to achieve an exact balance between pressure and muscle tone, resulting neither in aspired (h) or a glottal strike (Miller 2002 p 2-3).

Hugo Beyer (see Lamperti p 9) reported on the teaching of William Shakespeare:

His work is characterized by the utmost attention to detail and to the voice production of the student. He works with soft intonation and is tirelessly stubborn regarding the onset of the tone. It should be “loose, nice and soft” but still have a firm attack. “Great emphasis is placed on each exercise in order to achieve a correct cooperation between larynx and pharynx”.

(Beyer 1887 quoted by Liljas 2007 p 108)

The son, Giovanni Battista Lamperti, also argued that the onset was pivotal.

The beginning of a tone (mis-called “attack”) can be practised only when vibration starts focused in the center of the skull (sphenoidal sinus) without effort or muscular impulse. It is a “free-ing” and not a hitting process. The tone seems to come out of the head instead of the throat. The “dark-light” tone demands *this central start*.

(W E Brown 1937/1957 p 67)

Vocal onset according to Nordfors

The vocal onset should be based on appoggio, i.e. a deeply contracted diaphragm, with all counter-productive tension and rigidity eliminated. This is not something that you can learn from books. The knowledge is a baton that passes from master to student. It is an acquired skill.

(Interview with Nordfors)

Nordfors' opinion that you cannot learn this from books is shared by many others.

[...] singing was not really something that could be learned from books.

(Hemsley 1998 Foreword)

The truth of the matter is that to learn to sing from a book alone is an utter impossibility.

(Hines 1982/1984 p 13 Preface)

...and again, it has been my life-long conviction that singing *cannot* be learned from a book. Scientific explanations can only be grasped by singers already educated in the principles of their art.

(Rene 1941 p 190)

Lamperti to William Earl Brown:

The mantle of my father, Francesco Lamperti, fell upon me. It now descends to you, for you have grasped the truth of the Old Italian School of Singing, which descended from the Golden Age of Song, by word of mouth. It is not a method. There is no 'bel canto' system of teaching. Mental, physical and emotional reactions are the fundamentals of this old school.

(Lamperti quoted by Brown 1957 p 127)

Artistic application

I work with firm onset primarily to secure chiaroscuro quality in my voice, and appoggio. Firm onset means to me backward-stroking onset of tone far in the back of my throat. (see Appoggio p 20). It is possible to vary the onset depending on musical style and mood, but in practice, most singers stick to the type of onset that is central to the school of singing in which they have been trained (Miller 2002 p 6).

Legato and Portamento

Legato (ital.) = ‘bound’; means that tones follow in succession without breaks (Brodin 1975 p 126). Legato is likened by F Lamperti to “smooth and unbroken passage from one tone to another. The breathing must not be interrupted between the tones, but flow evenly as if a single tone were sung” (F Lamperti 1884 p 21, quoted in Stark 1999 p 165). Lamperti also meant that *legato* is the quality that dominates, not just in regard to flexibility, but in ‘good singing’ in general. The singer should not practice the other qualities until he has mastered the art of singing *legato* (F Lamperti referenced in Stark 1999 p 116-167).

Portamento (ital.) = act. ‘carrying’ (of the voice; sometimes also *portando la voce*), gliding from note to another (Brodin 1975 p 181). Perhaps the historically best description of this concept came from Mancini (1774), who regarded it as a necessity in all styles of singing. By *portamento* he meant tying the tone in the passage from one note to another, in perfect proportion and unity, as much in descent as in ascent. He also noted that portamento “cannot be learned by any scholar who has not already united the two registers which are in everyone separated” (Mancini 1967 p 40-41 quoted in Stark 1999 p 165). While it can happen between any two notes, Garcia and Lamperti meant that *portamento* should be used “sparingly for expressive purposes” (Stark 1999 p 165).

In *bel canto*, *portamento* plays such an important role that it has become completely associated with the style. However, it is not only a decoration, but a means to maintain the position (‘open throat’) throughout the vocal range. This gives an unbroken feeling of legato and a homogenous timbre (interview with Nordfors).



Music example 1: Demonstration of *portamento*

In music example 1 above, I have clarified with legato notation the places where portamento is used. You tie a tone to another without pausing for breath and while maintaining the position and openness of the original tone. This is demonstrated on the attached CD, track 2.

Messa di Voce

Messa di voce (ital.) = act. “placing of the voice” is a singing term meaning a gradual *crescendo* and *diminuendo* on a long extended tone. *Messa di voce* is one of the most adored vocal devices, and is still practiced as a vocal exercise (Brodin 1975 p 139). *Messa di voce* is sometimes regarded as the ultimate test of good vocal technique, since it requires fine coordination of larynx, breathing and reonance factors (Stark 1999 p 245). Regarding the execution of *messa di voce*, Francesco Lamperti advocated even timbre without register changes. Manuel Garcia, on the other hand, advocated changing of both timbre and register (Stark 1999 p 116, 245-46).



Music example 2: Demonstration of *messa di voce*.

In music example 2, 3rd bar, portamento is illustrated from low A_b to high A_b. Then, starting from *mezza voce*, a crescendo is made while maintaining position and timbre. The air flow is increased to full voice, after which a *diminuendo* is made back to *mezza voce*, still maintaining timbre and position. See Stark 1999

p 102 for Lamperti's definition of *messa di voce*, which is also demonstrated on the attached CD, track 3.

Mezza voce

Mezza voce (ital). = half voice. *Mezza voce* is an important ingredient in *bel canto* singing, but how it is done technically is seldom described in the vocal literature. Stark describes it as the pharynx becoming more passive, thus reducing the resonances. The larynx is however lowered somewhat compared to full voice (Stark 1999 p 246-253). Nordfors teaches *mezza voce* as maintaining a low larynx, but 'removing the voice'. This seems to be consistent with Stark's description. Nordfors also stresses that it takes at least as much work to sing quietly as it does to sing loudly. Because of this, it is important to first learn to sing with sufficiently low position and in full voice, before one can learn to 'remove the voice' while maintaining a low position and *appoggio*.

6 Investigation

The voice is the singer; it should never be thought of as in any way separate from the singer. [...]

Any form of training which forgets this essential difference, which tries to train the voice as if it were an instrument, an object to be played upon, must result in a form of singing which, divorced from its emotional origins, cannot have the same direct emotional appeal.

(Hemsley 1998 p 20)

How has my voice changed?

It has proven surprisingly difficult to account for my previous voice training. I have not been aware of a clearly communicated pedagogy. The purpose of different exercises was seldom explained to me, and I could not discern any particular plan. In my research, I have observed that I recognized many of the concepts, but had never had their origin explained to me, much less that they were integral parts of a complete system. One reason could of course be that I have studied with many different teachers, but I do not seem to be alone in feeling this way. In her PhD thesis *Becoming and being an opera singer: Health, personality, and skills* (2005), Maria Sandgren interviewed students in higher opera education about how they acquired their skills.

This research raises questions regarding the students' experience of learning. They described their learning process as vague and quite incidental. However, the process of skill acquisition as learning for artistic development so far has not attracted researchers, possibly due to a conservative notion about talent. This notion of emphasising the influence of talent instead of learning on skill acquisition might also be prevalent in the artistic context and among educators. In this way, this notion contributes indirectly to a student's difficulty to grasp the learning process.

(Sandgren 2005 p 62)

The pedagogy offered by Bengt Nordfors was in contrast very clear and concrete. He invested much energy into explaining underlying principles, in

what order things must be learned and, not least, how much work would be required over the course of several years. It was difficult for me to accept that even I, with such extensive vocal training, would have to undertake five years of basic training in order to grasp this technique. Looking back, I can see that he was right.

Ironically, Nordfors claims that he just sits down at the piano and reacts to what he hears. He bases his teaching on where the student is at any given moment. The pedagogical clarity may stem from his solid grounding in the technique and his intuition for what the end result should be, as well as his recognizing the indications of whether the student is headed in the right or wrong direction.

It is useless, worse than useless, for a young singer to hope to achieve this physical poise and feeling of strength in the body's centre by instruction from someone who has never had the personal experience of being themselves well grounded. As in so many aspects of singing, the difference between the real thing and a good imitation are subtle, but absolutely fundamental.

(Hemsley 1998 p 31)

I experience my voice as much freer, with a natural vibrato that changes with my expression, just as the colour of the tone changes depending on the emotion or mood that I express.

As the position of the voice has changed, my voice has become bigger and more resonant, with a more stable range both at the top and the bottom. My overall range is roughly the same as before, I may have gained a tone both upwards and downwards. My range is from A₃ to E_b6. I have always had a good range, if perhaps not as stable and resonant as now. My voice type is still the same.

I am better at singing piano while maintaining timbre and position, and I nowadays prefer to sing more slowly. The speed in my coloratura remains, but I find that I sing coloratura passages with more expression today.

My relationship to my voice has changed. Before my re-training, I mainly used singing exercises to warm up the voice and work to make my voice faster and louder. I sang scales slowly then with increasing speed and length up and down in the register. I was not particularly focused while singing scales, and was not focused after having sung them.

Now I seek the right position and quality of tone throughout the range, by practising scales slowly and with much focus, a single tone or 3-5 tones ascending and descending. I maintain full concentration throughout the exercises and feel focused and aware afterwards.

I have had to let go of the notion that I can control the way I ought to sound, and instead trust the technique. That my voice should sound beautiful in my own ears can no longer be my focus. Instead I must concentrate on position and expression.

In this too, I feel that I find some support in Sandgren's thesis.

The singers described the performance on stage more as an achievement in displaying their singing technique than any other expressive modes.

(Sandgren 2005 p 76)

It has been a great relief to me not to be dominated by thoughts about what the audience will think.

A special challenge as an established artist was the jobs I already had and the new offers coming in. I had to change my technique gradually, since any differences must always be perceived as an improvement. The audience needed to always find it beautiful and rewarding.

How did I practice before?

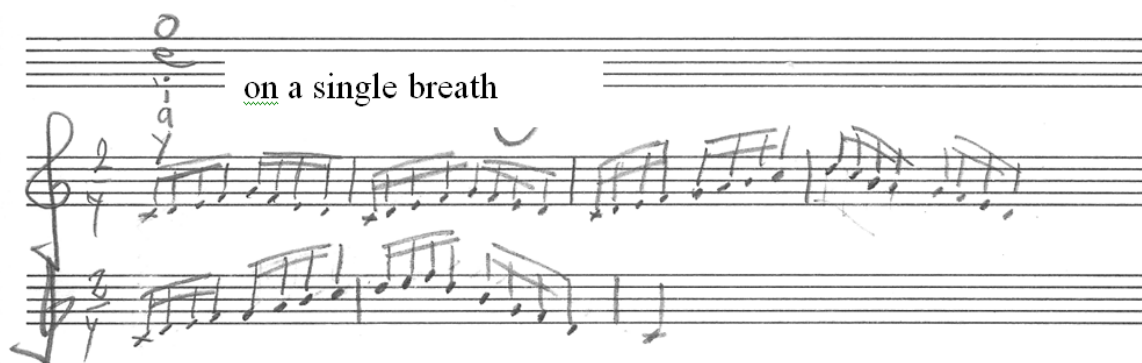
Both my singing exercises and performances were focused on singing beautifully. All notes should be beautiful. I never had any clear sensation of working with my body while singing.

I used to begin with some speaking exercises, e.g. 'hej', 'haj', 'hoj' and 'minne', 'manne', 'månne', and also sounding 't', 'p', 'k' och 's', 'f', 'tj' (as in 'shut') in order to feel the support.

Singing scales, I would start off softly with some slow scales in order to warm up the voice. Then I would go on to fast and long scales to work up the speed in my voice and the endurance of my breath support. Throughout the scales, I always tried to keep all notes beautiful.



Music example 3: Fast scale on different vowels, legato and staccato.



Music example 4: Fast and long scale

How do I practice today?

Nordfors argues that you first have to learn the start of a tone (onset) and the position of the *chiaroscuro* tone, using slow exercises with full concentration. It takes time and patience to master these exercises. They are simple, but not easy to perform, and fully adequate for laying a foundation. I have worked these exercises for more than four years now, and they demand focus on the right things in the right order. Complete awareness is a requirement. Performing these exercises becomes a form of yoga.

To me these have become the basic drills that I then apply to my repertoire. Songs that I have learned before my re-training must be re-learned with the new position.

It has been difficult to accept that singing is very physically demanding. After having been told for 20 years' time that singing should be easy and relaxed, it's taken a long time to recondition my muscles and dare to work so hard with my body. I thought that I would become hoarse and injure my vocal cords. The opposite happened.

In order to reach a sufficiently low position, much emphasis is put, especially in the beginning, on getting the student to use expressions that we normally do not associate with singing. Nordfors says that the singer should be "a beast with a thin layer of veneer on top". The beauty we find in a voice is the wild, artless and true expression – 'the primitive cry'. It is there when someone cries in despair as their child is drowning in deep water, when you shout a warning to a friend stepping out into the street, who is unaware of the car approaching at full speed. A more positive example is when you hear football fans singing-shouting their chants (see music example 5).

The next step is exercises on one or a few notes in order to establish the right position throughout the range. The exercises are simple and sung on 1-, 3- or 5-note scales.

Exercise A

This exercise serves to illustrate the difference between vowel and position.

Change the position without changing the vowel, e.g. sing the vowel [i] starting with a high larynx and narrow pharynx, moving to low larynx and widened pharynx.



Fig 8. Bengt Nordfors demonstrates deepening of the vowel [i] (attached. CD, track 5). Left picture: high larynx; right picture: low larynx.

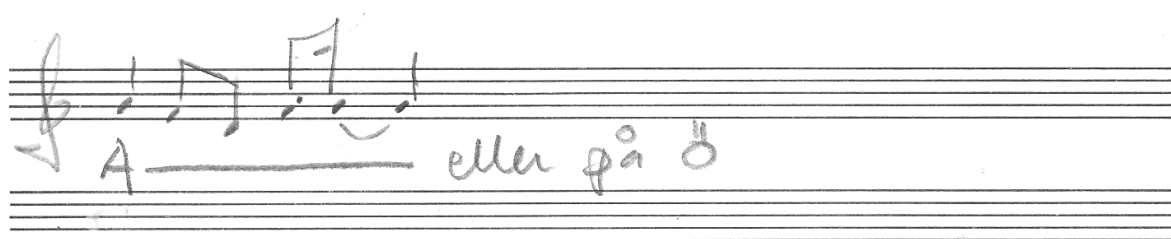
Exercise B

In order to sustain *appoggio* (se Appoggio sid 20), practice with ‘vibrating lips’¹⁷ on 3-tone or 5-tone scales, and sometimes whole songs.

Common to all exercises is the need to eliminate tension in the tongue and jaw, and to find a sufficiently low position. *Legato* is important in all exercises.

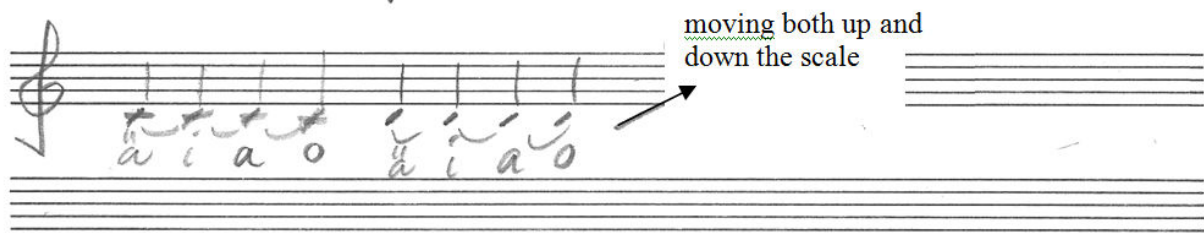
I start by finding a good posture (see Posture p 23).

Then I try to find a sufficiently low position e.g. by shouting ‘Nej!’ (Swedish for “No!”) with despair, or using ‘football chants’ (see music example 5 below).



Music example 5: Football chant, sounds like shout-singing. I think most are familiar with this phenomenon.

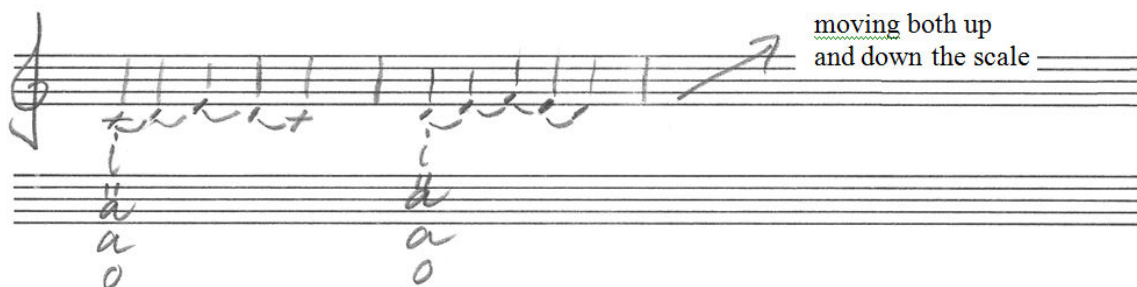
¹⁷ Somewhat similar to what trumpet players refer to as “lip buzz”, but more resonant and with less air flow. The objective is to maintain tightly pursed lips and get them to vibrate sonorously.



Music example 6: Singing one note while changing vowels.

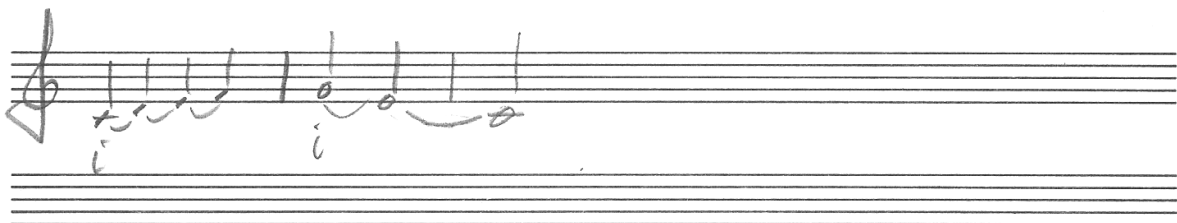
This exercise focuses on maintaining the position (lowered larynx, widened pharynx) regardless of vowel. Sing the same note while changing vowels, 'ä', 'i', 'a', 'ä', 'o'.

I practise singing one vowel on 3-tone scales. Slow, focused exercises. Always *legato*. (Music example 7).



Music example 7: Simple 3-tone scale, single vowel.

Then slow scales first on [i] (the easiest vowel to start with, at least for sopranos) focusing on obtaining a sufficiently low position.



Music example 8: 5-tone scale, single vowel.

A slow scale on 5 notes, again to establish a low position and sufficient depth of tone.

Health aspect

Initially I mentioned that suffered from hoarseness and tracheitis, and subsequent periods of complete silence for days on end, in the beginning of my career. A less dramatic problem is a common cold. In this regard, I now feel much less vulnerable. Probable reasons for this are that I have eliminated nasality, widened the vocal tract and have better breath support, *appoggio*. In practise, this has meant that I have been able to perform recitals, where I would previously have had to cancel. I have even made some of my best performances while suffering from colds, possibly because I have then been forced to work harder than usual – and then probably approaching the intensity level that I should always have.

Sandgren's thesis also covers the health aspect.

Twice as many professional singers than non-singers were diagnosed with vocal disorders during the last 12 months. The most frequent diagnosed condition is laryngitis followed by oedema/swelling and voice problems of no known medical reason. Almost a third of the professional singers were unable to perform due to 'voice problems' during the previous year.

(Sandgren 2005 p 43)

Voice disorders can be diagnosed from a functional perspective. Functional disorders occur due to inappropriate use of the voice. Misuse/overuse of the speaking voice and inappropriate technique are reported as the main causative factors among adult singers [...]

From a clinician's view, excessive muscle tension in the tongue, neck and larynx are the most common errors [that manifest themselves] due to poor singing technique [...] Inadequate abdominal support and the use of excessive volume are two other complications. [...] vocal impairment among professional singers is usually caused by infrequent singing lessons and extreme schedule demands.

Another factor is 'oversinging'; i.e., the singer has suddenly increased his or her daily singing practice from 1-2 hours to several hours per day due to an upcoming performance within a fortnight [...]

(Sandgren 2005 p 44)

Several of the health problems mentioned above, such as inadequate support, tension in tongue, neck and throat, could be described as lack of *appoggio*.

Sufficient intensity is related to adequate muscle work, and I, who have not been used to working hard while singing, do not have to worry about singing with too much intensity. No matter how hard I try, it is never too much. It is not about raw strength, but rather about engaging the right muscles in the body in order to relieve pressure on the delicate muscles in the throat. The intensity is the ‘nerve’ in the voice which largely makes the tone vibrant, alive, and interesting.

I prefer to say that I sing with *chiaroscuro*, and with vocal efficiency, not with pressed voice. Incidentally, my larynx is healthy, and I have never had vocal polyps, nodules, contact ulcers, or any other vocal pathology. While all of this is anecdotal, it may at least cause us to look more closely at the matter of glottal closure and voice quality.

(Stark 2002)

The following anecdote taken from an article, where the opera singer Joseph Shore (1948-) interviews his colleague and mentor Jerome Hines (1921-2003), suggests that many singing teachers today are afraid to push their students and advocate powerful techniques.

Shore: Jerry do you think that we in the universities should hold up the professional singer’s voice as a model for our young students?

Hines: Oh, absolutely. I’ll give you an example. I went to a major university to do a series of master classes. They had a recital the first thing when I got there. The worst singer on the program was a tenor. He was just a disaster. But he had a couple of notes that really got my attention. I heard buried in there another Mario Del Monaco. I took him aside and told him to come for a voice lesson within the next day or two. [cont...]

He came in with “Nessun dorma,” and “Ch’ella mi creda.” I started working with him. I said, “Don’t be afraid of it. Sing with some real guts,” and I started showing how to do it, how to correct the high voice. Within an hour he was just knocking the socks off of it. So I spoke to the chairman of the department and said, “Come to this guy’s next lesson. I want to get your opinion.” So she did, and he just sang up a storm. At the end of the lesson she said to me,

“I would never have guessed that he had that voice in him, and if I had suspected it, I would have been afraid to have let him sing that way for fear he would have hurt his voice and I would have lost my job.”

Then she said, “You know, I think I have a confession to make. I think that we voice teachers in academia are destroying a whole generation of singers. We are afraid to let them sound like opera singers for fear that they might hurt their voices and we might lose our jobs.”

And that was her confession to me.

(Shore 1995)

Singing and research

Duey argues that before the 19th century, all attempts to describe the physiology of the singing voice were based on such erroneous and incomplete theories that they were useless as a basis for singing education. Because of this, singing teachers were forced to rely on their own experience (Duey 1951 p 18).

An unusually entertaining example of erroneous theories is presented below. One wonders how a singing teacher would develop a pedagogy based on these principles:

Voice is the sound formed by striking the teeth with the tongue as a plectrum, by striking the two lips like cymbals, by the hollow of the throat and the lungs which aid in the formation, and which, like a pair of bellows, take in and send out air.

(Adam de Fulda ca 1490, quoted by Duey 1951 p 32)

We can see how musicians in earlier centuries would regard science as less than useful for ‘good singing’. There are also indications that scientists on the other hand didn’t always hold musicians in any higher regard:

Said Aristotle: “Professional musicians we speak of as vulgar people, and indeed we think it not manly to perform music except when drunk or for fun.”

(Aristoteles quoted by Duey 1951 p 26)

In the mid-18th century and into the 19th century discoveries were made that would form a basis for vocal science. Antoine Ferrein, professor of anatomy in Paris, was able to demonstrate 1741 that it is the vibration of the vocal cords that produces sound (ibid p 17). Manuel Garcia II was the first who systematically differentiated between the effects of the *voice source* and of the *resonance tract* (Stark 1999 p 36), something that is now fundamental to voice science of today. Garcia can in many ways be regarded as the father of modern voice science (ibid p xxii).

Technological innovations in the 20th century, such as X-ray imagery, fibre optics, etc. have radically improved the ability to conduct detailed studies of singers in action. Even though we now know much more about the anatomy of the voice, it doesn’t seem to have helped us become better singers.

Do we understand the science of singing better than we did 50 years ago? Indeed we do. Has it really helped any of us be better singers or teachers? An honest answer would have to be “no.” The science of singing has supplied us with a useful vocabulary with which we can better communicate with the other professionals involved in singing these days, the M.D.s, the speech pathologists and voice scientists. A common scientific language has helped us to communicate with each other, and voice science has provided us with a good understanding of the voice and how it functions. But it hasn’t really helped us be better voice teachers, has it?

(Voice Professor Stephen Austin quoted by Holding 2007)

What will it take for science to reach a level where it can really explain the mysteries behind ‘good singing’? James Stark offered his views on this in a Keynote speech at the First International Conference on Physiology and Acoustics in Singing, Groningen, the Netherlands 2002:

Part of my task as a Keynote speaker was to suggest ways in which voice science might advance. In my view, there are two principal things that we should strive for.

First, we should encourage world-class singers to act as subjects in our experiments. To compare amateur singers to so-called trained singers in experimental protocols is not particularly helpful, since the word “trained” can mean so many things.

[...] the reality of fine singing is that it is full of colours, nuances, intensity levels, the use of legato, portamento, and low pitch onset, the use of schwa, and all the other artifices of classical singing. Voice science should move toward analyzing the voice in the context of the music that makes such extraordinary demands on the voice. What we need is real singers singing real music, and we must develop better laryngoscopy, and new, less invasive instrumentation that will enable us to objectively analyze singing without scaring off our subjects.

(Stark 2002)

According to Stark, science needs better methods, but also better singers to study. For obvious reasons, most scientific studies are conducted on voice students and professional singers of mediocre quality, while most world-class singers are very rarely available. This is certainly due to the fact that they are extremely busy, but possibly also that they are reluctant to risk having technical flaws ‘exposed’ in the middle of their careers. It may be because there is still a wide gap between the two worlds. As a singer, I have not understood until very recently that I might have something to contribute to voice science.

It is made abundantly clear in the current voice pedagogy literature that science has much to offer; what is rarely expressed at this juncture in the history of voice pedagogy is that singing artists have their own unique and valuable knowledge to offer as well. It is open to debate whether communication is stifled more by fear of scientific knowledge (which many artists feel unqualified to master), or by the conviction that a singer’s knowledge will be met with derision by the scientific community if expressed in nonscientific terms. Whatever the reasons may be for these perceptions, the scientific community is perhaps more receptive than the pedagogic and artistic communities might think.

(Helding 2007)

Stark’s closing words summarize well my own hope:

The singing voice is a thing of wonder, and it has only given up its secrets reluctantly over the centuries. Between us all, singers, teachers, voice scientists, laryngologists, musicologists, and all lovers of good singing, we have come a long way, but of course we still have a long way to go. Let us work together to enjoy the adventure!

(Stark 2002)

7 Discussion

Throughout my re-training, I have clearly experienced that a full and free expression is facilitated by concrete technique. The technical principles I have now acquired help me to increased concentration and awareness, and to great satisfaction. I have previously felt devoid of happiness in my attempts to express something through a voice that did not respond to the emotions I tried to convey.

I recognize many of the principles of the *bel canto* tradition in the way in which I sing today. It is easy to believe that it is mainly the singer's charisma that makes a star, and that when a deep and rich expression is conveyed, it is mainly due to the singer's personality. It is easy to overlook the many years of devoted practice behind their success. Conversely, singers who are not able to convey powerful emotions are often described as boring. Very seldom does one hear the suggestion that lack of expression may largely be a result of poor technique.

What I find most appealing about the technical principles I have learned is that they are few and simple.

However, they demand that you give it your very best. It is a physically demanding activity, requiring full concentration and presence of mind, which gives a wonderful liberation. Here, perhaps, the term 'no effort' gets its proper meaning – with all counter-productive tension and rigidity eliminated, and with full focus on expression.

This leads me to the 'floral language' of singing teachers. To 'sing with your eyes', establishing 'the inner smile', feeling a yawning sensation, 'drinking the tone', 'imagining that you are smelling a flower', etc.

The floral language is necessary, since many of the muscles involved in singing cannot be controlled directly, but only indirectly through associations. We need both concrete technique (mechanics) and floral language, communicated by a teacher who has experienced 'good singing' first hand. The baton is passed on from master to student.

My beloved father-in-law¹⁸ has many times had to comment on the current trend that everyone wants to be their own coach. He usually says that this is a tried-and-true method that even has a name: *Trial and error*. The problem is that once you have figured out which path you should have taken, your career may well be over. This triggers the desire to help others. You can only hope then, that they do not want to be their own coach, just as you did.

¹⁸ Erik Wiger (1941-) Swedish National Athletics coach 1970-1978, once on the national team in Steeplechase; for many years responsible for the education of coaches in the Stockholm region; sports historian and writer.

Increasingly, as this thesis has evolved, I have come to realise the vital importance of history and tradition for the creative process. Take for example the folk music tradition, which builds on the oral tradition passed on from person to person, all the way into our time. I have understood that our scientific tradition is very much based on tradition and history. For a successful meeting between historic tradition, practising singers and singing teachers, a common language is required. Such a meeting might well liberate all parties, and form a foundation for something completely new.

One of the great finds, for my own part, was the marvellous women Pauline Garcia Viardot, Anna Schoen Rene and Signe Hebbe. They went through a metamorphosis through hard work, and created, through their amazing deeds, a heritage that echoes still.

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