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By

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**Trends of Vocal Warm-ups and Vocal Health
From the Perspective of Singing and Medical Professionals**

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Trends of Vocal Warm-ups and Vocal Health
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Abstract

The purpose of this treatise is to investigate the efficacy of vocal warm-ups/vocalises and their role in teaching vocal technique and health for the solo singer. In addition, it will provide a brief history of vocalises and methods of the “Bel Canto” era.

Current literature addresses warm-ups for choral ensembles and choral singers. It does not adequately address solo/individual warm-ups and their impact on vocal technique, health and performances.

Laryngologists and voice professionals were interviewed to better understand the role of vocalises in the study of voice and professional performance. These interviews were conducted in person, by telephone and via electronic mail correspondence. Voice teachers and singers were surveyed on their current vocal warm-up practices both in the voice studio and in performance. Surveys are to be administered in three ways: 1) hard copy surveys delivered at the National Association of Teachers of Singing National Conference 2008; 2) selected nationally known teachers and singers received via ground mail a copy of the survey; 3) an online survey. This study was directed to obtain answers

to the following questions: 1) Is there a standard methodology for vocal warm-ups?; 2) If so, how has this methodology evolved over time?; 3) What is the current use of vocal warm-ups and vocalises by voice instructors and professional voice users?; 4) How does the use of vocal warm-ups and vocalises influence the effectiveness of vocal performance?; 5) Does the use of vocal warm-ups or vocalises contribute to the health of the singer, thus resulting in an excellent vocal performance?; 6) Does practicing vocal warm-ups or vocalises have a positive effect on overall vocal health?

This study aims to broaden the current understanding of vocalises and their impact on the teaching and performing of classical voice.

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CHAPTER 1

INTRODUCTION

“Too much practice and beauty of voice are incompatible,
but art is dependent upon much practice.”¹ --Tosi

STATEMENT OF THE PROBLEM

Current literature addresses warm-ups for choral ensembles and choral singers. What is not addressed adequately in choral and voice literature is the impact of vocalizes and warm-ups on solo vocal technique, health and performance efficacy. The use of vocalizes and warm-ups in the voice studio remains largely undocumented and spotty. Despite the rich history of vocalizes throughout the western classical tradition beginning in the Baroque era, broad studio usage is not well-documented or informed. During the development of singing, voice training was limited to the aural and oral tradition, passed down from teacher to student. Only in recent history has vocal science and technology become a specific area of scientific research. The recent rapid advancement in vocal science and technology immediately impacts improvements in vocal health and performance strategy. However, despite numerous scientific studies, there remains a huge disparity between vocal sciences, vocal techniques, and vocalises of the aural and oral tradition. This disparity may well be due to the resistance of traditional approaches against the process of integrating more modern innovations.

PURPOSE

This study aims to provide a detailed understanding of the history of vocalizes/warm-ups. The study produces an analysis of a broad survey of current singers and teachers and presents the recommendations of medical and scientific experts.

OVERVIEW OF METHODS

Ninety-seven voice teachers and eighty-seven singers were surveyed on their current vocal warm-up practices, both in the voice studio and in performance. Otolaryngologists, Dr. Richard Stasney and Dr. Robert T. Sataloff and voice professionals, Dr. Richard Miller, Dr. Ingo Titze, Dr. John Nix, Dr. Jana Holzmeier, Dr. Cindy Dewey, Dr. Karen Peeler, and Professor Darlene Wiley were all interviewed for their views on the role of vocalises, vocal health and professional performance. These interviews were conducted in person, by telephone and via electronic mail. Surveys were administered in three ways: 1) hard copy surveys delivered at the National Association of Teachers of Singing (NATS) National Conference, summer 2008; 2) hard copy surveys ground mailed to selected nationally known teachers and singers; 3) an online survey administered through SurveyMonkey.com and maintained online for five months.

Pertinent questions asked were: 1) Is there a standard methodology for vocal warm-ups?; 2) If so, how has this methodology evolved over time?; 3) What is the current use of vocal warm-ups and vocalises by voice instructors and professional voice users?; 4) How does the use of vocal warm-ups and vocalises influence the effectiveness of vocal performance?; 5) Does the use of vocal warm-ups or vocalises contribute to the health of the singer, thus resulting in a high level of vocal performance?; and 6) Does practicing vocal warm-ups or vocalises have a positive effect on overall vocal health? This study endeavors to expand the existing concepts of warm-up exercises and vocalises and their impact on the world of singing.

The historical approach to vocal training has followed an intuitive apprenticeship model passed down through centuries by an aural and oral tradition. Vocal instructors have uniformly guarded their methodology as proprietary which was passed down by this oral tradition. This approach has produced some great singers; however, this model of teaching has prevented a thorough understanding of the factors that influence and optimize vocal health. Specifically, the vocal field lacks research-based knowledge about proper vocal singing techniques. The resultant gaps in the historical, pedagogical, technological, and medical literature negatively impact the quality of research, innovation, and instruction which puts professional voice users' vocal health and performance at risk.

This research aims to broaden the current knowledge base for otolaryngologists, teachers of singing, vocologists, and vocal scientists, and to benefit the solo vocalists' performance and health. The purpose of this treatise is to investigate the efficacy of the vocalises and vocal warm-ups that emerged from the *Bel Canto* tradition and their role in teaching vocal technique, in addition to their impact on singers' vocal health. This chapter defines *Bel Canto* and differentiates between vocalises of the *Bel Canto* era, and related, but more modern vocal warm-up exercises. At the conclusion of the main body of the treatise, the following resources are provided: (1) An appendix providing a short bibliographic listing of Italian Methods and other supporting evidence; (2) A glossary of scientific terminology, common vocal terminology, and Italian terms; (3) A bibliography with works cited; (4) A list, organized by topical category of resources for further research.

Terminology

The following terms will be defined; *Bel Canto*, vocalizes, vocal warm-ups and History of *Bel Canto* Vocalise Methodology.

Bel Canto

The term *Bel Canto* is used in many different ways, ranging from a style of singing to a vocal method of days gone by. There is great ambiguity concerning the exact meaning of the term. This research will discuss *Bel Canto* in three ways: first, as a distinctive style of singing; second, as a set of exercises called vocalises or method used to perfect the style; and third, more broadly, as a tradition that reportedly originated in the Baroque era, although most scholars now agree that the term was not officially coined until the middle of the eighteenth century. For the purposes of this research, the focus will be on the Italian *Bel Canto*; the movement of the vocal technique to France, Germany and England will not be discussed.

For the sake of this study we will rely on the definition by the American Heritage Dictionary of *Bel Canto*, as a style of singing and more specifically “a style of operatic singing characterized by full, even tones and a brilliant display of vocal technique.”² The three distinguishing vocal characteristics of *Bel Canto*, according to the criteria that we will consider in this study, are vocal agility and flexibility; homogeneous timbre and tone color; pitch duration and legato production. Grove authors Owen Jander and Ellen Harris describe the term *bel canto*, in addition to such similar Italian expressions such as, ‘bellezze del canto’ and ‘bell’arte del canto,’ all of which have

... been used without specific meaning and with widely varying subjective interpretations. It did not take on special meaning as a term until the mid-19th century: 'neither musical nor general dictionaries saw fit to attempt definition until after 1900 (Duey qtd. Jander and Harris). Even so, the term remains ambiguous and is often used nostalgically in its application to a lost tradition.³

Translated from its original in Italian, "*Bel Canto*" literally means - beautiful singing. According to Richard Miller, *Bel Canto* is "a style of vocalism uniting tonal beauty and technical skill; frequently restricted to describing solo-voice literature and cultivated singing styles prior to the mid- nineteenth century, as in the music of Rossini, Bellini, Donizetti and their contemporaries."⁴ The *Bel Canto* features of beautiful singing, such as vocal agility, flexibility and evenness of tone, will be elaborated on in Chapter 2, a History of *Bel Canto* Vocalise Methodology.

During the *Bel Canto* period, a characteristic vocal technique came into practice as the result of the saturation of voice teachers, composers and singers documenting and composing effective sets of vocal exercises and/or methods that they felt were effective for the needs of the prevalent vocal styles. According to Richard Miller, in his book *The Structure of Singing: System and Art in Vocal Technique* (1986), *Bel Canto* is

a style of vocalism uniting tonal beauty and technical skill; frequently restricted to describing solo-voice literature and cultivated singing styles prior to the mid-nineteenth century, as in the music of Rossini, Bellini, Donizetti and their contemporaries.⁵

Composers began to require singers and performers achieve flexibility, agility and legato vocal production for opera performances; in turn, this called for the performers to have singing teachers who had the necessary vocabulary and exercises to fulfill this essential requirement.

The following definitions will be used for the sake of this study to describe and distinguish the terms “vocalise” and “vocal warm-up.”

Vocalise

The spelling of the terms “vocalise” and “vocalize” has four possible different meanings, depending on the context. Vocalise is also pronounced differently, according to meaning. The spelling of vocalization and vocalisation can have different connotations, depending on the context. The term *vocalise* (vokalaiz) will be used to mean ‘sing,’ as in vocal preparation or warming up the voice (see glossary). *Vocalise* (vokaleez), a textless vocal exercise, is also the term for the actual notes and passages of music composed solely for the purpose of integration of breath support, even tone color, pitch articulation (in opposition to articulation), agility and flexibility. *Vocalize* (vocaleez) means to produce tone with the voice and to articulate and use the voice as if to sing. For the purposes of this paper, the term for the musical composition of a vocalise (vocaleez) such as Rachmaninoff’s or Ravel’s *Vocalise*, are not included. In an effort to limit confusion concerning the terms vocalisation and vocalization (see glossary), the spelling is interchangeable unless used in direct quotations. In the essays and writings of the *bel canto* era (Mancini, Marchesi, Vaccai, et al.) the term vocalization is the most common spelling.

Vocal Warm-Ups

Warm-ups can be synthesized or evolved versions of the vocalises popularized in the *Bel Canto* era. Widely used, warm-ups are distinct from vocalises, although they share some breathing exercises and the more difficult scalar exercises, as well as serving

as precursors to more technical vocal regimens. Vocal warm-up methods vary greatly between/among singers, teachers, voice scientists, vocologists, and otolaryngologists and can best be assessed by comparing vocal warm-up practice time, order of exercises, amount of rest, vocal range, frequency, and purpose. A warm-up for the voice is a series of exercises that prepares the voice and body for singing, acting, and dancing, and is more athletic in nature than its predecessor, the *bel canto* vocalises. Chapter 6 will address the distinction between the practice of vocalises and vocal warm-ups, and the distinction made by those who use vocalises and vocal warm-ups for the purpose of vocal health and improved performance.

History of Bel Canto Vocalise Methodology

It is a challenge to determine when *Bel Canto* “the period,” or “the era” actually began. Scholars continue to debate the specific time frame of this vocal tradition. However, Grove and other important dictionaries argue that the term is best limited to the nineteenth century style of singing that emphasizes beauty of tone in the delivery of highly florid music. Further discussion of the basic concepts of vocalise and vocal warm-ups central to the *Bel Canto* tradition, dating from the Greeks (500 BC) aural tradition will be elaborated. With the advent of written music, the aural traditions of rhythmic systems, vocal melodies, and harmonic patterns that had come down by word of mouth, became more solidified as a result of having actual notation.

Chapter 1 introduces the study and defines the terminology used within this research. Chapter 2 will trace the evolution of the historical vocalise method of composers, singers, and writers, beginning with Caccini, and proceed to a sampling of

present day authors. Only in the last fifty years have vocal instructors, performers, and vocal scientists begun to collaborate with the shared goal of improving vocal performance and the vocal scientists, otolaryngologists, vocologists, teachers and singers. Chapter 3 expands the definition of vocal warm-ups, posture and alignment, flexibility and agility, vocal cool-down and physical exercises. Chapter 4 describes the methodology for the survey questions, research questions, and design of the survey and the analysis of the results. Chapter 5 conveys the advice of the voice professionals and finally, Chapter 6 discusses the conclusions and recommendations that require more research.

¹ Berton Coffin, *Historical Vocal Pedagogy* (MD: Scarecrow Press, 1987), 4.

² *American Heritage Dictionary of the English Language*, 4th Ed. Boston, (MA:Houghton Mifflin Co.2000).

³ Owen Jander and Ellen T. Harris. "Bel canto." In *Grove Music Online. Oxford Music Online*, <http://www.oxfordmusiconline.com.ezproxy.lib.utexas.edu/subscriber/article/grove/music/02551>.

⁴ Richard Miller. *Solutions for Singers: Tools for Performers and Teachers* (NY: Oxford Press, 2004), 250.

⁵ Richard Miller. *Solutions for Singers: Tools for Performers and Teachers*. (NY: Oxford Univ. Press, 2004), 250.

CHAPTER 2

HISTORY OF *BEL CANTO* VOCALISE METHODOLOGY

This chapter chronologically reviews the key contributors to the literature on the vocalise methods, tracing the evolution of the *Bel Canto* historical vocalise method used by composers, singers, and writers, from Caccini to authors of the present. This historical approach will outline an apprenticeship model of vocal training that was passed on via an aural and oral tradition and trace the traditional vocalizes and vocal warm-ups. Only in the last half century have the vocal instructors, performers and vocal scientists begun to collaborate with shared goals to improve vocal performance and health.

This chapter will incorporate the historical aspect and methodology of the composers of vocalise methods, comprised under three categories; 1) composers who were also singers, 2) singers who were singing teachers, and 3) singing teachers who were also voice scientists. For the purpose of this research, the following masters will be discussed; Caccini, Tosi, Mancini, García I & II, Viardot, Marchesi, Lamperti I & II, Shakespeare, Stockhausen, Vaccai, and Rossini. Appendix A comprises a list of known contributors and their works from Italy, France, Germany, England and America. James Stark in his 1999 book, *Bel Canto: A History of Vocal Pedagogy*, captures the diversity of literature and styles of methods:

Many of the voice books issued by such teachers are, in fact, personal statements about their own preference in vocal techniques. Such books are rich in colorful imagery and inventive descriptions of vocal function but spare in facts about specific physiological, acoustical, or aerodynamic details of the singing voice.¹

This chapter will also address the work of the twentieth and twenty-first centuries, William Vennard, Oren Brown, Ralph Appelman, Richard Miller, Ingo Titze, Scott

McCoy, Richard Stasney and Robert Thayer Sataloff. These men have influenced the vocal community at large over the past fifty years in a fashion similar to the influence of García, Marchesi, and others of the earlier times.

The *Bel Canto* vocal technique was originated by voice teachers, composers and singers who wrote their own sets of vocal exercises and/or methods. *Bel Canto* vocal technique and style, as described in Chapter 1, reportedly originated in the Baroque era. It became necessary for professional singers' vocal technique to have specialized singing teachers who would have the necessary technical vocabulary and appropriate exercises. A key factor to the development of these methods was the popularity of castrati, (1555-1720)² and the rise of female singing.

As defined in Chapter 1, the term *Bel Canto* has a variety of meanings and can be traced from earliest written commentary through the Medieval, Renaissance, and Baroque periods to the present day. "Even so, the term *Bel Canto* remains ambiguous and is often used nostalgically in its application to a lost tradition."³ Most agree that *Bel Canto* emphasizes beauty of tone, and florid melismatic music. Roldolfo Celletti writes in his 1996 book, *A History of Bel Canto*, that the term '*bel canto*' and '*belcantismo*' was not known in the seventeenth and eighteenth centuries. In 1921, William James Henderson argues in his book *Early History of Singing*, that "...we are not in possession of sufficient information to enable us to trace conclusively the details of progress through the centuries between A.D. 300 and 1600, when the modern opera originated."⁴ More recently, James Stark's 1999 book, *Bel Canto: A History of Vocal Pedagogy*, believes "it is always a bit hazardous to put forward a case for the origins of any musical style (Allen

qtd. Stark). Yet, there is extensive historical documentation that attests to the rise of an ‘old Italian school of singing’ in the late sixteenth and early seventeenth centuries.”⁵ There are many vocal qualities that concerned the early teachers, including vocal registers. However, for the purpose of this treatise the three distinguishing vocal qualities of *Bel Canto* are vocal agility, flexibility and even tone color, (timbre) and legato (duration).

Bel Canto Beginnings

Bel Canto is believed to have begun with Caccini’s treatise and compositions during the Baroque era, yet some evidence of analogies to this style of singing can be traced back to Ancient Greece. For example, in Homer’s *Hymnus en Apollium*, Aristotle’s *De Audibilibus*, and Dionysius of Halicarnassus (fl.30-B.C.-10B.C.) *De Compositione Verborum*, make the point that there was a regimen of training, practice of breath control, pitch awareness, tone colors, flexibility and virtuosity, all principles of beautiful singing, or *bel canto* vocal production. Through Pope Gregory I (ca. 540-604) education and training of musicians and singers was a vital component which contributed to the foundations for the *Bel Canto* style of singing.⁶⁷⁸

Rebecca Baltzer, in the 1980 version of “*The New Grove Dictionary of Music and Musicians*,” points out “a systematized approach to teaching singing, developed in the medieval monasteries of the Roman Catholic Church sometime near the beginning of the 13th century.”⁹ Towards the end of the thirteenth century, Marchettus of Padua (fl. 1270-1310) wrote on tone colors, breath support, articulation, vocal anatomy, and vocal clarity. Baltzer explains that there were two influential monks of the early fourteenth century,

Johannes de Garlandia (fl. c. 1270-1320) and Jerome of Moravia (? d.1271) who “were the first to develop a concept of vocal registers.”¹⁰ The idea of voice production identified in two or three registers continued to be developed throughout the fourteenth, fifteenth and sixteenth centuries, after which there remains continuing controversy.

The fifteenth century brought about a great resurgence of scholarly activity in secular as well as sacred centers. Schools and conservatories for musical training rose up in Rome, Florence, and Naples, where support was coming from the rich courts and patrons such as the Medici’s and the Dukes of Burgundy.

In the seventeenth century, the beginnings of opera included the *Bel Canto* vocal style of singing, performers, composers, patrons, and venues exploded. Berton Coffin informs us in his book, *Historical Vocal Pedagogy Classics*,

The art of opera began in rooms, salons, and small theaters, which were the meeting places of society in Italy. At one time there were as many as sixteen ‘theaters’ in Venice. The singers were from orphanages and had been trained for singing opera in small places with light instrumental accompaniment.¹¹

This shift from rooms, salons and smaller theaters to the larger opera stages is crucial in analyzing the changes in vocal techniques. Henderson points out works by singers and composers such as Ludivico Zacconi (1619), who wrote the treatise *Prattica di Musica utile et necessaria si al compositore si anco al cantare*, in which three chapters dealt with solfège, rules for singers (including vocal exercises), the duties of the singers and qualifications for composers and singers.

With the birth of *Bel Canto* came “a style of operatic singing characterized by full even tones and a brilliant display of vocal technique.”¹² Stark writes that “despite the disagreements in the pedagogical literature, we cannot ignore the common theme that

runs through so many works – namely, that there is something special, perhaps even ‘secret,’ involved in singing according to *bel canto* principles.”¹³ He believes that the first performance study manuals and treatises were actually written for instruments and vocal methods books appeared later. Some of the first authors who wrote early methods include “Giovanni Camillo Maffei (1562), Girolamo dalla Casa (1584), Giovanni Battista Bassani (1585), Giovanni Luca Conforto (1593), and Giovanni Battista Bovicelli (1594).”¹⁴ In Grove Music Online, Owen Jander and Henry Pleasants reference the 1995 dissertation by Mary Jones Saathoff, “A Study of Vocal Exercises and Vocalises Used in Selected University Vocal Programs,” stating that the first known vocal method book was written by Giovanni Camillo Maffei in 1562. This writing was a letter to the Conte D’Alta Villa, in which he describes the manner in which air moves through the lungs and passes through the larynx, and the value of articulation and vowel placement.

CACCINI

With Giulio Romano Caccini (ca 1551-1618), the tradition of *bel canto* begins. Caccini, an Italian composer, lutenist, singer and singing teacher, was known for his writing *Le Nuove Musiche: ad una Voce Sola*, which linked the *Bel Canto* style of singing and vocal expression. This noteworthy collection has a preface in which Caccini includes recommendations for vocal technical practice, vocal ornamentations, rehearsal, and music presentation. In addition, it includes his solo vocal songs with basso continuo and his claim that he was the inventor of *musica recitativa*. According to Stark, Caccini spoke of “voice quality, he said that one should sing with a ‘full and natural voice’ (*voce piena e naturale*), avoiding falsetto (*la voce finta*) ...without being constrained to

accommodate himself to others.”¹⁵ Caccini is known for the vocal virtuosity that characterized early Baroque music and is recognized as the teacher of many castrati, who sang roles in Monteverdi operas. Julianna Wrycza Sabol, Linda Lee and Joseph Stemple in an article in the *Journal of Voice* entitled “The Value of Vocal Function Exercises in the Practice Regimen of Singers” (1995) and James Stark in his book, *Bel Canto: A History of Vocal Pedagogy* (1999) argue that Caccini was productively emphasizing practical and artistic approaches to perfect intonation, good breathing technique, clear enunciation of the text and artistic interpretation. Sabol refers to Caccini’s thoughts on pitch “therefore, to proceed in order, thus will I say that the chief foundations and most important grounds of this art are the tuning (intonation) of the voice in all the notes.”¹⁶

Caccini was a member of the *Florentine Camerata*, a group of intellectuals, humanists, musicians, and poets, who lived and worked in Florence during the sixteenth century. Other members included Count Giovanni Bardi, Pietro Strozzi, and Vincenzo Galilei (the father of astronomer Galileo Galilei). The earliest recorded meeting at Bardi’s house was January 14, 1573. Rodolfo Celletti in his 1996 book, *A History of Bel Canto*, comments on Caccini, “the notion of singing was made more varied and more pleasing by means of vocalise passages and ornaments corresponding to the ‘rhetorical colouring’ of eloquence.”¹⁷ Thus, according to Caccini, the relationship of vocal technique and the musical presentation should always be unified.

Henderson writes that Caccini “left us the most satisfactory records of the teaching of the period which may be thus outlined: The pupil must first of all things know and understand the text and endeavor to interpret it.”¹⁸ Malcom Boyd and John Rosselli

in the *Grove Music Online* mention that the general goals of the vocalizations, according to Caccini, called for perfect intonation, “the tuning of the voice in all the notes.”¹⁹ In order for the voice to project in a chamber music setting and/or a larger hall, one had to have, according to Tim Carter in the *Oxford Music Online*, “a command of breath.”²⁰ Without it, the voice would not be able to sustain the pitch nor have the expression necessary. Celletti writes that although Caccini was “overrated generally as a vocal technician – a field in which other writers had preceded him, and with greater clarity,” he was “nevertheless a noteworthy theorist on the subject of vocal expression.”²¹ The types of vocal exercises Caccini wrote were specific to tonal quality, articulation, and breath and breathing.

TOSI

Pier Francesco Tosi (ca.1646-1732) was born in Bologna. His father, a musician, recognized exceptional musical talent in his son and had Tosi castrated, hoping he would have a successful career as a singer. Fortunately for Tosi, his father’s wishes were not in vain, and Tosi was eventually in great demand throughout Europe. According to Karen Sell in her book *The Disciplines of Vocal Pedagogy*, “Tosi wished his singers to learn by imitation and by hearing great singers. He also stressed the importance of a good ear, and like Caccini, warns against singing all the songs in the same way.”²² Tosi is best known for his writing *Opinioni de' cantori antichi e moderni, o sieno osservazioni sopra il canto figurato* (1723) and according to Saathoff, Tosi provides “perhaps the most important early work on vocal pedagogy.”²³ Tosi produced some of the first writings for vocal instruction in his work *Observations on the Florid Song* (1743), principally concerned

with the castrato voice. According to Berton Coffin in his book *Historical Vocal Pedagogy Classics* (1987), Tosi demonstrates to teachers how “always [to] keep the voice in motion....and if the teacher hastens the tempo in runs, he can quickly free a voice (unbind it) and bring it more volubility.”²⁴ As any excellent vocal pedagogue would do, Tosi left a legacy of wisdom not only for the singer, but for the singing teacher.

Tosi’s influence on the singers of this era in Italy and abroad is evident by the accessibility of Tosi’s treatise, made available later in German and English translations. As with Caccini’s work, Tosi also includes recommendations for a vocal technical practice, rehearsal, and musical presentation. He “delineates examples and exercises for various vocal ornaments, as well as their proper usage.”²⁵ Tosi and his peers dealt with performers who had an extended vocal range; in addition, singers of their era were trained in blending the voice over the transition area so that discrete registers would not sound disconnected. Tosi is one of the first to speak in greater detail about vocal registers. He states that

a diligent Master, knowing that a [male] *Soprano* [castrato], without the *Falsetto*, is constrained to sing within the narrow compass of a few notes, ought not only to endeavour to help him to it, but also to leave no means untried, so to unite the feigned and the natural Voice, that they may not be distinguished; for if they do not perfectly unite, the Voice will be of diverse Registers, and must consequently lose its Beauty.²⁶

To enhance the connection of registers and tonal beauty, Tosi apprised singers and teachers of his views on posture, nasality, ornamentation, the use of time in rubato and vowel placement, all key elements covered in his treatise. Tosi’s treatise laid the groundwork for contemporary singers and created a formula for excellence in vocal technique for the next generation.

MANCINI

Giambattista Mancini (ca 1714-1800) was an Italian castrato soprano, “a student of Bernacchi (ca 1690-1756) who was an alto castrato. Mancini was the founder of a Bolognese singing school based on the precepts of Bernacchi’s teacher, Pistocchi. Bernacchi’s other students included the castrati, Sensesino and Carestini.”²⁷ In 1774 he published the vocal methods book, *Pensieri, e riflessioni pratiche sopra il canto figurato*. It was later translated by Pietro Buzzi in 1912 and again in 1967 by Edward Foreman as *Practical Reflection on Figured Singing* (1774). Another contribution by Mancini to the training of the male soprano includes directions on singing with figured bass, vocal style and practical vocalises, published as *Riflessioni pratiche sul Canto figurato*, (1777).

John Rosselli, in Grove Music Online, praises “Mancini’s influential treatise on singing, *Pensieri, e riflessioni pratiche sopra il canto figurato* (1774).”²⁸ Roselli says that Mancini’s writing was a reworking and “a more systematic version of Tosi’s *Opinioni de’ cantori antichi e moderni* (1723),”²⁹ and that Mancini took Tosi’s pedagogical concepts and gave written support to the idea that there was “no practical difference between operatic and other singing, and in endorsing without qualms the cult of agility.”³⁰ Vocal exercises that were key to Mancini’s philosophy promoted (1) breath and breathing coordination, (2) enunciation and clarity of diction, (3) vocal placement, (4) sustained tones (usually comprising the value of a whole note), (5) gradual range extension from three notes to an octave, (6) register connection from ‘chest’ and ‘head,’ (7) *messa di voce*, the sustaining of a tone with crescendo and decrescendo, and, finally, the most intricate of detailed study, (8) the *portamento di voce*, mordents and trills and

appoggiaturas. Roselli wrote that “both Mancini and Tosi shared a belief in the need for singers to undergo prolonged training and to work out their own ornamentation, since this could not be definitively written down.”³¹ The ornamentations were improvised and as such, vocal students were encouraged daily to practice these improvisatory skills.

Mancini also promoted the “smile” technique, mostly for higher voices, which consisted of raised or uplifted cheeks with a slight smile on the lips, making vocal flexibility and agility easier. From each generation following Caccini, Tosi, and Mancini, arises new controversy in vocal technique exercises, as well as arguments on teaching philosophies passed down in this aural tradition from teacher to student/teacher. As an example of this controversy, Roselli reports that Mancini blamed the “Italian schools of singing and their decadence, which he blamed on the modern rush to get pupils on to the stage.”³² Mancini was adamant that the private vocal instructor be able to model good vocal technique.

Bel Canto evolved in northern Italy in the Venetian opera house, which served as a transition between performances in homes and salons to those open to the general public. In eighteenth century Naples, Venice, Florence and Rome, conservatories were at first private, but later opened their doors to ‘paying’ students, promoting public performance of opera. The aria, a solo song within an opera, became the driving force for the singers to exhibit their vocal prowess and virtuosity via embellishment, especially in the third (da capo) section of an aria.

GARCÍA FAMILY TREE

Manuel García

Without Manuel del Popolo Vincente García (1775-1832) there could not have been a *Bel Canto* period. As a Spanish opera singer, composer, and impresario, he strongly influenced the vocal traditions through his students and children. The title baritone role in Rossini's *Il Barbiere di Siviglia* (1816) was written for him. Vocal instructors included the Spanish composer Antonio Ripa (c1720-1795), Juan Almarcha (dates unknown) and Neapolitan teacher Giovanni Ansoni (1744-1826). In their teachings, García, Tosi, and Mancini all concur on the importance of the *messa di voce*. As with any vocalise (method), all the exercises, breath support, articulation, and range, should increase in difficulty, in range and agility, a fundamental point stressed in “the singing and teaching of the *bel canto* style of the younger García and of later generations.”³³ García's book, *Exercises pour la Voix*, (ca. 1820) is accepted as one of the first writings on exercises for the voice. His children continued his legacy: Manuel García II (1805-1906), Maria Felicita Malibrán, mezzo-soprano (1808-1836), and Pauline García Viardot (1821-1910), mezzo-soprano.

In 1819, Manuel del Popolo Vincente García, wrote *Exercises composés pour ses Elèves*. These vocal method books were acknowledged as the first vocal exercise books he compiled while living in Paris. Leaving Paris for London after he experienced censorship by opera management, he opened a vocal academy on Dover Street. Eventually his *Exercises composés pour ses Elèves* were expanded and translated to

English (1824), *Exercises and Method for Singing*, and republished by Boosey and Hawkes and reprinted in 1868.

García's work was originally a treatise in Italian and French with tuneful melodies, figured bass accompaniment and a list of rules and explanations on how these exercises were to be followed. They hold the key to the entire García method. García included Mancini's exercise of *messa di voce*, the sustaining of a tone with crescendo and decrescendo, and modified other vocal exercises which included: (1) breath and breathing coordination, (2) enunciation and clarity of diction, (3) vocal placement, (4) sustained tones, (5) gradual range extension from three notes to an octave, (6) register connection from 'chest' and 'head', and (7) the *portamento di voce*, *mordents* and *trills*, and *appoggiaturas*. García differed from Mancini's approach in that he taught tempo rubato.

Manuel García II

Manuel García II (1805-1906), son of Manuel García, served in the French army in 1830, where he was able to examine the anatomy of the larynx. From this opportunity, he formed the foundation for his theories on vocal production. García II's study of anatomy, vocal pedagogy and the science of singing developed into a viable means of training teachers and singers. In 1854, García II first used the laryngoscope, a rod with a mirror on the end, angled in such a way that one could see the vocal folds working. Today this laryngoscope is either a rigid or flexible endoscope that passes through the mouth, equipped with a light source and magnification, for examining and diagnosing.

In her book *Singing in Style: A Guide to Vocal Performance Practices*, Martha Elliot explains that García II "went on to become one of the most important voice

teachers of his day. His treatise, [...] captures the approach and style he learned from his father in the first decades of the century.”³⁴ Significant contributions of his include: 1) *Traité complet de l'Art du Chant*, the English translation *A Complete Treatise on the Art of Singing*, Part One (1841) was a method for developing the voice; 2) Part Two (1847) a discussion of the interpretation and application of the principles in Part One, complete with musical examples; 3) *Nouveau Traité sur l'Art du Chant* 1856, translated and edited in 1872, by Donald Pascke, and 4) *A Complete Treatise on the Art of Singing*, Part One was reprinted in 1975 and Part Two in 1982. García’s later translated publications include *Physical Observations of the Human Voice* (1855) and *Hints on Singing* (1894), the latter written as a defense for vocal pedagogy, reasoning for using the *coup de glotte*. *Coup de glotte* is a term for 'shock of the glottis' an expression used to describe a method of singing. It is a method of opening the vocal folds to produce a note by an abrupt physical mechanism of the glottis (the space between the vocal folds).

Stark says that García II wrote “in *Hints on Singing*, [that he] reduced his descriptions to five forms of vocalization: *legato*, *marcato*, *portamento*, *staccato*, and *aspirato* (García 1894, 1920).”³⁵ The exercises were originally composed by García’s father, then expanded and rearranged by Manuel II. Berton Coffin calls this writing a “classic of vocal pedagogy,”³⁶ carried on by the next generation of voice teachers and singers, including such people as Viardot, Marchesi, and Lamperti.

Part One, based on *Memoire sur la voix humaine*, offers García's II’s methods for developing the voice, which includes, according to Sell, “exercises specifically designed to encourage the development of power and volume” such as “the singing of scales with a

messa di voce on each note,”³⁷ and more controversial by his “infamous *coup de glotte* (stroke of the glottis) which caused much controversy and debate among singers, teachers, (otolaryngologists) and critics.”³⁸ The ‘controversy’ between García II and Dr. Morrell Mackenzie, an otolaryngologist at the time, appeared in the press:

They clash in print about the use of the laryngoscope (which, according to tradition, García was said to have invented,) the training of children, and the number of vocal registers. Mackenzie, although acknowledging the benefits of the study of anatomy and physiology for singing teachers, insist that to have singers learning to sing by studying the vocal organs, particularly with a laryngoscope, is as absurd as a painter learning to paint by studying the eye with an ophthalmoscope.³⁹

The controversy did not stop with singers, teachers and one otolaryngologist but included, as Stark indicates, “doctors and physiologists who made their own observations with the laryngoscope and drew their own conclusions, despite the fact that they were non-singers themselves and had little insight into the singing voice.”⁴⁰

Part two (1847), “discusses the interpretation and application of the principles in part one and contains many musical examples, demonstrating that Manuel García II had based his method on that of his father but changed the order of the exercises.”⁴¹ During the 19th century there was disagreement among teachers and performers as to whether or not the technique should be taught as a normal part of vocal method. The technique is still sometimes used to achieve dramatic or ornamental effects and not regarded as a means of a fundamental vocal method.

García II was asked some of the following questions regarding the study of exercises by all voices:

Q. In what manner should exercises be studied?

A. The student must sing each measured exercise strictly in time, but at first slowly enough to give each individual note all the requisites already mentioned: vis.: intonation, value, strength, legato, timbre.⁴²

Q. When ought the rapidity to be increased?

A. As soon as, fast as these qualities can be maintained, but not sooner.⁴³

Vocal practice methods and scales were invaluable to the singers of the time. Translating the García II method into today's vocal practice mode is significant in terms of breath, enunciation, vocal placement, sustained tones, range, intonation and agility. There are some who criticized García's II's description of register; as indicated earlier. The controversy of registers continues long after García's death. However, students of singing should be persuaded to read *Hints on Singing*.

García II's students included some famous singers, including, Jenny Lind (1820-1887), Mathilde Marchesi (1821-1913), and Julius Stockhausen (1792-1868). Jenny Lind studied with García II several times a week after having lost her voice. Once her voice was healthy again and her vocal technique solidified, she went on to have a major career.

Pauline García Viardot

Pauline Viardot-García (1821-1910) mezzo-soprano, daughter of Manuel García, had a unique musical talent for piano and was proficient in several languages. After the death of her sister, Maria Malibran, she became a professional singer with an extremely wide range. When her singing career came to an end, she taught voice lessons and composed more than a hundred songs, operettas, operas, and chamber music for violin and piano. Her children, Paul Louise Joachim Viardot (1857-1941), violinist, and Louise Pauline Marie Héritte-Viardot (1841-1918), contralto and composer, continued the García legacy.⁴⁴⁴⁵

Viardot's writings were published in France. The first of these was self-published: *École classique de chant* 1861, a manual on singing with comments on phrasing, accents and vocal interpretation. Viardot also published a manual on singing based on the García method (ca.1880): *Une heure d'étude: exercices pour voix de femmes*, a collection of selected songs and arias, English translation republished in 1889, *An Hour of Study: Exercises for Female Voice*. These publications, her compositions, and transcriptions are important sources for the understanding of vocal performing practice in the nineteenth century.

Here are some examples of her expectations of students included in *An Hour of Study: Exercises for Female Voice*. She only taught female students, hence the singular reference to she/her:

1. If the pupil accompanies herself, she should be seated as high as possible; and a small mirror could be placed on the desk so that she can observe her features, as well as the movement of her mouth. She should sit upright, the head slightly raised.⁴⁶
2. If the pupil is sufficiently a musician, and has an ear correct enough not to require her to play all the accompaniment, it is preferable, as soon as the exercise is well understood, that she could sing standing.

Posture: In so doing, she must take care to hold herself erect, a little arched backwards, the head should be slightly elevated, the eyes looking straight forward, and the body resting firmly on the feet without swaying backwards and forwards, or from side to side.⁴⁷

Caccini, Tosi, and Mancini believed it was best to sing in a standing position due to principles of posture, or alignment. Viardot was one of the first to accept the idea that a student might be able to sit while practicing. The only problem for her students was that they were also expected to play the piano in order to accompany themselves while practicing.⁴⁸

Another principal element of Viardot's teachings was, as described by Mancini, *messa di voce*, the sustaining of a tone with crescendo and decrescendo. Viardot agrees that the fullness of the voice should be used; however, she points out that it should also be without effort:

3. [8] The exercises must be sung with the full natural voice: without effort: without changing the vowel; with the same degree of power throughout the entire extent of the voice; and without any changing, except when indicated.⁴⁹

In regard to the amount of time a student should practice, Viardot and Marchesi agree that this period needs to be limited and that great care should be taken in the exercise protocol. Though each teacher before her, (Caccini, Tosi, Mancini, García II), took a similar approach, Viardot placed special emphasis on setting practice time limits:

4. [9] The pupil should not sing longer than a quarter of an hour at a time. Should the pupil find difficulty in any of the exercises, she should, before attempting them with the voice, play them on the piano until she has them well in her mind. She should never fatigue her voice by trying to sing what she has not comprehended musically. Care must also be taken not to sing notes so high or so low as to necessitate making an effort to produce them.⁵⁰

Viardot advocated daily practice, including sustained tones, together with agility and flexibility exercises in accelerated speed. Her pupils included performing artists Désirée Artôt (1835-1907), a Belgian mezzo-soprano, later soprano; Aglaja Orgeni (1841-1926) a Hungarian soprano; Marianne Brandt (1842-1921) an Austrian mezzo-soprano; and Antoinette Sterling (1850-1904), contralto.

Maria Malibran-García

Maria Felicita Malibran (1808-1836) daughter of García II, was able to sing either soprano or mezzo-soprano parts. Her voice was described as one of power, range and flexibility, well suited to the roles of composers like Rossini (1792-1868) and Donizetti

(1797-1848), both of whom composed music for her color, range and flexibility of voice. Malibran's career came to an end after she fell from a horse, never to recover, resulting in death at twenty-eight.

Mathilde Marchesi

The next generations of singers and voice teachers from the García lineage included Mathilde Marchesi (1821-1913) a mezzo-soprano, soprano Jenny Lind (1820-1887) and Julius Stockhausen (1792-1868). Marchesi studied four years with García II. In Marchesi's writings and in her 1903 book - *Bel Canto: A Theoretical and Practical Vocal Method*, she stressed vocal technique in her own vocal register, which she calls "the middle register."⁵¹ Marchesi also wrote *Marchesi and Music: Passages from the Life of a Famous Singing-Teacher* (1897), *Correct Methods of Vocal Study* (1893), and *Ten Singing Lessons* (1901). Marchesi was not inclined to think of herself as a bel canto teacher, though she was well versed and well informed to carry on the García, bel canto style of singing. Marchesi believed that singing should be natural and that breathing should be instinctive. She believed that:

the attitude of the pupil, in singing, should be as natural and easy as possible. The body should be kept upright, the head erect, the shoulders well thrown back, without effort, and the chest free. In order to give perfect freedom to the vocal organs while singing, all the muscles surrounding those parts should be completely relaxed.⁵²

Coffin backs up this assertion stating "she [Marchesi], advised against strenuous exercise, singing after meals, exposure to excessive heat or cold, loud speech, and, too frequent theater parties."⁵³ She vehemently opposed the Mancini 'smile' technique. In her book,

The Art of Singing, Book 1, Opus 21, Marchesi wrote a special note to teachers that conveys the seriousness of her attitudes:

I assume that each teacher, before undertaking the difficult task of the formation of the voice, and the weighty responsibility for the artistic future of his pupils, will have studied anatomy, physiology and acoustics to the extent requisite for explaining and enforcing the following precepts: 1) Posture, 2) position of the mouth, 3) Respiration, 4) Attack of the tone (onset), 5) Female Registers, 6) Method of practicing (time), 7) analysis, 8) style.⁵⁴

Elsewhere she discusses the necessary skills of the teacher, specifically how to avoid “fatigue of the voice from study ... its avoidance depends entirely on the skill of the teacher and the intelligent receptivity of the pupil.”⁵⁵ Her instructions to both student and teacher were concise and to the point in order for the student to avoid vocal fatigue or vocal disorder. Examples of that concern for the student are contained in her detailed directions: (1) at the conclusion of a lesson the student should not sing for long periods of time; (2) beginning students should not practice for “more than five to ten consecutive minutes,” and should be limited in the amount of time per day allotted to practicing; and, (3) the amount of time to exercise the voice needed to begin at five minutes and be increased up to thirty minutes to an hour, but never over that time allotment. She cautioned students to practice these habits at home, to observe the teacher’s instruction on time limits for vocal practice in order to prevent vocal fatigue or distress. Another caution was to sing in full voice, but to avoid shouting.

Marchesi’s principles on breathing and registration are unified. Sabol points out that she “believed in diaphragmatic breathing [no corsets], and considered the treatment of the registers as “the touchstone of all singing methods.”⁵⁶ Marchesi was clear on her impression of vocal registers:

It is owing to this ignorance of the limits and the treatment of these three registers of the female voice that there are so many imperfectly-trained singers, who struggle against the faults and difficulties of the mechanism wrongly used, and so many unequal voices, which possess sets of weak and heterogeneous sounds, commonly called *breaks*. These *breaks*, however, are only sounds wrongly placed and produced.⁵⁷

Marchesi was extremely concerned with vocal registration, calling it “the ‘Alpha and Omega’ of the formation and development of the female voice, the touchstone of all singing methods, old and new.”⁵⁸ Yet again, we see the controversy of registers; clearly hers was a three-part register rather than a two-part register which was held in belief by Caccini and Tosi.

As a student of García, Marchesi herself incorporated her own ideas into his established method. She demanded that the beginning student limit practice time and understand the vocal anatomy (*larynx, glottis, vocal cords, etc*), technical terminology of teaching voice (*breath, register, range, tone color, etc*), and the aesthetics of a singer’s own performances. Marchesi believed that “if we do not teach the elements of the anatomy and physiology of the human voice, we needlessly deprive the pupil of the means of becoming acquainted with the physical phenomena of the vocal organs.”⁵⁹ Her expectation was for her students to learn how to protect, preserve and manage their voices throughout their careers.

Marchesi held obsessive contempt for teachers who claimed they could in one or two years have a student prepared to sing professionally. She was adamant about the teaching process, which was to be approached methodically, slowly and deliberately. Based on her training with García, Marchesi’s reasoning in her vocal training methodology was insightful. She felt it crucial that voice teachers be able to train even

the most difficult of voices, in vocal distress, correcting bad habits all resultant of poor vocal training, or at least be able to train the student to care for her own voice. Her vocal method is best described in her own words:

A singer who has learned how to breathe well, and who has equalized the voice, neatly blended the registers and developed the activity of the larynx and the elasticity of the glottis and resonant tube in a rational manner, so that all possible shades of tone, power and expression can be produced by the vocal organs, would most assuredly be able to sing well, and without fatigue and effort the long and declaimed modern phrases.⁶⁰

Her acclaimed teaching successes included Dame Nellie Melba (1861-1931), Australian soprano; Emma Eames (1865-1952), American soprano; Emma Calvé (1858-1942), French Soprano; Frances Alda (1879-1952), New Zealand-born soprano; Selma Kurz (1874-1933), Austrian Soprano; and soprano Mary Garden (1874-1967). Estelle Liebling (1880-1970), a vocal coach, who was one of the few who continued the García legacy of the three-register method, carrying it forward to such students as Beverly Sills and Meryl Streep.

STOCKHAUSEN

Julius Stockhausen (1826-1906), baritone, conductor, composer, harpist, and another protégé of García, was a true advocate of beautiful tone of the *bel canto* style, through breath control, flexibility and enunciation, each element as important as the next. He campaigned for artistry and interpretation via the systematic study of language. Karen Sell, in *The Disciplines of Vocal Pedagogy*, submits that “Stockhausen’s method anticipates the phonetic/phonemic work of Dr. Ralph Appelman and Berton Coffin in the twentieth century.”⁶¹ Stockhausen’s 1884 treatise, *Gesangsmethode* or *Method of*

Singing, was translated by Sophie Löwe from German to English.⁶² Stockhausen did not duplicate García's teachings; however, several key vocal elements were similar.

Stockhausen and García shared views on other key vocal elements, such as beauty of tone, trill, *coup de glotte*, breathing and register. Sell explains Stockhausen's method as one that placed "great emphasis on the study of vowels as indispensable for beauty of tone, and insisting that vocalizes should be practiced on all vowels. He was aware of the importance of the tongue, lower jaw movements and laryngeal positioning in vowel formation."⁶³ The vocal element that was significantly different was the disagreement Stockhausen had with García's placement of the larynx. This is done by positioning of the tongue, lips and elongation of the pharynx and mouth for articulation, which results in what Stockhausen called "vowel tone" and necessitates a calmer larynx in singing.

According to Stark, Stockhausen promoted "a new and detailed method of attaining the trill."⁶⁴ In his writing, Stockhausen referred to Caccini's trillo as using a glottal articulation, yet the 'modern trill' appears to be more of a larynx wiggle, similar to that of the throat of a bird. Stockhausen described the *coup de la glotte* in a similar fashion to that of García:

The vocal attack is produced by the lips of the glottis being closed, and then a moderate explosion or expulsion of air taking place through the glottis chink. It must be distinct and decided, but free from harshness. The degree of firmness depends on the expression intended.⁶⁵

Stockhausen continued his description of facial lip expression during formation of consonants and breath control of expulsion of the sound. Stockhausen mimicked García's concepts of breath and breathing, calling for the use of diaphragmatic breathing and rib

breathing for full extension of breath. He quoted García's statement on how to perform the *messa di voce*.

Other Traditional Italian Methodologies

The Lamperti family lineage, Shakespeare, and Vaccai all had methods that stood on the shoulders of those before them. There are as many similarities as differences between each of these methods of singing.

LAMPERTI I

Francesco Lamperti (1813-1892) was an Italian voice teacher who believed that most singers on the stage performed prior to the completion of their vocal training. His son, Giovanni Lamperti (1839-1910), also a voice teacher, followed in his father's footsteps. Lamperti's vocal philosophies covered the *bel canto* style of full tone and three registers (chest, mix and head) written in *A Treatise on the Art of Singing*, London, 1877.

He published other books, *Guida teorico-pratica-elementare per lo studio del canto*, 1875; *Studi di bravura per soprano*, 1883; *Esercizi giornalieri per soprano o mezzo-soprano*, 1883; and *L'arte del canto*, 1864. According to Stark, Lamperti's key elements are described as only four; "*legato, portamento, piccettato, and martellato* – with *legato* being the most important."⁶⁶ Lamperti was a campaigner for attention to dynamics and for the ability to sing *pianissimo* tones with the same emotions and delivery as a *forte* sound. He had students sing with full voice and then practice decrescendos and crescendos, repeating the process. He was a strong advocate for the vocal method of Tosi, and the basis for his vocalises was based on the Mancini and García II Italian methods.

Coffin provides an account of Lamperti's "true method of singing," which is "in harmony with nature and the rules of health,' and the chief requirements of the singers are 'voice, musical talent, health, power of apprehension, diligence, and patience.'"⁶⁷ Lamperti requires teachers to have the ability to hear the nuances of the voice via a "sensitive ear and gift of intuition,"⁶⁸ and the dedication to build healthy voices. Some of his students were Emma Albani (1847-1930), a Canadian soprano, Italo Campanini (1845-1896), an Italian tenor, Maria van Zandt (1858-1919), an American soprano, Herbert Witherspoon (1873-1935), an American bass, William Shakespeare (1849-1931) an English tenor, and David Bispham (1857-1921), an American baritone.

LAMPERTI II

Giovanni Battista Lamperti (1839-1910) was the son of Francesco, a voice teacher. As the *bel canto* teachers before him, he also believed that the "true method of singing is in harmony with nature and the rules of health."⁶⁹ Francesco's writings include; *L'arte del canto*; *The Technics of Bel Canto*, 1905; German Translation, *Die Technik des Bel Canto*, 1905; and *Scuola di Canto*, (8 volumes of solfeggi and vocalises), 1931. Lamperti was asked several questions about voice production and vocal health. His responses follow:

Q. What is the best time for exercising the voice?

A. After the period of digestion, whether it be in the morning or afternoon, and particularly in the evening, as it is then that the pupil will find himself in the fullness of his physical and mental powers.⁷⁰

Lamperti is asked how one should use his/her voice while studying.

Q. What is the most advantageous way of studying?

A. Singing with the voice full and clear, with as much grace and ease as possible, and being very careful to avoid forcing.⁷¹

Lamperti addressed the question of duration one should practice.

Q. Should singing be practiced for long or short periods at a time?

A. The general rule is to study moderately, and with a variety of exercises, always finishing before feeling tired.⁷²

Q. How should the pupil study his exercises?

A. He should study them mentally, until he has thoroughly understood their true nature and then he may sing them.⁷³

Lamperti had several words of advice for his students: (1) no humming, (2) no singing for long periods of time at the extremes of the vocal range, (3) no singing exclusively in the middle range, (4) exercises should be practiced daily on vowels, and (5) scales and arpeggios should be practiced. Lamperti knew that no two individual voices were alike. On the controversy of registers, Lamperti taught the three-register theory for female voices, which were: chest, mixed, and head, and, for males, two voices; chest and mixed. He advocated singing without forcing and with a full, clear tone. Lamperti believed that “the low-quality versus the lack of high-quality singing is due to the void of knowledge of vocal technique and should encompass a thorough knowledge of the vocal instrument.”⁷⁴

Lamperti was proud that his lineage of Italian singing masters could be traced back to Paccierotti and Velutti. His own students from Italy, Dresden and Berlin included David Bispham (1857-1912), American baritone; Franz Nachbaur (1835-1902), German tenor; Ernestine Schumann-Heink (1861-1936), German contralto; and Marcella Sembrich (1858-1935) Polish coloratura soprano.

According to Coffin, the impact of the teachings of the García, Marchesi, Stockhausen and Lamperti have been “diluted in three generations until they are

practically non-existent.”⁷⁵ Lamperti began to feel that decline while he was alive, believing the cause was singers being thrust upon the stage before they were thoroughly prepared.

SHAKESPEARE

Lamperti’s lineage lived on through students like William Shakespeare (1849-1931) an English tenor, pianist, composer and teacher. He is known for his singing, composing and extolling of the Lamperti method. He published *The Art of Singing* (1898) a three-part publication, his own version of the Lamperti method. Shakespeare did not follow the method to the letter; thus, his method formed a distinct branch of vocal study. It does, however, remain a vocal study that reflects the Italian *bel canto* tradition. Shakespeare’s writings include *Singing for Schools and Colleges* (1907), *Plain Words on Singing* (1924), and *The Speaker’s Art* (1931). Shakespeare believed that a singer’s notes should be produced in full tone and with accurate pitch, and that sound should be produced naturally and expressively to convey feelings. The vocal training taught to his students encouraged them to be more like “art,” and, according to Shakespeare, should be cultivated diligently and industrially.

VACCAI

Nicolo Vaccai (1790-1848) was an Italian opera composer and singing teacher. In 1838 he published *Metodo pratico de canto (Practical Vocal Method)*, which remains in print today. Vaccai also composed brief songs with texts by Metastasio, for the beginning or amateur singer. Each song had vocalise-like qualities: basic breathing technique,

Italian vowels, intervallic melodies of thirds, fourths, and fifths, up to an octave. These songs were originally written in Italian and later translated into English.

Vaccai believed that anyone who wanted to improve his singing should begin with Italian. His vocalises do not strain the vocal cords and all notes remain in a comfortable, medium range. *Metodo Pratico de Canto* has been transposed into various keys and translated into several languages, for beginning and amateur singers. From the methods mentioned above, Vaccai's method is one that survives to our current times.

Twenty and Twenty-first Century

Leaders of Voice Science and Otolaryngology

William Vennard, Oren Brown, Ralph Appelman, Richard Miller, Dr. Ingo Titze, Dr. Scott McCoy, Dr. Richard Stasney, and Dr. Robert Thayer Sataloff are leaders of the twentieth and twenty-first centuries in the field of pedagogical and vocal science research who have contributed significantly to the art of singing. The medical literature regarding the traditions of vocal warm-ups and vocalises and how they affect today's professional voice users is in need of further development. An important article is *Vocal Health Equals Singing for a Lifetime* by Richard Stasney, John David Garrett and Dr. Sharon Radionoff (1995). Because of the work of these men and women and their desire to establish a bridge between vocal health and vocal performance, *bel canto* has survived into the new millennium.

Besides the systematic traditions of vocalises and vocal warm-ups there are commercial vocal warm-up products available for all voice types and ranges. Some are developed by scholarly endeavors, however, the balance of these commercial products

are without a sound pedagogical base. In addition to compact discs, and video demonstrations there are examples of vocal lessons and vocalise warm-ups via internet presentations.

William Vennard

William Vennard (1909-1971) was a Californian and vocal pedagogue. A pioneer during the mid-twentieth century, he established new criteria for scientific research in the study of singing, vocal anatomy and physiology. His 1967 book, *Singing, the Mechanism and the Technic*, was one of the foremost resources for research into the human voice and singing and “has become the reference book of many a voice student and pedagogue for knowledge of anatomy and physiology of the vocal tract, and references to research on physics and acoustics of musical sound.”⁷⁶ He was responsible for integrating contemporary scientific research in the area of vocal anatomy and physiology.

Vennard’s other book, *Voice Production: The Vibrating Larynx*, is considered the finest in medical research. Vennard is recognized by his colleagues as having been most active and influential in promoting dialogue between singers, voice teachers, vocal scientists, otolaryngologists, physicists, and psychologists. His vocal exercise of choice was that of the “song-approach” and Vennard “states that the public would much rather hear a fine Bach or Handel aria than a vocalise of Vaccai, Sieber, or Concone.”⁷⁷

Oren Brown

Oren Brown (1909-2003) was a private New York voice teacher and faculty member at The Juilliard School. Brown became a major spokesperson in voice science and singing, as well as in voice therapy, vocal rehabilitation and research. *Discover Your*

Voice: How to Develop Healthy Voice Habits, (1996) Brown instructs the student on the primal sound, vocal release, posture and breathing, range and registers and agility, resonance, and much more. His other writings include articles for the *National Association of Teachers of Singing Bulletin*, a journal for singing teachers; and *The Voice Foundation*. Brown was one of the founding teachers of the Juilliard Symposium, known today is known as the *Voice Foundation*, located in Philadelphia.

His vocal exercises of choice were those of systematic warm-up. His book is accompanied with a CD that includes some of his widely used vocal exercises. Brown's students all had the advantage of a brief vocal warm-up prior to singing repertoire in their lessons. His students include those in the above mentioned fields, such as John Aler, Kathryn Barnes-Boroughs, Mark Bosnian, Cindy Dewey, Bruce Kolb, Janeal Sugars, and Leon Thurman.

Dudley Ralph Appelman

Dudley Ralph Appelman, (1908-1978) was the author of *The Science of Vocal Pedagogy: Theory and Application* (1967), which has become a required reading for anyone interested in voice science, vocology and improving his/her singing performance. His vocal philosophy promoted "coordination of body and sound," which he considered an "athletic task requiring an ability that varies with each individual singer."⁷⁸ Appelman expected his students to perform drills or vocal exercises precisely. To attain proper muscular coordination for a substantial career, he felt that:

the finest singers who attain professional stature usually possess this unification of breath pressure and phonation naturally, but a greater number of voice students must discover this body-voice relationship through thoughtful vocal exercise and

guidance, for breathing for singing is a planned muscular discipline which can be learned by those who are dedicated.⁷⁹

So important was this connectivity between breath and vocal positioning in Appelman's view that he felt if singers did not have this coordination, their careers would be limited and that "other vocal faults will emerge within their technique because they lack muscular coordination."⁸⁰ He indicates that certain vocal repertoire would be out of the grasp of singers who did not have this coordination, because they would not be able to sing it technically. Appendix F contains Appelman's explanations of objectives of the drills for warming up the voice.

Robert Gurnee and William Vennard in the 1971 NATS Article "In Memoriam: Selected Articles from the Writings of William Vennard" assert that the scientific approach to studying voice "led to the rejection of many of the assertions of the *bel canto* singing method, particularly in the areas of vocal registration and vocal resonance."⁸¹ Several theories of the rejection and/or acceptance between scientific and traditional approaches to singing are well-founded. Where Appelman himself believed that there was a creation of a hybrid of the two historical positions, the *bel canto* method and the scientific approach came together, "He speaks very little of the exercises or vocalises."⁸²

Appelman and Vennard were also part of a group of pedagogists [pedagogues] who developed courses of study for beginning voice teachers, adding these scientific ideas to the standard exercises and empirical ways to improve vocal technique, and by 1980 the subject of voice pedagogy was beginning to be included in many college music degree programs for singers and music educators.⁸³

The contributors prior to the twenty-first century are well known: Richard Miller and Johan Sundberg, both of whose work has increased connections between singers,

teachers, vocologists, voice scientists and otolaryngologists. Their efforts have accelerated in the past half century with regard to vocal registers, air flow, and air pressure. Those who have been influenced by Appelman and Vennard are also some of the leading names in the area of pedagogy. Many have and continue to develop courses for all levels of singers, teachers, vocologists, and voice scientists. They set the benchmark for excellence in scholarship and research. These pedagogical courses are now more readily available in universities and colleges and some have evolved into degree programs for singers and teachers alike. Some of these well known and respected scholars are Stephen F. Austin, Jana Holzmeier, John Nix, Scott McCoy, Karen Peeler, and Darlene Wiley.

Richard Miller

Richard Miller (1926-2009) was a singer, vocal pedagogue, and professor at Oberlin College Conservatory of Music. He wrote many books and articles for over one hundred twenty journals, serving as editor on musical anthologies and collections. He had written several books, two of which are *National Schools of Singing* (1977) and *The Structure of Singing* (1986). His article entitled “Historical Overview of Vocal Pedagogy” a selection in the 2006 *Vocal Health and Pedagogy: Science and Assessment*, edited by Robert T. Sataloff, has been especially influential.

In his article, “Historical Overview of Vocal Pedagogy” Miller discusses a two part approach on dealing with vocal pedagogy:

First, the instructor must approach the study of pedagogy free from aesthetic bias with emphasis on vocal efficiency. Second, the instructor must deliver the facts, and only the facts, and encourage the students to interpret, and to connect the

information they are given in the classroom with the information that they are given in the voice studio.⁸⁴

Miller considers the importance of instruction in pedagogy a facilitator to better understanding of the vocal mechanism, leading to more efficient training and to students who will be equally successful in maintaining vocal health in them and in others. Benefits from Miller's most recent research provides us an international accessibility for singers, teachers and voice scientists through which to acquire knowledge, internationally.

In her 1995 dissertation, "A Study of Vocal Exercises and Vocalises Used in Selected University Vocal Programs," Mary Jones Saathoff outlines four reasons through which Miller explains the validity of vocal exercises and vocalises: "1. To physically warm-up the voice, 2. To develop good vocal technique, 3. Ear Training, and 4. To prepare for literature."⁸⁵ This repeats ideas from the *Bel Canto* era on how to practice. Miller's suggestion for time allotment in practicing is "about twenty minutes of warm-up time, and that warming-up provides both psychological as well as physical benefits to the singer."⁸⁶

Ingo Titze

Ingo Titze (1942--) is a tenor, vocologist, voice scientist, and author. Titze spends a portion of his time as the director of National Center for Voice and Speech (NCVS) and as professor in the Department of Communication Sciences & Disorders at The University of Iowa. Titze has published over 550 articles on voice, some in the *Journal of Singing*; and he also wrote the book *Principles of Voice Production* (1994), translated into several other languages and he is a researcher in audiology. In *Principles of Voice Production*, Titze delves into the physics and physiology of vocal production and vocal

mechanics. His concentration is on the applied uses and health concerns of the voice. His insights from a scientific viewpoint make a convincing argument for the importance of warming up the voice. Stretching and using range of motion is beneficial in order to have a greater range of movement, in a fashion similar to that of an athlete. For examples of his “Favorite Five Vocal Warm-ups for Singers,” see Appendix E. They are reprinted here with permission.

Vocology is the science and practice of voice habilitation combining scientific and voice professional programs (see glossary). Titze trains others in vocology at NCVS center in Denver, Westminster Choir College of Rider University, in New York City at The Grabscheid Voice Center at Mount Sinai Medical Center (NY), and at the Vox Humana Laboratory at St. Luke's Roosevelt Hospital in New York.

Robert Thayer Sataloff

Robert Thayer Sataloff (1943--) is a Medical Doctor and Doctor of Musical Arts. He is editor-in-chief of the *Journal of Voice*, editor-in-chief of *Ear, Nose and Throat Journal*, associate editor of the *Journal of Singing*, as well as a vocal health scientist, researcher, pedagogue, singer, vocal teacher, conductor and educator. His involvement in the arts and medicine, and his contributions to these fields is monumental. Sataloff has written over six hundred fifty publications, including thirty eight books. He continues to practice medicine in the care of professional voice users.

Sataloff has assisted writers in the vocal scientific community by encouraging others to publish crucial information for the field. His most noted publications are in two editions of *Vocal Health and Pedagogy*. 2nd ed. used in this research. The great masters of

the past relied on one another, as well as composers, patrons, and impresarios to get their vocal methods and ideas across. In the late twentieth and twenty-first centuries we are blessed to have the people like of Richard Miller, Robert Sataloff, Richard Stasney, and many others.

Vocal Instructors

Coffin's insightful perspective about teachers "of the past" seems to be "no longer known when the careers of their singers come to an end, unless they taught teachers of singing or had assistant teachers."⁸⁷ Due to changes in technology, science, and research, teachers of voice were close to extinction or were besieged by the notion that they were no longer needed and were being replaced by vocal scientists, and researchers. In the late twentieth century these assumptions could not have been further from the truth; instead, vocal teachers, are regrouping and reinventing themselves by finding some 'fad or gimmick' to improve their vocal training skills, to make up for the lack of the scientific knowledge in their own vocabulary. They found solace in the Alexander Method, Feldenkreis, and other such posturing methods. This was a brilliant move on their part; by supplementing their current practice, they were able to bring to the vocal scientists other factors that assisted in the research process. In doing so, they promoted their own vocal methods that included a better understanding of anatomy, posture, breath and breathing, tone color and the scientific ramifications of these elements. Should these elements be incorrect, the student falls into the category of a patient with vocal disorders, with their mouths open and a laryngoscope peering down on their vocal folds. Stark, in 1999, wrote:

modern voice scientists do not generally concern themselves with elaborate historical or pedagogical constructs like *bel canto* nor do they put much stock in resonance imagery, ‘placing the voice,’ or other traditional techniques of voice teaching. Rather, they try to isolate specific physiological, acoustical, and aerodynamic aspects of the singing voice in the controlled environment of the voice research laboratory.⁸⁸

Sabol et al., believe that Richard Miller’s 1986 book, *The Structure of Singing*, is “one of the most comprehensive vocal pedagogy texts to date.”⁸⁹ Miller explains the early Italian terminology, using a physiological and scientific approach. Vocalises are performed with distinctive dynamic levels, soft singing to louder expression are discussed. In chapter 7 on the vocal warm-ups, before his recent death, Miller shed light on the current practice via email correspondence.

Recent Studies

The most recent scientific research on teaching, practicing, and warming up the voice, and the connection of these to the *Bel Canto* style of singing, is followed through in the studies of Kathleen Rose De Jardin, Constance Rock, Michael Kutner, Bernadette Timmermans, Karen Sell and Edward Foreman. Kathleen Rose DeJardin’s 1992 dissertation, “The Accompanied Vocalise and its Application to Selected Baroque, Classical, Romantic and Twentieth Century Songs and Arias,” facilitates a second look at the vocalise as a “vehicle for voice training since the ‘golden age of ‘bel canto.’”⁹⁰ Significant research that was done on the style of singing traits is also covered, including tone color, legato phrasing, flexibility, agility and smoothness of register change. Constance Rock’s 2005 dissertation, “The Application of Vocal Literature in the Correction of Vocal Faults,” is yet another useful book on the same style of singing, tone

color, legato phrasing, flexibility, agility and registral continuity. This research represents an additional step towards a better understanding of vocal health in producing the tone.

In the 2008 dissertation by Michael Kutner, *“Here we Study Voice,” Cornelius Reid’s Functional Voice Training in Historical Perspective*, investigates the works of Tosi, Mancini, Manfredini, and García. Bernadette Timmerman’s 2005 study on *“Analysis and Evaluation of a Voice-Training Program in Future Professional Voice Users,”* focuses on the vocal characteristics and a need for voice-training and vocal hygiene for future voice professionals.

Karen Sell in “The Disciplines of Vocal Pedagogy” states,

At the present time many teachers all over the world use similar technical exercises and the question of where they originated is often asked. In fact, most of the exercises heard in the world’s studios today are from the Old Italian masters and with a competent teacher good results are achieved.⁹¹

Edward Foreman, leading researcher of the Italian Bel Canto era and vocal style articulates it best:

The tradition, image of bel canto – particularly Italian bel canto – as all sweetness and light obscures the very real expressivity of the delicate nuances, the chiaroscuro sound, the rhetorical flourishes which enliven the melody – all made possible by an easy vocal emission, but not limited by or to it. Even the singer with a flawed vocal emission or a limited vocal instrument could still enchant and enthrall by his singing, by the manner in which he presented the song – in short, Style.⁹²

Bel Canto as a vocal method has not died, but existed over the centuries, to evolve and reinvent itself with the advances of technological and scientific wisdom. We all agree that there is no confusion that beautiful singing is the ultimate goal of those who study and contribute to the development of Bel Canto.

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- ¹ James Stark, *Bel Canto: A History of Vocal Pedagogy* (Toronto: Univ. of Toronto Press, 1999), xx.
- ² The earliest account of eunuch or castrati is found around 400AD in Constantinople.
- ³ *New Grove Dictionary of American Music*. 4 vols. Edited by H. Wiley Hitchcock and Stanley Sadie, NY: Grove's Dictionaries of Music, 1986. 1986 Available online at <http://www.grovemusic.com> Bel Canto
- ⁴ W.J. Henderson, *Early History of Singing* <<http://books.google.com/books>>(NY: Longmans, Green and Co. 1921), 19.
- ⁵ Stark, *Bel Canto*, 190.
- ⁶ Gordon Holmes, *Treatise on Vocal Physiology and Hygiene with Especial Reference to the Cultivation and Preservation of the Voice*, (London: J. & A. Churchill, 1881), 26.
- ⁷ Philip A. Duey, *Bel Canto in its Golden Age: A Study of its Teaching Concepts* (NY: King's Crown Press, 1951), 26-27
- ⁸ Philip A. Duey, *Bel Canto in its Golden Age: A Study of its Teaching Concepts* (NY: King's Crown Press, 1951), 26-27 Silva and Baker, "The Beginnings of the Art of "Bel Canto": 58.
- ⁹ Rebecca Baltzer, *New Grove Dictionary of American Music*. 4 vols. Edited by H. Wiley Hitchcock and Stanley Sadie, NY: Grove's Dictionaries of Music, 1986. 1986 Available online at <<http://www.grovemusic.com>>
- ¹⁰ Baltzer, *New Grove Dictionary*
- ¹¹ Berton Coffin. *Historical Vocal Pedagogy Classics*. (Lanham, MD: Scarecrow Press, 1987), xv.
- ¹² *American Heritage Dictionary*
- ¹³ James Stark, *Bel Canto*, xxi.
- ¹⁴ James Stark, *Bel Canto*, 156.
- ¹⁵ Stark, *Bel Canto*, 194-197.
- ¹⁶ Julianna Wrycza Sabol, Linda Lee and Joseph C. Stemple, "The Value of Vocal Function Exercises in the Practice Regimen of Singers." *Journal of Voice* 9 (1995): 15.
- ¹⁷ Rodolfo Celletti, *A History of Bel Canto* (London: Oxford University Press. 1996), 15-16.
- ¹⁸ W.J. Henderson, *Early History of Singing*, 104.
- ¹⁹ Malcolm Boyd and John Rosselli. "Tosi, Pier Francesco." In *Grove Music Online. Oxford Music Online*, <http://www.oxfordmusiconline.com.ezproxy.lib.utexas.edu/subscriber/article/grove/music/28201> (accessed April 6, 2009).
- ²⁰ Tim Carter, et al. "Caccini." In *Grove Music Online. Oxford Music Online*, <http://www.oxfordmusiconline.com.ezproxy.lib.utexas.edu/subscriber/article/grove/music/40146pg1> (accessed April 6, 2009).
- ²¹ Rodolfo Celletti, *A History of Bel Canto* (London: Oxford University Press. 1996), 15-16.
- ²² Karen Sell, *The Disciplines of Vocal Pedagogy: Towards an Holistic Approach*, (UK: Ashgate, 2005), 14.
- ²³ Mary Jones Saathoff, "A Study of Vocal Exercises and Vocalises Used in Selected University Vocal Programs." (PhD. diss. Texas Tech University. 1995), 4.
- ²⁴ Coffin, *Historical Vocal Pedagogy Classic*, 3.
- ²⁵ Mary Jones Saathoff, "A Study of Vocal Exercises and Vocalises, 4.
- ²⁶ Owen Jander, et al. "Singing."
- ²⁷ Judith Coe, *History of Voice Pedagogy* http://carbon.cudenver.edu/~jcoe/vocalped_timeline.htm
- ²⁸ Grove John Rosselli. "Mancini, Giovanni Battista." In *Grove Music Online. Oxford Music Online*, <http://www.oxfordmusiconline.com.ezproxy.lib.utexas.edu/subscriber/article/grove/music/17595> (accessed April 6, 2009).
- ²⁹ John Rosselli "Mancini, Giovanni Battista."
- ³⁰ John Rosselli "Mancini, Giovanni Battista."
- ³¹ John Rosselli "Mancini, Giovanni Battista."
- ³² John Rosselli "Mancini, Giovanni Battista."
- ³³ Coe, *History of Voice Pedagogy*
- ³⁴ Martha Elliot, *Singing in Style: A Guide to Vocal Performance Practices*. (New Haven, CT: Yale Univ. Press, 2006), 130.
- ³⁵ Stark, *Bel Canto*, 166.
- ³⁶ Coffin, Berton Coffin, *Historical Vocal Pedagogy*, 18.
- ³⁷ Karen Sell, *The Disciplines of Vocal Pedagogy: Towards an Holistic Approach* (UK: Ashgate, 2005), 22.
- ³⁸ Karen Sell, *The Disciplines of Vocal Pedagogy*, 23.
- ³⁹ Karen Sell, *The Disciplines of Vocal Pedagogy*, 23.
- ⁴⁰ James Stark, *Bel Canto*, 78-80.
- ⁴¹ Berton Coffin, *Historical Vocal Pedagogy*, 29.
- ⁴² Manuel Garcia, *Traité complet de l'art du chant* (Reprint of the 1872 Ed. NY: DaCapo Press, 1975), 20.

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- ⁴³ Manuel Garcia, *Traité complet de l'art du chant*, 20.
- ⁴⁴ Diane Jezic and Elizabeth Wood, *Women Composers* (NY: Feminist Press, 1994), 129-130.
- ⁴⁵ Barbara Kendall-Davies, *The Life and work of Pauline Viardot Garcia* (Cambridge Scholar Press, 2003).
- ⁴⁶ Pauline Viardot-García, *An Hour of Study: Exercises for the Voice: Heure d'etude* (Melville, NY: Belwin Mills, 197?), 8.
- ⁴⁷ Pauline Viardot-García, *An Hour of Study*, 8.
- ⁴⁸ Viardot's students were amateur performers as well as professional singers. The training she required was for all her students. She continued the traditions from her family line as well as adopting her own method for her students, which were all women.
- ⁴⁹ Pauline Viardot-García, *An Hour of Study*, 8.
- ⁵⁰ Pauline Viardot-García, *An Hour of Study*, 7.
- ⁵¹ Mathilde Marchesi, *Vocal Method, Op 31: Methode de Chant Theorique et Pratique*. (Milwaukee, WI: G. Schirmer, 1967), xiv.
- ⁵² Mathilde Marchesi, *CD SheetMusic: The Art of Singing, Book 1, Opus 2*, (PA: Theodore Presser Co., 2001), 3.
- ⁵³ Berton Coffin, *Historical Vocal Pedagogy*, 33.
- ⁵⁴ Mathilde Marchesi, *CD SheetMusic: The Art of Singing*, 1.
- ⁵⁵ Mathilde Marchesi, *CD SheetMusic: The Art of Singing*, 3.
- ⁵⁶ Julianna Wrycza Sabol, "The Value of Vocal Function Exercises in the Practice Regimen of Singers." (Diss. University of Cincinnati. 1992), 19.
- ⁵⁷ Mathilde Marchesi and Philip Lieson Miller, *Bel Canto*, xiv.
- ⁵⁸ Mathilde Marchesi and Philip Lieson Miller, *Bel Canto*, xiii.
- ⁵⁹ Mathilde Marchesi, *CD SheetMusic: The Art of Singing*, 6.
- ⁶⁰ Mathilde Marchesi, *CD SheetMusic: The Art of Singing*, 36.
- ⁶¹ Sell, *The Disciplines of Vocal Pedagogy*, 27.
- ⁶² Stockhausen, Julius. *A Method of Singing* Trans. Sophie Löwe, London: Novello, Ewer and Co., 1884. .
<http://books.google.com/books>
- ⁶³ Karen Sell, *The Disciplines of Vocal Pedagogy*, 26.
- ⁶⁴ James Stark, *Bel Canto* 171.
- ⁶⁵ Stockhausen, Julius, *A Method of Singing*, 9.
- ⁶⁶ James Stark, *Bel Canto*, 166.
- ⁶⁷ Berton Coffin, *Historical Vocal Pedagogy*, 63.
- ⁶⁸ Berton Coffin, *Historical Vocal Pedagogy*, 63.
- ⁶⁹ William Earl Brown, *Vocal Wisdom: Maxims of Giovanni Battista Lamperti*. (Boston: Crescendo Publishing Company. 1931), 114-115.
- ⁷⁰ Giovanni Battista Lamperti, *The Technics of Bel Canto* (English Translation) (NY: Schirmer, 1902 Public Domain), 14.
- ⁷¹ Giovanni Battista Lamperti, *The Technics of Bel Canto* Lamperti, 14.
- ⁷² Giovanni Battista Lamperti, *The Technics of Bel Canto* Lamperti, 14.
- ⁷³ Giovanni Battista Lamperti, *The Technics of Bel Canto* Lamperti, 14.
- ⁷⁴ Berton Coffin, *Historical Vocal Pedagogy*, xi.
- ⁷⁵ Berton Coffin, *Historical Vocal Pedagogy*, xi.
- ⁷⁶ Julianna Wrycza Sabol. "The Value of Vocal Function Exercises in the Practice Regimen of Singers." (Diss., University of Cincinnati. 1992): 27.
- ⁷⁷ Mary Jones Saathoff, "A Study of Vocal Exercises and Vocalises": 28.
- ⁷⁸ Dudley Ralph Appelman, *The Science of Vocal Pedagogy*, 23.
- ⁷⁹ Dudley Ralph Appelman, *The Science of Vocal Pedagogy*, 23.
- ⁸⁰ Dudley Ralph Appelman, *The Science of Vocal Pedagogy*, 23.
- ⁸¹ Robert Gurnee and William Vennard, "In Memoriam: Selected Articles from the Writings of William Vennard" *NATS Bulletin* (1971), 34.
- ⁸² Gurnee and Vennard, "In Memoriam": 34.
- ⁸³ Gurnee and Vennard, "In Memoriam": 34.
- ⁸⁴ Richard Miller, "Historical Overview of Vocal Pedagogy." *Vocal Health and Pedagogy: Science and Assessment*. Robert T. Sataloff, Editor. (San Diego, Oxford: Plural Publishing, 2006), 207.
- ⁸⁵ Mary Jones Saathoff, "A Study of Vocal Exercises and Vocalises": 18.
- ⁸⁶ Mary Jones Saathoff, "A Study of Vocal Exercises and Vocalises": 18.
- ⁸⁷ Berton Coffin, *Historical Vocal Pedagogy*, ix.
- ⁸⁸ James Stark, *Bel Canto*, xxii.

⁸⁹ Sabol, “The Value of Vocal Function Exercises”: 26-27.

⁹⁰ Kathleen Rose DeJardin, “The Accompanied Vocalise and Its Application to Selected Baroque, Classical, Romantic and Twentieth Century Songs and Arias.” (DMA diss., The University of Arizona, 1992).

⁹¹ Sell, *The Disciplines of Vocal Pedagogy*, 17.

⁹² Edward V. Foreman, *The Art of Bel Canto in the Italian Baroque: A study of the Original Sources*. (MN: Pro Musica Press, 2001), xiii.

CHAPTER 3

VOCAL WARM-UPS

Warm-Up

In some vocal studios “vocalise” and “vocal warm-up” are synonymous. Unlike the warm-up, a “vocalise” was a written set to rules and guidelines with relatively clear reasons on how to approach any given exercise. García, Caccini, Vaccai, Marchesi, Concone, et al had sets of rules on how a specific exercise was to be performed. Often times these exercises were solfèged or on a singular vowel in a systematic order. The order of the vocalises did have a specific rational working on breath, single vowels for even tone color, sustaining, and timbre. Fundamental to most of the *Bel Canto* methodologies was the gradual move towards acceleration of exercise, gradual widening of range, increased rhythmic complexity, increase of vowels to consonant ratio, and increase of volume. This change to a more complex form of singing requires a more physical and repetitive skill set. Duration of practice time was kept relatively the same, ten to fifteen minutes of warming up the voice and equal time of rest.

The “vocal warm-up” is in contrast to the *bel canto* vocalises traditions, an amalgamation of many of the tradition methods and exercises. In addition, these exercises were augmented by studies in physical, more athletic methodology. The incorporation of twentieth century techniques like Tai Chi, Alexander, Feldenkrais, Linklater, and yoga has allowed the singer and teacher to investigate how the physical body reacts in connection with the vocal mechanics of singing. Generally, a vocal warm-up precedes the more difficult “vocalise” exercises, therefore the vocal warm-ups integrate an athletic

approach, relaxation movements, body stretching, slow walking for an increase of blood flow, and jaw, head and neck massages. These warm-ups are the preparatory exercise routine prior to both the full physical, strenuous “vocalise” and performance, and can be repetitive skills, adapted to develop and maintain vocal fitness. John Nix in an interview said that “the repetitiveness of the skill also has performance benefits.”¹

Many benefits from a “vocal warm-ups” include; (1) Increase blood flow to working muscles, (2) Elevated heart rate, (3) Increased cardio respiratory response, (4) Raised core body temperature, (5) Muscular strength and coordination, (6) Body and breath connected, (7) Ribs more flexible and muscles prepared for sustaining longer vocal melodic lines, (8) Timbre and tone quality placed, (9) Larynx in a more relaxed position and ready for the more difficult scalar and rhythmic exercises, (10) Body and larynx more flexible and agile, ready to respond to a wider range, (11) Flexibility of ligament and tendons, (12) Increase range, (13) Improved pitch accuracy, (14) Clearer mental focus, and (15) More coordinated vocal performance. It should be noted here that the psychological benefits of warming up the voice will not be discussed; clearly, there is need for more research in this area.

These benefits come as a result of practicing, drilling, and repetitive exercises. Titze and Verdolini suggest that “blocked, constant massed practicing of exercises, starting with general and moving to more specific aspects which are similar to the demands of the music (and/or excerpted phrases of the music itself) will give the best results.” However, Titze and Verdolini also believe that there is “added benefit is that distributed practice is much less fatiguing to vocal fold tissue.”² This distributed practice

is firmly based in the old Italian *Bel Canto* singing methods. The vocal methods of García, Mancini, Caccini, Marchesi, and Rossini adopted a practice regimen that allowed for a distributed practice segment. In *The Singing Voice* by Pat Wilson wrote that singers such as Caruso also believed in a distributed practice segment, “Until they become thoroughly proficient in managing the voice, pupils should never devote more than fifteen minutes a day to practice.”³ In today’s ever increasing demand on our time, the segmentation of practice regimen is dispersed throughout the day.

Marcus Low, in *Health24*, (August 2005) wrote that one “Always Warm Up.”⁴ Become more like an athlete to avoid physical injury. “Musicians are putting athletic demands on fine motor musculature and should similarly be religious about warming up before practice or performance.”⁵ Leon Thurman, et al., describes their idea of warm-up:

Before you use your voice vigorously and/or extensively, you need to increase blood flow to your vocal muscles and vocal fold tissues, raise their temperature, stimulate lubricating mucus flow , and ‘tune’ up your bodymind neuromuscular programs for vigorous, high-speed, but precise and ‘smooth’ movements (Vegso, 1995a). Those changes strongly contribute to short-term flexibility, elasticity, and agility, and endurance of your vocal muscles and tissues, if warm-ups are done in a way that encourages those benefits.⁶

Several deciding factors need be considered for establishing a warm-up regimen; age (child, pre-teen, teen, college, adult), level of study (beginner, intermediate, advanced, professional), current performance schedule (once a year, once a month, once a week, daily (7-8 shows a week), style of singing (classical, contemporary (inclusive of pop, jazz, country, rock etc.)), degree of wellness (healthy, mild vocal trauma, severe vocal disorder), and time of day. Each singer’s warm-up regimen and singing strategy is as

different as his/her finger print; no two are alike. When in doubt, consult your specialized singing otolaryngologist!

Duration of practice time is kept relatively the same, ten to fifteen minutes of warming up the voice and equal time of rest. The practice of “vocal warm-up” can vary in duration; hourly, daily, weekly, monthly. The variables for duration are many, including; time allotment set aside for warming up, age, and amount of time spent on the previous series of warm-ups. A Wake Forest University Baptist Medical Center team of doctors, say that “most of a singer's warm-up is devoted to the objective of obtaining a beautiful vocal timbre through the use of an enormous variety of vocal calisthenics.”⁷ Warming up the voice is a physical, psychological, mental and emotional event.

Julie Rosewald in her 1892 book, *How Shall I Practice?* tells her students they should “never exceed fifteen minutes at a time in [your] practicing. You should strive to obtain quality, not quantity.”⁸ Brent Jeffrey Monahan in his (1978) book, *The Art of Singing: A Compendium of Thought on Singing* wrote “almost four dozen authors do suggest practice time intervals and lengths of repose in between. No two authors express exactly the same opinion, and slight differences in thought make it impossible to quote any authors as typical.”⁹ Each of the responses will be different, where an average recommended duration of vocal warm-up can be anywhere from ten to twenty minutes. Strongly discourage a student from overdoing a warm-up unless this is the singing regimen for the entire day and no performance will be required.

Advocates for the “5 Minute” physical and vocal warm-up say that they are first low energy and gentle. Manuel García suggests that “the student must sing [...] first

slowly enough to give each individual note all the requisites.”¹⁰ Millie Ryan in the 1910 version of “What Every Singer Should Know” says that “a beginner should not practice much more than five minutes at a time.”¹¹ García and Ryan have a grasp on the meager beginnings of practicing. The beginner needs to intake a lot of information about the anatomy and physiology of the voice, in addition to learning how to coordinate his/her breath and breathing to the sound that comes out of own's mouth. There are many things to be thinking about and, as said earlier; there is a mental component to warming-up the voice. If there is too much information given, the student becomes discouraged and/or reticent to return for fear of failure or lack of success in achieving the goals prepared by the instructor. Sergius Kagen in his (1950) book, *On Studying Singing*, supports the slower methodical manner of warming up the voice in scales.

Some believe that ‘a few’ minutes will be satisfactory for a vocal warm-up. Thomas Hemsley wrote, *Singing and Imagination: A Human Approach to a Great Musical Tradition*, (1998), “A few minutes of physical warming up, (face and eyes) [...] are more valuable than long spells of trying to warm-up the voice by singing badly.”¹² There are others such as Dr. Barbara Jacobson, Kenneth Phillips, Bruce Schoonmaker, and Pat Wilson who believe that ten to fifteen minutes is a sufficient amount of time to warm up the voice. Some caution that the longer time of warm-up is exhausting, tough, harsh, and severe. Most will agree that the actual warm-up exercise need be personalized for the individual student’s strengths and weaknesses. Separating out the time is also suggested dividing the time even further, five minutes followed by a rest period and then returning to an additional ten minutes of warm-up. The student whose practices a warm-

up of ten to fifteen minutes should then reverse in the same amount of time for a cool-down. In the view of Leon Thurman, et al, it is recommended that:

cool down begin at the end-level of vigorous voice use and do a reverse warm-up. Gradually slower, less strenuous versions of earlier more vigorous vocal coordination's will gradually reverse the warm-up effects, such as a lowering of larynx muscle temperature. Cool down helps prevent post-voice use muscle tightening. Eventually, gentle stretching is recommended, perhaps using softer, downward sigh-glides, with the start-pitches gradually lowering. Any sound or pitch patterns that are performed near the beginning of a warm-up may also be appropriate.¹³

There are those that suggest longer time spans for vocal warm-up regimen, such as fifteen to thirty minutes a day, with rest involving brief breaks. The professional singer would be able to sustain the longer regimen without injury to the voice. John Potter, who wrote *The Cambridge Companion to Singing*, communicates another point of view, "a Warm-up is not an end in itself, simply a means to oil the wheels, so to speak, and facilitate the smooth running of the machinery. It should not take more than fifteen to twenty-five minutes, and should be an enjoyable prelude to the music itself."¹⁴ The singers, teachers, vocologists, voice scientists and otolaryngologists all seek to have vocal health and the optimum vocal performance for the singers. Limiting the duration according to the factors listed above and with the guidance of the professionals one can alleviate vocal strain, vocal disorders and vocal fatigue. The singer is ultimately responsible for his/her vocal limits and vocal warm-up regimen. Harriette Brower gives examples in *Vocal Mastery*, of a professional singer's regimen:

Frieda Hempel (1885-1955), German opera soprano says of her warm-up regimen: "I do about two hours or more, through not all of this for technique. I approve of a good deal of technical study, taken in small doses of ten to fifteen minutes at a time. Technique is a means to an end, more in the art of

song than in almost any other form of art. Technique is the background of expressive singing.”¹⁵

Giovanni Martinelli (1885-1969), Italian operatic tenor “practices exercises and vocalizes one hour each morning; then another hour on repertoire. In the afternoon an hour more – three hours daily.”¹⁶

Consistency of a vocal warm-up routine will contribute to the health benefits which are substantial for all ages, levels of singing and singing styles. How one warm-ups up plays as significant a part as how much and how often, reminding us all that we are human and are not always able to maintain strict regimens. Davidson Palmer in, *The Boy's Voice at the Breaking Period*, reminds the singer of our human quality that things happen in life and that,

...stress or frustration in your personal life will show up in your voice. Before each performance, set aside at least 15 minutes to warm up mentally. Experiment with meditation, yoga and other methods of relaxation and focusing your energy. Obviously, what works for one performer might not work for another.¹⁷

Leon Thurman et al dispense a stern warning, “Never stretch muscles and ligaments that have not been warmed up, so highest pitches would need to be performed toward the end of a fifteen to twenty minute warm-up,” advice which when heeded will save the voice from strain and vocal fatigue. Please see Appendix G-7 for more of Thurman’s vocal conditioning ideas. Miller states, that if the student follows such recommendations for practicing periods of time, vocal health [and vocal performance] will be enhanced. He proposes that:

Warming up should be a daily event for healthy singer of any age. A beginner may find no more than ten to twenty minutes a comfortable amount of warm-up time before feeling fatigue. A more advanced singer may take thirty minutes to touch all areas of technical work. When established singers have perfected a warm-up routine, they can if necessary, warm-up in a few minutes. Lighter voices, female or male, seldom need a long warm-up. Aging performers may need

to increase the duration of warm-up periods, pacing themselves less strenuously, although some maturing singers require less time than formerly. A good warm-up procedure puts the voice in healthy condition for the remainder of the day, but it does not replace the periods of further technical exploration.”¹⁸

Posture and Alignment, Flexibility and Agility

Good posture and alignment is not only important, but necessary for singing, breathing, walking, dancing, and speaking. Barbara Conable’s “Body Mapping” is one of the best examples of correct alignment for singing, 2000, *What Every Musician Needs to Know about the Body: The Practical Application of Body Mapping to Making Music*. This method of aligning oneself is not just for singers, but, is suited for pianists, violinists, trumpeters’, any musician who physically suffers in producing musical tones. She has inspired others and in doing so they have become authors, like James Jordan’s, *Learn Conducting Technique with the Swiss Exercise Ball*. When you are preparing to sing, watch that you are in a position of minimum tension and maximum flexibility with ears directly over shoulders, shoulders over your hips.

Amir Ofer, in the 2005 *Journal of Voice* article “Evaluating the Influence of Warm-up on Singing Voice Quality Using Acoustic Measures,” reports that “although the actual exercises in such routines may vary, most vocal warm-up routines include body posture alignment and relaxation exercises.”¹⁹ For many singers the standing position is only for the warm-up period, often times a singer will be sitting, kneeling, or lying prone on the floor. The establishment of a good alignment, therefore, should be in all positions. The full entry of James McKinney position on posture and alignment can be found in the Appendix G-8 on physical warm-up exercises. McKinney informs singers and teachers that “many of the problems encountered in singing and speaking can be avoided by

proper preparation of the body as a whole. It is a good idea to establish a regular warm-up procedure to be used *before* you practice or perform.”²⁰ Dr. Sharon Radionoff in her online 1997 article, “What is a Warm-up? And What Is It For?” advises that the “Individual mental/vocal focus should center on the individual singer's systems alignment to balance, posture, respiration, phonation, and resonance. Since the voice is a logical instrument, one can use a "building block sequence" to achieve this balance.”²¹

Alignment and posture are key elements that have been known from the Italian tradition have carried through the generations as the strongest component to breathing, vocal placement, and relaxed larynx. Without excellent alignment or posture the potential for physical and vocal fatigue are strong possibilities.

Agility/Flexibility

Coordination of alignment, posture, breath breathing, vocal placement, relaxed larynx and muscular coordination are necessary exercises of agility and flexibility. The essential quality in agility is to move the voice quickly and easily. Flexibility requires that one is also able to be bent, stretched, pliable, and limber, without coming to a breaking point. In order to have part of the body relaxed (head and neck) or pliable and another part powerful (arms and legs) necessitates a balance and coordination required for optimal vocal performance. Saathoff, Stark, and Miller articulate that applied coordination through daily vocal warm-up regimens results in the ability to sing with flexibility and agility. Flexibility and agility transfer to vocal performance via songs and arias, because of the physical state of relaxation and physical synchronization.

Developing the stamina and power to endure, is not immediate; it can come within a week, a month, or in some cases a year (depending on the amount of time committed to warming-up and practicing). “Singers who invest time warming up their voice before they sing, will find that after a few years their vocal stamina develops to a stage where they rarely get a hoarse throat after singing”²² Technical drills, scales, and arpeggios, interspersed with a combination of relaxation technique, will allow the voice to respond accordingly and can alleviate the cause of some vocal disorders.

More sample warm-up regimens can be found in Appendix G, Rachelle Randeem, Appendix G-1; Tracy Lane Ford, contemporary warm-ups Appendix G-2, and Amanda Gray, contemporary warm-ups Appendix G-3. For classical vocal warm-ups, Appendix G-4 the English National Opera, Bruce Schoonmaker sets out a “how to practice” voice regimen, Appendix G-5 and Jana Holzmeier “Vocal Conditioning” Appendix G-6. Vocal warm-up exercises can be reversed in order for a cool-down process, thereby concluding the practice regimen with the same exercises that were started; lip trill, humming, yawn-sighs.

COOL- DOWN – FORGOTTEN or LEFT OUT?

“Cool-down is simply the opposite of the warm-up, bringing the voice back to a state of relaxation into a comfortable range and dynamic level. Again, the time may vary, but a good rule of thumb is approximately half the time spent on the warm-up.”²³ The questions to be asked are, (1) When does one cool-down the voice?, (2) Why does one need to cool down the voice?, (3) How does one cool-down the voice?, and (4) What exercise is most effective?

When does one cool-down the voice?

Immediately following an extended use or vigorous use of vocal production is the suggested moment to cool-down the vocal instrument. “After extensive and/or vigorous voice use, Saxon & Schneider recommend that cool down begin at the end-level of vigorous voice use and do a reverse warm-up.”²⁴ There is no evidence that scholars agree as to when to cool-down the vocal instrument. Much like an athlete, it is necessary to relax or stretch the muscles slowly to return to a normal state.

Why does one need to cool-down the voice?

In her 2002 dissertation, Rachel Kathleen Gates recommends for “singers who add warm-ups, stretches, and cool-downs to body movement, and maintain consistent and appropriate body movement over time.”²⁵ The benefits from cooling down are; lowering temperature of the entire larynx, relaxing of the surrounding muscles, and allowing the voice to return to a resting place and the vocal pitch returns to normal speaking toning. Cooling down the vocal instrument will assist in the prevention of muscle restriction, dizziness, and muscle cramping, and prepares the muscles for the next time one sings.

How does one cool-down the voice?

Making a cool-down a part of the practice/performance regimen will thwart any vocal strain, fatigue, or decreased range. Athletes are aware that cooling down after strenuous physical efforts for a long time allows them the possibilities of a quicker return to activity, whether it is in the same hour, day or week.

“For an effective cool-down: perform low intensity exercise for a minimum of 5 to 10 minutes and follow this with a stretching routine.”²⁶ The student may choose a cool-

down exercise that will decrease in speed gradually, and decrease in intensity for maximum physical relief. Stretching after a cool-down is also advisable, while the muscles are still warm.

What exercises are most effective?

General fitness experts recommend stretch exercises which ensure that one uses all the major muscle areas. Michael S. Benninger, author of *Vocal Arts Medicine: The Care and Prevention of Professional Voice Disorders*, (1994), wrote “both warming up and cool-down exercises are important in training routines. “Warming-up’ the voice before extensive voice use is analogous to stretching and ‘limbering up’ before running a marathon.”²⁷ A singer must become like the athlete in the process of warming up and cooling down. Most athletes, who perform physical activities, like dancing daily or playing either team or individual sports, will use this practice regimen to stay in the best possible physical shape. “Cooling-down’ following heavy voice use involves similar vocal exercises and is analogous to other athletic cool-down procedures.”²⁸ Neglecting the complete practice regimen of warming up and cooling down will lead to vocal strain, fatigue and decreased range.

Other recommendations may include learning relaxation techniques, such as the Alexander Technique to help lessen body tension, changing the warm-up/cool-down or other practice habits, reducing or increasing the amount of time spent singing and speaking each day, changing vocal hygiene habits, and changing vocal technique.²⁹

The staff at the Mayo Clinic says that adequate time should be taken to cool-down and that it should be done immediately after one’s workout. As a result, the temperature of

your muscles lowers, which may reduce muscle or laryngeal injury, stiffness of the neck, and soreness of the vocal folds.

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- ¹ John Nix, (Voice Professor UT San Antonio), Interview, 2009.
- ² MTNA Volume of Proceedings 1921, 123-126.
- ³ Pat Wilson, *The Singing Voice*, 72.
- ⁴ Marcus Lows Health24 www.health24.com/fitness/shape_up_for_summer
- ⁵ Los Angeles County High School, http://artshigh.org/docs/Safety%20Handbook_Music.pdf
- ⁶ Leon Thurman, et al. "Vocal Efficiency and Vocal Conditioning in Expressive Speaking and Singing" *Bodymind and Voice* (Rev ed.). (Iowa City, IA: Collegeville, MN: VoiceCare Network; Iowa City, IA : National Center for Voice & Speech; Minneapolis, MN: Voice Center of Fairview, 2001), (2001), 307.
- ⁷ Warming Up the Voice www1.wfubmc.edu/otolaryngology/, nd.
- ⁸ Julie Rosewald, *How Shall I Practice?* CA: The Bancroft Company, 1892, 44.
- ⁹ Brent Jeffrey Monahan. *The Art of Singing: a Compendium of Thought on Singing Published between 1777 and 1927*. (Metuchen, NJ: Scarecrow Press, 1978), 40-41.
- ¹⁰ Manuel Garcia, *Hints on Singing*, 20.
- ¹¹ Millie Ryan, "What Every Singer Should Know" NE: Franklin Pub., Co. 1910, X.
- ¹² Thomas Hemsley, *Singing & Imagination: A Human Approach to a Great Musical Tradition*, NY: Oxford Univ. Press, 1998). 45.
- ¹³ Leon Thurman, et al. "Vocal Efficiency and Vocal Conditioning, 308.
- ¹⁴ John Potter, *The Cambridge Companion to Singing*. NY: Cambridge Univ. Press, 2000), 153.
- ¹⁵ Harriette Brower, *Vocal Mastery*, (NY: Frederick A. Stokes, 1917). www.books.google.com
- ¹⁶ Harriette Brower, *Vocal Mastery*,
- ¹⁷ Palmer E. Davidson. *The Boy's Voice at the Breaking Period*. (London: Joseph William. 19??), 153.
- ¹⁸ Richard Miller, *Solutions for Singers: Tools for Performers and Teacher*. (NY: Oxford Univ. Press, 2004), 243.
- ¹⁹ Ofer Amir, Noam Amir, and Orit Michaeli, (June 2005) "Evaluating the Influence of Warmup on Singing Voice Quality Using Acoustic Measures." (*Journal of Voice*, 19 (2) (2005): 252.
- ²⁰ James McKinney, "*The Diagnosis and Correction of Vocal Faults: A Manual for Teachers of Singing and for Choir Directors*" (TN: Broadman Press 1982), 36.
- ²¹ Dr. Sharon Radionoff, in her online 1997 article "What is a Warm-up? And What Is It For?" www.soundsinging.com
- ²² Leanne Hoad – Vocal Warm-ups <http://leannehoad.com.au/resourcecentre/singingtips/vocalwarmups.asp> 7.20.08
- ²³ Michael S. Benninger. *Vocal Arts Medicine: The Care and Prevention of Professional Voice Disorders* (NY: Thieme Medical Pub., 1994), 323
- ²⁴ Keith Saxon and Carole M. Schneider. *Vocal Exercise Physiology*. CA: Singular Pub., 1995, 70.
- ²⁵ Rachel Kathleen Gates, "The Owner's Manual to the Singing Voice" diss (Ohio State University, 2002): 7.
- ²⁶ Mydr,2003 <http://www.mydr.com.au/sports-fitness/warming-up-and-cooling-down-for-exercise>
- ²⁷ Michael S. Benninger, *Vocal Arts Medicine: The Care and Prevention of Professional Voice Disorders*. NY: Thieme Medical Pub., 1994), 74-75.
- ²⁸ Michael S. Benninger, *Vocal Arts Medicine*: 74-75.
- ²⁹ Michael S. Benninger, *Vocal Arts Medicine*: 119.

CHAPTER 4

VOCAL WARM-UP QUESTIONS METHODOLOGY

Research Questions

In the recent past, the following authors have published material on the subject of solo vocal warm-ups. Mary Jones Saathoff's 1995 dissertation, entitled "A Study of Vocal Exercises and Vocalises Used in Selected University Vocal Programs," emerged after the design of this research questionnaire. Fortunately, some of the questions from the Saathoff dissertation are similar in nature to the questions presented, making it possible to compare results. A continuation of significant sources include: Nathan V. Welham et al, "Vocal Fatigue in Young Trained Singers Across a Solo Performance: A Preliminary Study" (2004);" Richard Miller "*Solutions for Singers: Tools for Performers and Teachers*" (2004); Ofer Amir et al, "Evaluating the Influence of Warmup on Singing Voice Quality Using Acoustic Measures," published in *Journal of Voice* (2005); John Nix, "Criteria for Selecting Repertoire," published in *Journal of Singing* (2002);" B. Timmermans et al, "Analysis and Evaluation of a Voice Training Program in Future Professional Voice Users," published in *Journal of Voice* (2005); and David Bishop, "Warm-Up I: Potential Mechanism and the Effects of Passive Warm-Up on Exercise Performance," and, "Warm-Up II: Performance Changes Following Active Warm-Up and How to Structure the Warm-Up," both published in *Sports Medicine* (2003).

Scope of the Study

A pilot study was conducted prior to University of Texas Institution Review Board's approval (IRB) and thus was inadmissible for this current study. This study is a

descriptive analysis of a survey taken by voice teachers and singers, as well as interviews with otolaryngologists, vocologists, voice teachers, and voice scientists. Voice teachers and singers were surveyed on their current vocal warm-up practices both in the voice studio and in performance. The data was gathered in 2008 and 2009.

Design of Instrument

In summer 2008, an instrument was designed by this researcher to determine what, if any, vocalises and vocal warm-up exercises voice teachers and singers were using across the nation. The Institution Review Board (IRB) reviewed and approved the survey, (see Appendix J). Two surveys were constructed for this data, one for voice teachers, and a second for singers, each with individualized survey questions, (see Appendix B - Singers and Appendix C - Teachers). A questionnaire of thirty-two questions, each with several subsets of further questions, was designed with the intention of gathering information from the individual singer. Similarly, a questionnaire of thirty-three questions, each with several subsets of further questions, was designed with the intention of gathering information from the individual voice teacher. The overall general questions sought information in the following areas: 1) Is there a standard or traditional methodology for vocal warm-ups?; 2) If so, how has this methodology evolved over time?; 3) What is the current use of vocal warm-ups and vocalises by voice instructors and professional voice users?; 4) How does the use of vocal warm-ups and vocalises influence the effectiveness of vocal performance?; 5) Does the use of vocal warm-ups or vocalises contribute to the health of the singer, thus resulting in an excellent vocal

performance?; 6) Does practicing vocal warm-ups or vocalises have a positive effect on overall vocal health?

Surveys were administered in three ways: (1) Hard copies of the survey were available to singers and voice teachers at the National Convention of the National Association of Teachers of Singing (NATS), during the summer of 2008. Surveys were returned anonymously to a box in the conference lobby. (2) Selected nationally known teachers and singers received copies of the survey via ground mail. They were asked to respond to the survey via electronic mail or by phone. (3) A national online survey was conducted and taken anonymously through SurveyMonkey.com. A comment section was available for those who chose to respond further to the questionnaire.

Mailings

Select singers, teachers, vocologists, voice scientist, and otolaryngologists were sent a letter via ground mail to invite them to be interviewed in an effort to better understand the role of vocalises in the study of voice health and professional performance. This researcher conducted interviews in person, by telephone, and via electronic mail correspondence. A sample letter to the invited professionals is found in Appendix H.

Participants

The following singers, teachers, vocologists, voice scientists, and otolaryngologists were invited to respond, though not all responded: Dr. Stephen Austin, Dr. Kathryn Barnes-Burroughs, Edee Bers, Dr. Penelope Bitzas, Dr. Cindy Dewey, Joyce Farwell, Dr. Jana Holzmeier, Dr. Stephen King, Dr. Scott McCoy, Dr. John McFarlane,

Dr. Richard Miller, Dr. John Nix, Dr. Karen Peeler, Dr. Robert Sataloff, Steve Schnurman, Dr. Blake Simpson, Dr. Richard Stasney, Dr. Ingo Titze, Linda Wall, Professor Darlene Wiley, and Dr. Steven Zeitels. Follow-up phone calls resulted in interviews and or electronic mail responses.

A total of eighty-seven singers and ninety-seven teachers participated in this survey. Thirty-three singers responded to the SurveyMonkey online survey. Twenty-five voice teachers responded to the SurveyMonkey online survey. Fifty-four singers responded to the hard copy survey from the conference. Seventy-two voice teachers responded to the hard copy survey from the conference. For purposes of analysis the results were totaled from the greater sum of survey participants.

Aim of the Study

This study aims to broaden the current understanding of vocalises and their impact on the teaching and performing of classical voice.

RESULTS

This questionnaire was offered to participants at the 2008 National Association of Teachers of Singing (NATS) National Conference, which is bi-annually attended by over six hundred singers, teachers, vocologists, voice scientists, and otolaryngologists. The results are obtained by averaging the responses of the conference attendees and online survey participants and can be found in Appendix D. The participation of singers and teachers who ‘agreed’ with one another, within a ten percent or less margin is combined together. For the participant of singers and teachers that who were in ‘agreement by a slightly larger margin,’ within twenty to fifteen percent were considered in slight

disagreement and therefore combined together. The participants of singers and teachers who were in a wider margin of disagreement, twenty percent or more are combined together. The margin of error in this survey could be considered if the participant was a singer, as well as a teacher, and would have been calculated twice. The margin of error is unknown because the survey was obtained anonymously.

The participation of singers and teachers who agreed within a ten percent or less margin are combined together; referring to questions thirteen through nineteen, singers and teachers agreed that warming up and voice prior to any vocal use is ‘essential,’ ‘beneficial,’ ‘enhances agility,’ ‘vocal health,’ ‘range,’ ‘register,’ and ‘vocal quality.’ The singers and teachers also agree that there is a correlation of physical and vocal warm-up regarding vocal health, referring to question twenty-five. A slim margin, (4.2%) of teachers believes that there is no correlation between the physical and vocal warm-up regarding vocal health.

For those who were in ‘agreement by a slightly larger margin,’ within fifteen to twenty percent was considered to be in slight disagreement and therefore combined together.

Questions one, four, five, and ten of the survey, asked general knowledge questions of the teachers’ and singers’ understanding of standard or traditional vocal methods. The results for question number one were as expected; teachers usually use a traditional method, however, not expected was that 32% of the teachers rarely used a traditional method. One might conclude that they are either creating their own warm-ups

or not using them at all. The singers, however, use a standard or traditional method more often than what is instructed.

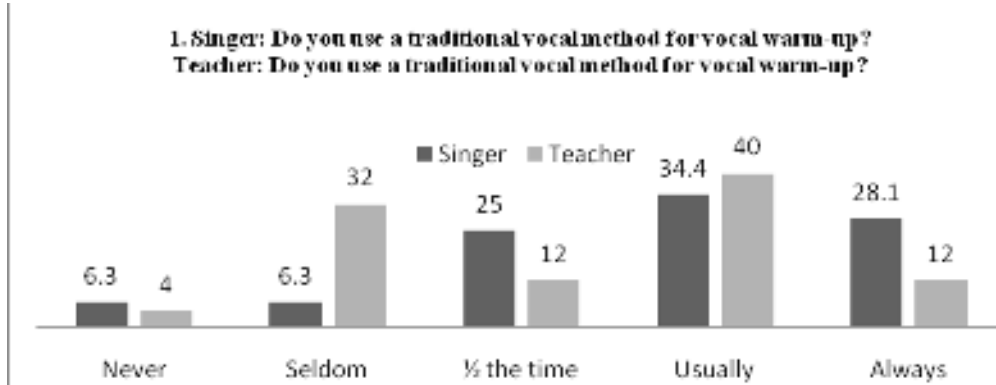


Table 1: Survey Question 1

When comparing the usage of traditional vocal method of the teacher and singer, it might be said that the student and teacher are not in the same lesson, or that the student lacks understanding of traditional vocal method. While the teacher reports that they are using only a quarter of the lesson on a traditional vocal method, the singer reports that they usually spend more than half the lesson on that task.

There is a slight margin of agreement between the singers and teachers in questions number two and three regarding frequency of the warming up period. Thirty-one to forty percent of the singers reported that they warmed up their voices prior to coming to voice lessons, conversely the teachers were reticent in encouraging their students to always warming up their voices prior to the lesson, to a margin of twenty-four to forty percent. When asked of the singer if he/she warmed up their voice during the lesson, there was a wider spread, 3.1% reported they never warm up during the lesson, 18.8% reported they seldom warm up during the lesson, 9.4% said they will warm up half

of the time; 31.3% and 37.5% of the singers reported they do warm up during their lesson period. The teachers preferred that 8.3% of their students not warm up in their lesson period, though 12.5% (seldom), 4.2% (half the time), 54.2% (usually), and 20.8% (always) allow their students to warm up during the lesson period.

Question number twelve concerns the controversial topic of warming up by singing a song. Only 53.1% of the singers report that they seldom use a song to warm-up. The percentage of teachers that used a song to warm up reported that only 20.8% used them half of the time, but a greater majority either seldom or never used a song to warm up. Both the students' and teachers' lack of using songs as warm ups is encouraging.

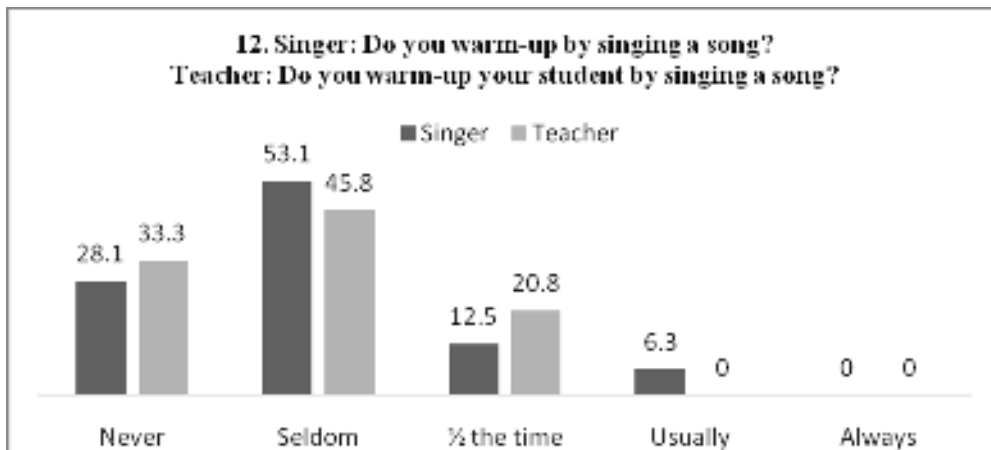


Table 2: Survey Question 12.

Because questions number twenty-one and twenty two were ambiguous in their working, allowing for either/or premises, they have been removed from the results.

Marginal results have occurred with question twenty-seven. Singers report that they never or seldom (31.1% - 62.5%) have vocal problems as a result of warming up their voice prior to a performance. Teachers have reported that 29.2% – 54.2% of their singers never or seldom incur vocal problems resulting from warming up their voice prior

to a performance, however they report that 12.5% - 4.2% of them have experienced some sort of vocal problem resulting from warming-up the voice prior to a performance.

Of the singers and teachers that participated in the survey there was a wider margin of disagreement, twenty percent or more are combined together. There are sharper contrasts among the singers and teachers regarding the actual vocal method used during the lesson.

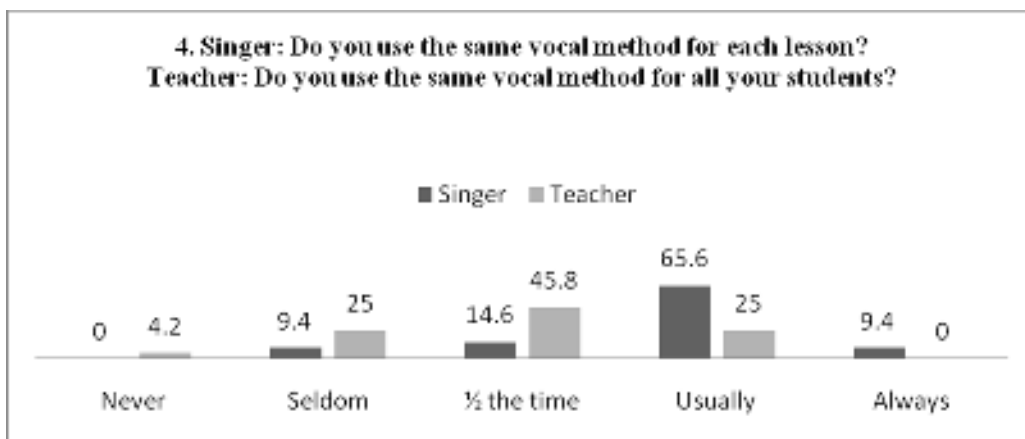


Table 3: Survey Question 4

The results for the beginning students seem to indicate they realize that there is a shift in the methods of warming up the voice as they progress. The teachers acknowledge that they use a different method for their beginning students' and a more advanced advance method for their advanced student. However, there is a slim percentage of students and teachers who indicate there might be a change in method. Therefore, one might conclude that they are either creating their own warm-ups or not using them at all.

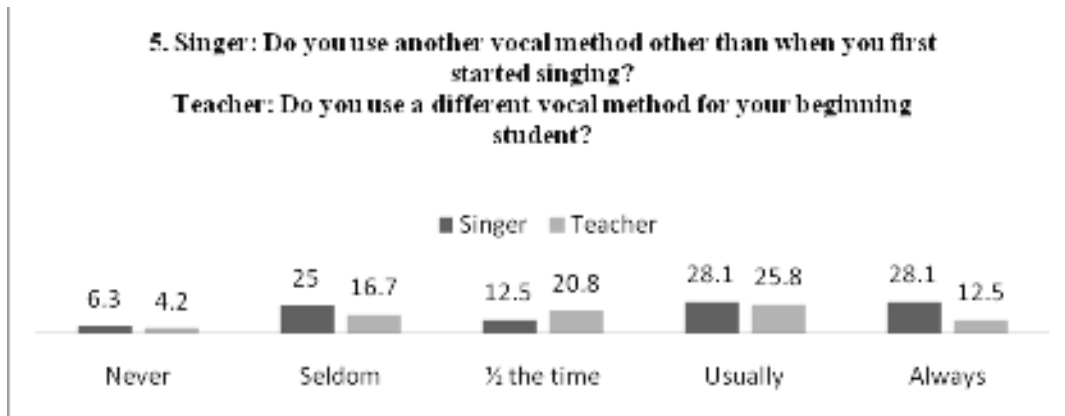


Table 4: Survey Question 5

The teachers were asked further questions about vocal health and vocal disorders in which their responses were unusually divergent. Question number 32 asked the teachers if any of their students had emergent vocal disorders and their answers were clear that they neither never had, nor seldom had, such vocal disturbances. Below are the charts for questions 33, 34, and 35 in which these opposing responses are reported.

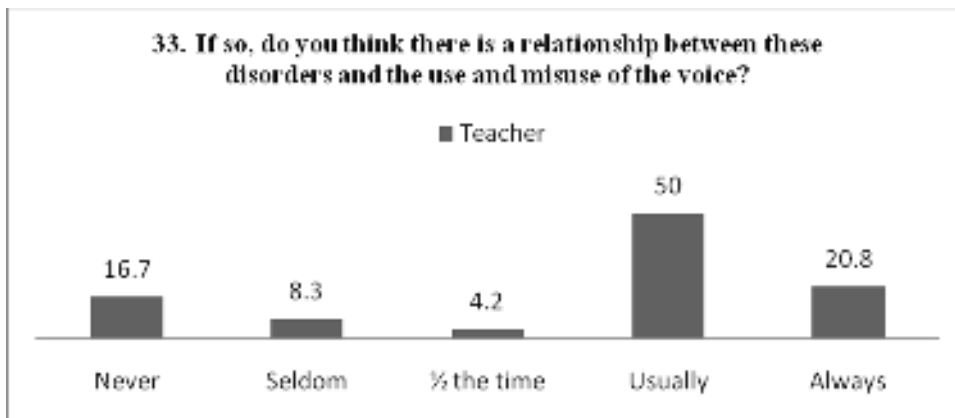


Table 5: Survey Question 33

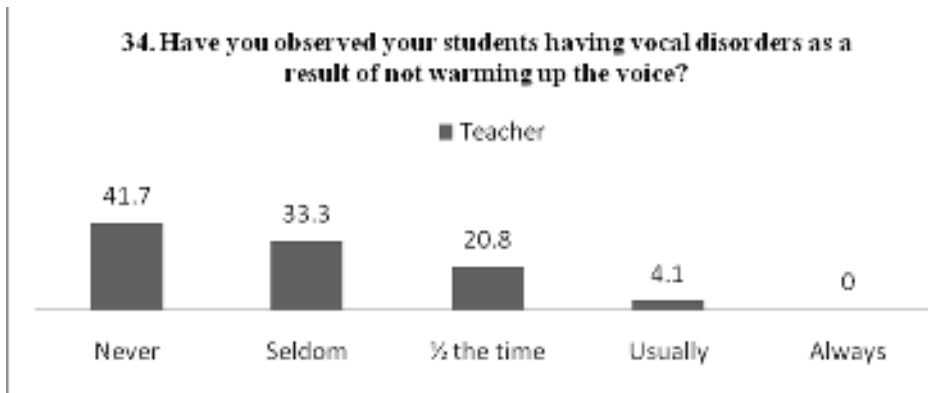


Table 6: Survey Question 34

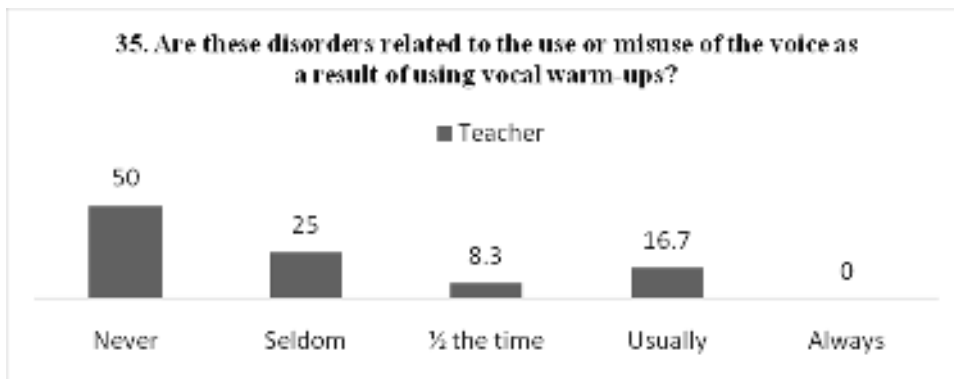


Table 7: Survey Question 35

There are many more *Bel Canto* traditional vocal methods which one is able to choose from to teach or to learn singing, however for the purpose of this survey, the following methods were asked of the participants; Marchesi, Viardot, Liebling, Vaccai, Concone, and others. There was not a place allotted in the survey to indicate whether the teachers do not use a traditional vocal method. On one survey there was a handwritten note that asked the question “What is a traditional vocal method?” indicating that they were unaware that such existed.

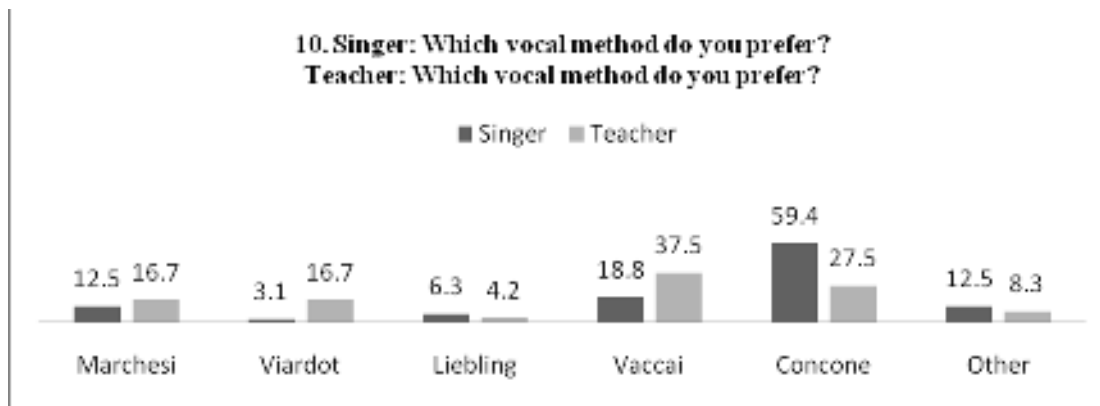


Table 8: Survey Question 10

When asked of the singers and teachers if they create their own vocal warm-up routine, the results of this question give cause for looking more carefully at the responses and further development, as will be reported in the conclusion. Singers stated they never create their own warm ups to a small percentage of 3.1%, and seldom and half of the time do they create exercises to a percentage of 18.8% equally. A little over half of the singers do create their own warm up routine. The teachers do take the time to create and compose their own warm up routine to a margin of 37.5% to 16.7% of the warm up period of the lesson.

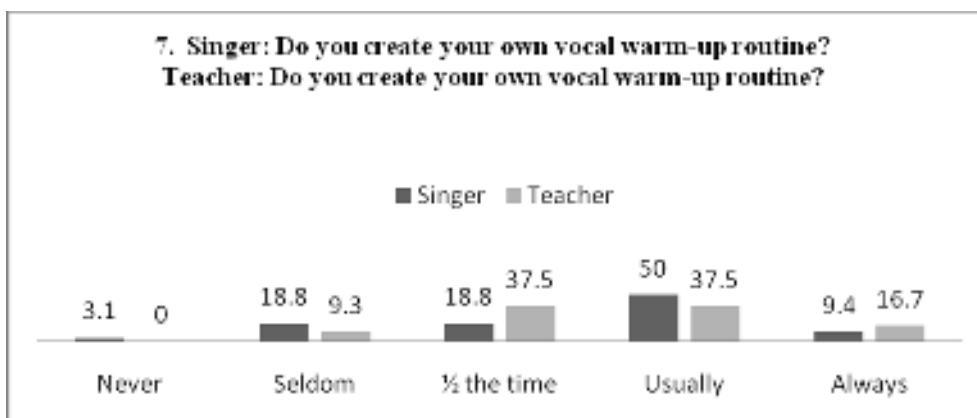


Table 9: Survey Question 7

In her 1995 dissertation entitled *A Study of Vocal Exercises and Vocalises used in Selected University Vocal Programs*, Mary Jones Saathoff asked if the teacher wanted the students to warm up on their own prior to a lesson. The results for a beginning student are that half of the teachers would prefer they not warm up prior to a lesson. An intermediate student would be requested to warm up slightly less than half of the time and an advanced singer would be asked to warm up prior to the lesson, again slightly less than half of the time.¹

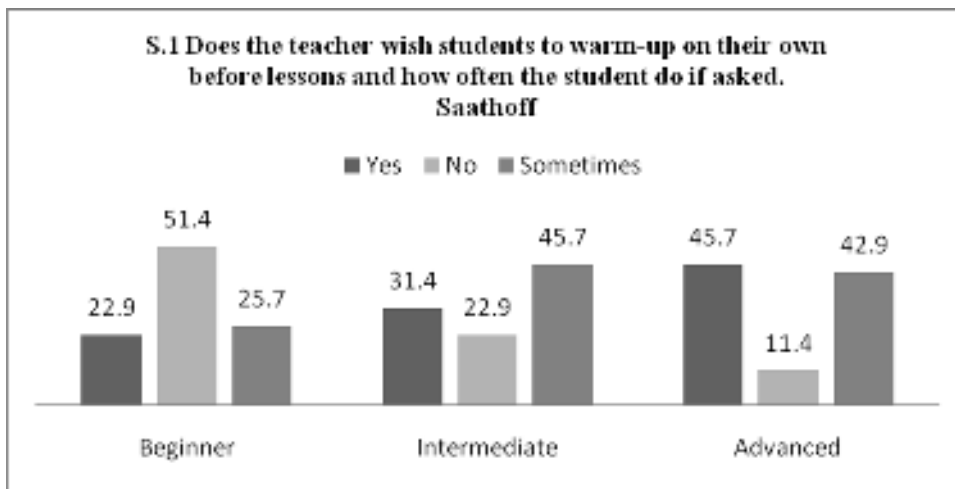


Table 10: Saathoff Survey Question 1

Time allotment

Time allotment during the lesson period is subject to the amount of actual lesson time, which could be any of the following: a thirty minute, forty-five minute or an hour lesson. The majority of singers and teachers seem to agree that between ten minutes and twenty minutes per lesson are spent in vocal warm ups.

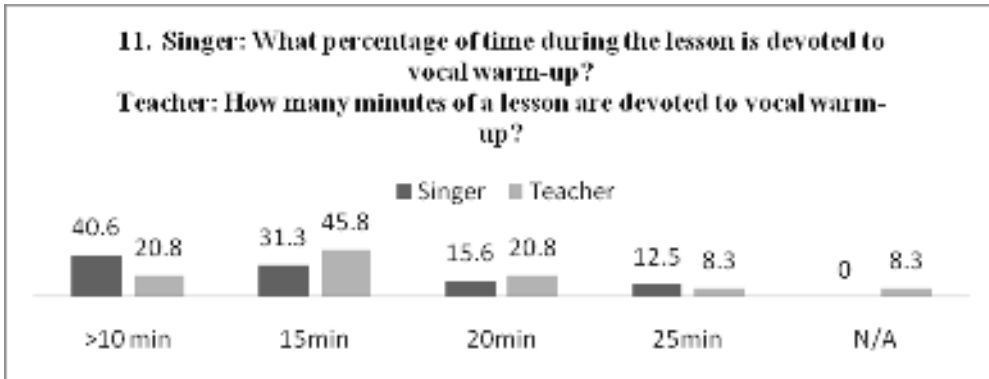


Table 10: Survey Survey Question 11.

In her 1995 dissertation entitled *A Study of Vocal Exercises and Vocalises used in Selected University Vocal Programs*, Mary Jones Saathoff asked about the time allotment during the lesson period, with results very similar to my research findings.²

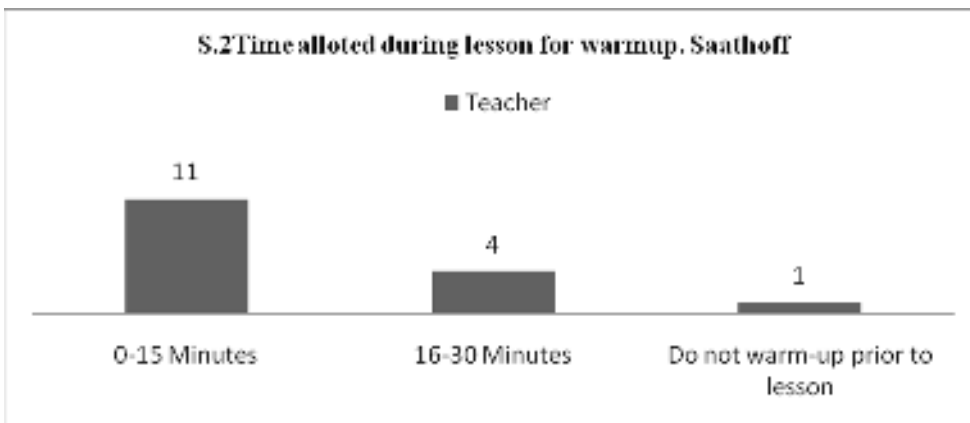


Table 11: Saathoff Survey Question 2.

In her 1995 dissertation Mary Jane Saathoff asked, “Does the teacher wish students to warm up on their own before lessons and how often students warm up if asked do?”³ Her results were as follows:⁴

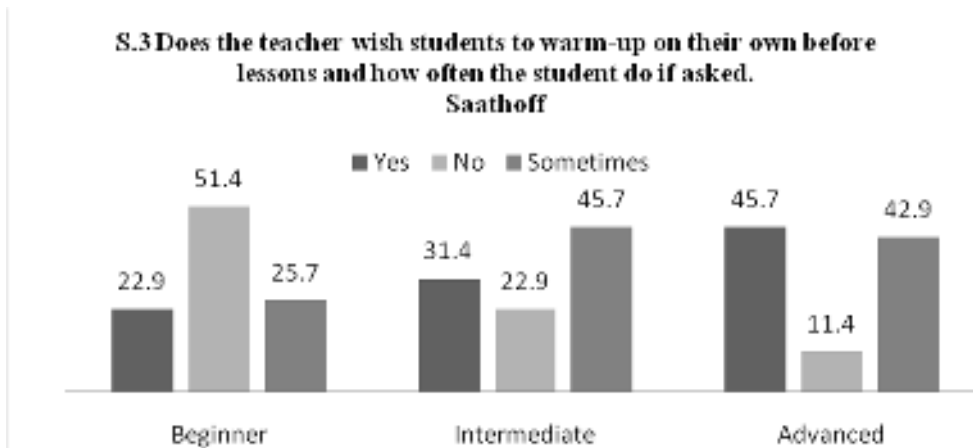


Table 12: Saathoff Survey Question 3.

Saathoff’s dissertation posed a similar question for the teachers, to this research Question 4: “Do you use the same exercise for all your students?” Her results were similar to my findings: yes (31.4%), no (65.7%), and sometimes (0%).

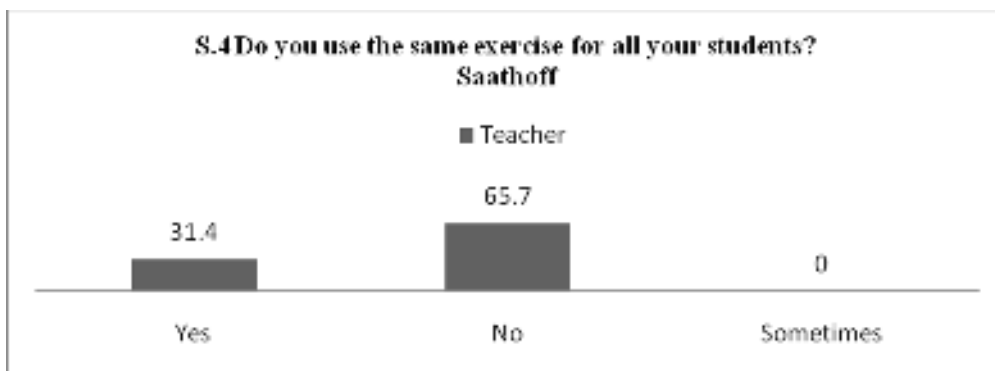


Table 13: Saathoff Survey Question 4.

Health Risks

As reported in the findings below, there is a significant correlation between warming up the voice and vocal health risks. The results suggest that there is greater understanding of such vocal health issues, such as ‘laryngitis,’ ‘raspy quality,’ ‘complete

loss of voice,' 'dry throat,' 'sore throat,' and 'fatigue,' due to a lack of warming up the voice prior to extended use.

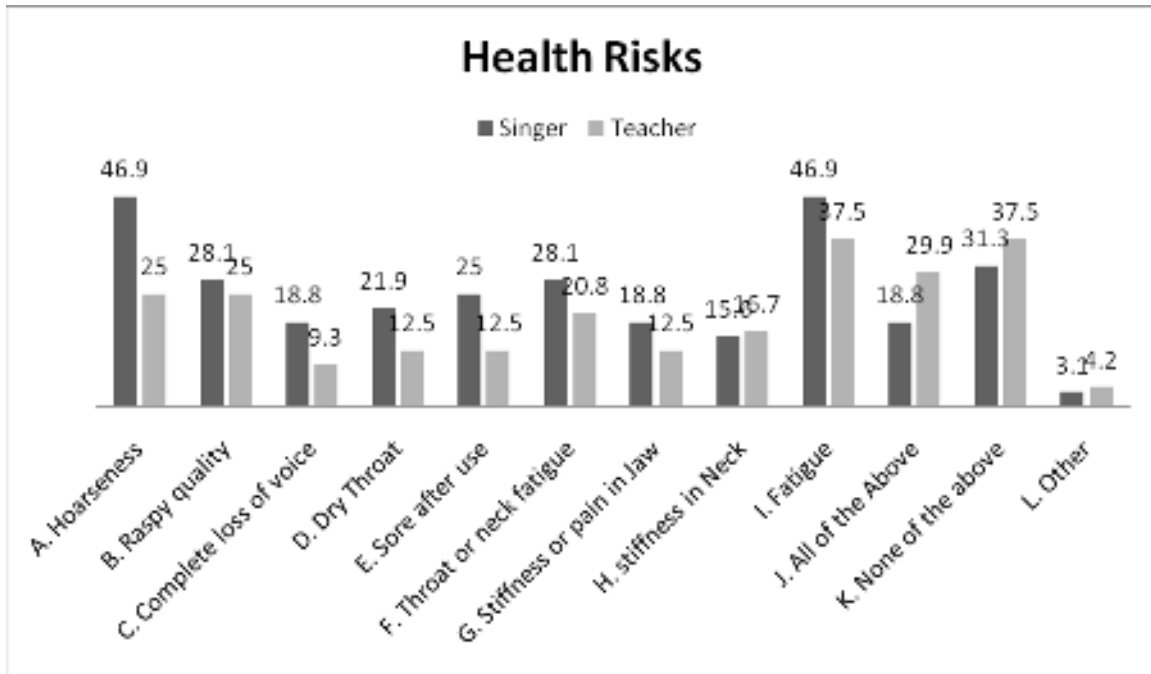


Table 14: Survey Question 23.

Physical and vocal warm-up to Vocal Health

The survey allowed the opportunity for anonymous additional comments. Some of these comments included the following: In the conference survey, one participant (here called “Teacher #1”) commented: “Not 100% sure I know that you mean by “Traditional Vocal Method.” In the same survey, another participant (“Teacher #2”) drew an arrow to the word “Traditional” and wrote: “What does this word even mean?” “Teacher #2” reported using self warm-up methods. Another participant, (“Teacher #3) commented: “Suggestion for definitions of “traditional” aka, Marchesi, Lütgen, etc. or “routine” “method” to address specific problems and goals?” One conference participant reported being unable to complete the questionnaire.

Online Survey Comments and Response to Comments

Singer Comments

Respondents 1, 2, and 3 both point out the necessity for physical as well as vocal warm-up in preparedness for singing.

1. I always find that a physical warm-up is always beneficial to my vocal production and technique. When my body is physically warm and I have an awareness of my spine as well as the entirety of my vocal instrument, I find greater freedom.⁵
2. I find that warm up is both a physical and mental state that does help the singer use the vocal mechanism to its fullest potential. It centers the singer and helps keep the vocal folds in top shape.⁶
3. I'm a professional international opera singer and was sent this by a colleague. There is no such thing as warming up the voice itself, but the mechanism as a whole (particularly the breath/body) is what needs the warming up.⁷

Allowing for 'input' was changed following this participant's comment.

4. The "Other" questions would not allow an input. For warm-up, I use specific vowels and arpeggios to prepare the body and vocal mechanism. I have not impaired vocal health when not warming up, but there is a definite correlation between technical proficiency and a warm-up.⁸

Reflux, also known as GERD is commonly known to irritate the vocal tract.

5. I have had only one real vocal crisis in my singing life and that was related to a soft node that developed as a result of severe reflux.⁹

The survey proved imperfect due to the lack of delineation between the beginner, intermediate, or advance singer for each respondent.

6. I wish it was "Sometimes" instead of "About Half the Time." #28-30 is confusing to me. I am a freshman student in music, but a description for choices in #10 may have been helpful. On those I answered "Other," I only did so because I had to answer the question.¹⁰

Consideration for any future surveys should include a place for "I don't know" or "Yes/No," and with a clause that would include the need for assistance in a better

understanding of vocalise and vocal warm-ups. Additional space for comments was included; however, the respondent was able to write any and all comments at the end of the survey.

7. There needs to be a place for "I don't know"¹¹
8. I think that perhaps it might benefit this survey to also request the age and or level of experience of the singers that are answering these questions. A more experienced singer will probably have different answers than a less experienced one.¹²
9. I didn't understand exactly the questions asking about the perceived relationships between warming up the voice and not warming up the voice therefore those answers may not be accurate.¹³
10. Blessings on your survey!¹⁴

This respondent was both a singer and teacher. There are many different methods for teaching voice produced and published. Take caution that the methods selected are with guidance in vocal pedagogy and a clear understanding of vocal physiology.

11. I prefer the Hal Leonard "teach yourself to sing in 10 easy lessons" method for most private voice students, as it brings the concepts to an accessible level for today's singer. Also, I expect my students to warm themselves up before their lesson themselves. I provide warm-up exercises and vocalises for them to practice and use to warm up. Many of them choose to sing easy songs as a warm up instead. I generally experience laryngitis at least once a year because I find it impossible as a voice teacher to rest my voice adequately when I have students to teach, and I can't afford to cancel students just because I'm hoarse, and then I talk (or worse, sing) during lessons and end up losing my voice completely as a result.¹⁵

Teacher Comments

1. Great questions!¹⁶
2. Vocalises are like stretching before a race. You will be able to run more efficiently if you take the time to warm up. If you don't, you might finish the race fine, but you have a greater risk of injury. When it comes to the voice that is not a risk I want my students to take.¹⁷

Vocalise, vocal warm-up, and vocal conditioning will be included in future studies.

3. You make no distinction between "warming up" in a lesson, and "vocal conditioning" that happens in the lesson. I see "warming up" as being a different activity than "vocal conditioning" to build muscular strength and flexibility.¹⁸

As in traditional vocal methods the focus was on 'vocal health' and not performance readiness, perhaps should there be a turn towards 'vocal health' there would be an elevation of 'stars' and not 'comets.'

4. We aim for performance readiness, not "vocal health" in my preparation training. Any detriment caused by "warming up" indicates a lack of understanding of vocal processes. The answers "required" are slightly phony and it would have been better if it had been possible to add personal explanations to the "other" blanks.¹⁹

A note of thanks is to the teacher below who took time and so eloquently distinguished some of the essential problems of teachers who are 'teaching singing.'

5. There are some teachers who are not trained to teach singing. They may have natural talent as singers but have never received a degree or studied voice for a long enough time periods. Such teachers are dangerous and use what I consider "experimental" techniques on their students. You left out Concone as a choice for traditional methods. A song for a warm-up may be useful if it is a simple song which proceeds an almost equally simple singing task after the warm up. Church choirs often use a hymn as a warm-up on Sunday morning for lack of time. As for performance, I believe that if a singer has been well trained and prepared for the performance, depending on the difficulty, warm-ups are not always essential. Shortening the warm-up and saving their energy for the performance may be best in some cases. Performance can mean so many different things to a singer, i.e., auditions, repertoire, length of performance, style of singing, time of day, how rested the singer is, and, of course, difficulty level. A seasoned performer who has sung the song many, many times can often begin and end without much preparation. However, newly trained singers almost always need a warm-up.²⁰

'Too little' or 'too much,' does depend on the individual and level of performance abilities.

6. "too little or too much": It all depends on the individual. The issue with certain vowels for male/female has to do with how the individual is singing....not necessarily the gender.²¹

7. The students that I have had with vocal problems did not have those problems because of too much or too little warming up. They had to do with other factors such as over use, and smoking.²²

The suggestions for future surveys not having a separate set of variables in answer

options are well received.

8. I liked having all the questions visible throughout the survey; I hate those one-question, one-screen surveys. But I did grow frustrated with the invariable Never/Seldom/Half etc. answer options, when some of these questions (e.g., #22) are yes/no questions, and others demand more nuanced answers. The proper answer to most of the questions #14-33 is "It depends entirely on what the singer is doing to warm up, how s/he is doing it, and how/whether s/he is paying any actual attention as s/he is warming up!" That last is the big issue. Just mindlessly singing a bunch of exercises for 10, 20 or 30 minutes is a total waste of time; it is the MINDFUL quality of the warm-up, in which the singer makes discriminating judgments about what is happening and responds to those judgments by carefully modifying behavior that makes it beneficial (or not, if the student is just going through the motions). Without mindfulness, "warm-ups" can indeed be counter-productive or damaging, but with true mindfulness, that is nearly impossible. Also, it's silly to REQUIRE an answer to #11 when you ask whether we even use them. If not, then clearly we don't prefer one. (Perhaps a "None" option would have been useful.)²³
9. Warm-ups, depending on how they are executed can teach and re-enforce beneficial vocal habits or just the opposite. If bad, warm-up is not good to use. Moreover, if they are performed badly, generally all the singing that singer will do will be inefficient and harmful over time.²⁴

¹ Mary Jones Saathoff, "A Study of Vocal Exercises and Vocalises Used in Selected University Vocal Programs." (PhD. diss. Texas Tech University. 1995). 110-138

² Mary Jones Saathoff, "A Study of Vocal Exercises and Vocalises Used in Selected University Vocal Programs." (PhD. diss. Texas Tech University. 1995). 110-138

³ Mary Jones Saathoff, "A Study of Vocal Exercises and Vocalises Used in Selected University Vocal Programs." (PhD. diss. Texas Tech University. 1995). 110-138

⁴ Mary Jones Saathoff, "A Study of Vocal Exercises and Vocalises: 110-138

⁵ Respondent #S1, survey by author, 12.4.08, online survey platform, location unknown.

⁶ Respondent #S2, survey by author, 11.9.08, online survey platform, location unknown.

⁷ Respondent #S3, survey by author, 10.20.08, online survey platform, location unknown.

⁸ Respondent #S4, survey by author, 10.15.08, online survey platform, location unknown.

⁹ Respondent #S5, survey by author, 10.13.08, online survey platform, location unknown.

¹⁰ Respondent #S6, survey by author, 10.12.08, online survey platform, location unknown.

¹¹ Respondent #S7, survey by author, 10.12.08, online survey platform, location unknown.

¹² Respondent #S8, survey by author, 10.11.08, online survey platform, location unknown.

¹³ Respondent #S 9, survey by author, 10.10.08, online survey platform, location unknown.

¹⁴ Respondent #S10, survey by author, 10.08.08 date, online survey platform, location unknown

¹⁵ Respondent #S11, survey by author, 10.08.08date, online survey platform, location unknown

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- ¹⁶ Respondent #T1, survey by author, 11.21.08, online survey platform, location unknown.
¹⁷ Respondent #T2, survey by author, 10.20.08, online survey platform, location unknown.
¹⁸ Respondent #T3, survey by author, 10.16.08, online survey platform, location unknown.
¹⁹ Respondent #T4, survey by author, 10.13.08, online survey platform, location unknown.
²⁰ Respondent #T5, survey by author, 10.12.08, online survey platform, location unknown.
²¹ Respondent #T6, survey by author, 10.09.08, online survey platform, location unknown.
²² Respondent #T7, survey by author, 10.09.08, online survey platform, location unknown.
²³ Respondent #T8, survey by author, 10.09.08, online survey platform, location unknown.
²⁴ Respondent #T9, survey by author, 10.09.08, online survey platform, location unknown.

CHAPTER 5

Discussion from Vocal Health Care Professionals

Respondents from the vocal professional community agree that warming up the voice is beneficial, essential, and conducive to singing in a healthy manner. In one of the last letters written before his death on May 5, 2009, Dr. Richard Miller responded with an electronic email. Below is an unpublished addition to his ideas on vocalization, warming up the voice, and therefore significant to the vocal community. This correspondence is included in its entirety the correspondence as per his request.

Date: Mon, 9 Feb 2009
From: Richard Miller
To: Janeal Sugars

Dear Janeal Sugars,

I really cannot be of service in providing anecdotal stories (if I understand your request properly) because I hold a different viewpoint on vocalization either before or during lessons than that its main service is one of warming-up. Let me explain briefly, which is what I would have had to say in a telephone conversation.

First of all, no vocalization patterns should be undertaken without a specific pedagogic goal. Each must deal with specific aspects of the singing voice. I do not want a student to do some sort of warm-up run-through unless it directly relates to principles being enunciated in the studio. Because of that, in the early weeks of instruction I usually ask the student not to vocalize before coming to the lesson, except for a few brief patterns. We hear the subject sing, and then make an analysis of what should be immediate and primary goals. Then she/he is given a set of exercises tailored to the specific need, which vocalizes are to be practiced daily, then reviewed in the first part of the subsequent lesson. This policy is extended to include the several main areas of voice technique: breath-management (including onset, release, and breath renewal); resonance balancing; agility, sostenuto, registration; vowel modification, and achieving the even great scale. In most of my lessons, the first half of the period is devoted to the vocalization routine, the rest to its application to vocal literature and artistic communication. The amount of time to which any of these designated areas is devoted is dependent on the current capability and performance level of the student.

Finally, I want to stress that I do not consider the purpose of vocalization exercises to be solely “warming-up” the voice.” After basic principles in each area of technique have been fairly well established, then the singer is to follow a daily routine of patterns taken from each of the areas. An abbreviated run-through of some of them- - depending on the nature of the performance- -should be adopted as a brief warm-up maneuver.

Good luck to you. I feel more comfortable in explaining my basic pedagogic approach than to answering questions regarding anecdotal example of favorable or unfavorable warming-up exercises. So I hope this will serve your purposes adequately. Feel free to quote this as coming from a private communication. However, if you do use it, I request that it be done in its entirety.

Once again, all the best in your continued study and work.
Sincerely,
Richard Miller¹

Most do agree that there should be a daily routine of vocal warm-ups, both physical and vocally, however, the question still remains; are they actually maintained as a part of this daily routine? Dr. Ingo Titze, from the National Center for Voice and Speech (NCVS), gives all singers, teachers and vocologists alike the beginning of what Titze calls his “Five Vocal Warm-ups for Singers.”² These warm-ups are included in Appendix I. At the Greater Baltimore Medical Center, where Dr. Titze is a contributor the “Care of Your Speaking Voice – Voice Treatment Center,” he serves the vocal community by including tips for the professional voice user and singer by reminding all to “always warm up your voice before or cool down after prolonged speaking or singing. Try quiet lip or tongue trills up and down your range, or softly and quietly hum five-note descending scales in the middle of your range.”³ Dr. Titze writes critical information on vocal warm-ups and cool-downs stating that “many singers engage in some form of daily routine or warm-up prior to singing; however, many singers do not know the rationale

behind choosing various warm-ups or their actual function. Unfortunately, these questions also elude researchers.”⁴

At the root of this research is the belief that “warm-ups should not be confused with vocalises. Warm ups, as in weight training, are used to stretch the muscles to prepare them for work without injury. Vocalises are tasks aimed at acquiring a particular skill.”⁵ Confirmation of this vocal principle is not only held by Dr. Titze, but also by Dr. Robert Sataloff, who states that “voice building is possible, productive, and extremely gratifying. Speaking and singing are athletic. They involve muscle strength, endurance, and coordination.”⁶

In his article on vocal health, Dr. Sataloff suggests that “fatigue of the voice is inability to continue to phonate for extended periods without change in vocal quality.”⁷ According to Dr. Sataloff, fatigue results from misuse or over use of vocal warm ups and vocal training, therefore becoming hoarse or inconsistent. However, where a “well-trained singer should be able to sing for several hours without developing vocal fatigue.”⁸ Dr. Sataloff also suggests that a “voice teacher is essential and trains a singer in singing technique.”⁹ This places the responsibility of vocal health squarely on the shoulders of the teacher and as a matter of accountability to the singer.

The next issue to address is the amount of vocal training, voice use and the effective quality of vocal warm ups and vocalises. When addressing his patients Dr. Sataloff states that,

the more good voice training a person has, the safer it will be to use the voice under adverse circumstances. The patient should be instructed to avoid all forms of irritation and to rest the voice at all times except during warm-up and performance.¹⁰

Many are in agreement with Dr. Sataloff that

the more people understand about their voices, the more they will appreciate their importance and delicacy. Education helps us understand how to protect the voice, train and develop it to handle our individual vocal demands, and keep it healthy. Even a little bit of expert voice training can make a big difference.¹¹

What is 'expert voice training' and who evaluates the qualifications, education, and structure of a voice/trainer teacher? In his book, "*The Singer's Companion*," Brent Monahan, both a teacher and pedagogue, agrees that "lessons are highly individualized experiences."¹² Essential voice training is required for singers and non-singers alike. Dr. Sataloff's recommends that "non-singers normally require(s) only about ten to thirty minutes to warm-up the voice."¹³ The singer should then develop a

proper vocal practice incorporates scales and specific exercises designed to maintain and develop the vocal apparatus. Simply singing songs and giving performances without routine studious concentration on vocal technique is not adequate for the performing singer. The physician should know whether the singer practices daily, whether he practices at the same time daily, and how long the practice lasts. Most serious singers practice for at least 1 to 2 hours per day.¹⁴

Vocal health issues come into view when rehearsing excessively, singing extensively, or singing 'cold' (no prior warm-up). These habits "may result in the use of minor muscular alterations to compensate for vocal insecurity produced by inadequate preparation. Such crutches can result in voice dysfunction."¹⁵ Excellent advice from Dr. Sataloff for avoiding vocal health anomalies can be found below.

10 Good Ways to Abuse your Voice:

1. Do not warm up before you use your voice
2. Do not study singing.
3. Do not exercise.
4. Speak as you would never dare to sing.
5. Wear yourself out.
6. Sing the wrong music.
7. Sing or speak in noise.

8. Speak in noise.
9. Conduct.
10. Teach voice.

Robert T. Sataloff, M.D. *Nats Journal*, September/October 1985.¹⁶

In an interview with Dr. Jana Holzmeier, Associate Professor of Music at Nebraska Wesleyan University, she describes the vocal training/conditioning as exercises to be those that will help

to warm you up and establish basic levels of coordination in breathflow and pitch changing. Singers need to transfer these skills to gradually more and more complex levels and speeds of pitch change, and to gradually louder and louder (then softer and softer) dynamics. These skills are then transferred into songs and arias (skill transfer). There are exercises that singers do to build other basic skills. The skills that every singer needs to sing artistically include:

- Balanced Onset
- Breath Pulsing (Staccato and Marcato)
- Legato/Sostenuto
- Agility (speed of pitch change)
- Articulation
- Registration
- Resonation
- Dynamic Control

Therefore, every singer should be able to answer the following question:
"What is the purpose of this vocalise?"¹⁷

Dr. Holzmeier studied in a summer program at the Voice Care Network and the materials of Leon Thurman "Body Mind and Voice." This was for her the "very first systematic approach" for vocalizing and conditioning exercises. She states that

...what I find from them is that you can do just about anything, as long as it's sequenced properly. You'd be better off than just doing a few just random exercises, than doing the same exercises that you do for every student, and every exercise that you learned from your teacher. So the key is to start in the middle range using descending patterns.¹⁸

In an interview with Otolaryngologist, President of the Texas Ear, Nose and Throat Consultants, and Director of the Texas Voice Center, Dr. Richard Stasney was

asked about difficult places in which the singer has trouble executing a musical phrase.

His suggestion was the same as Dr. Holzmeier,

Rather than having the singer go over that phrase of the song that is very difficult, it might be a scale or arpeggio, or it might a high note, instead of having them bang that phrase over and over and over until it gets better, I stop the song and make up an exercise on this spot, build a scale that will build that aria, transferring it into the aria. Work it out of context and then put it back in the song.¹⁹

The question was asked of Dr. Holzmeier: ‘How long in a lesson time do you warm them up? Do you teach them how to practice on their own?’ She relayed the following important information:

After a student has studied with me for a semester or so and they’ve got the basic repertoire of vocalises then they have to demonstrate to me in the second semester that they can do this on their own, for a good 15-20 minutes and I can step away and get a lot done. What often bugged me, I know other teachers like this, You spend a lot of time in the studio with exercises and technique and when they are in the practice room, they either skip the vocalizing or go back to the 6 exercises they learned in high school. I know that they’re not doing the exercises that I’m teaching there, because in my building you can hear what’s going on in their practice rooms. You know they’re 30 feet away from my door, so hear them yammering away, caterwauling away on some choral vocalise that they learned in high school and then I know that they’re not doing the systematic about how they build their skills. Just going and whaling in the practice room to “warm-up” is not what I had in mind. They have to demonstrate to me that they can do the exercises. I also make a CD for them. If their piano skills are not very good at the beginning, so they can play the CD on their laptop computer or put it on their iPod and use the external speaker into and so I’m keeping them through their exercises on the piano. Each set of exercises has its own track. I turn them into MP 3’s.²⁰

The interview with Dr. Holzmeier and Dr. Stasney has proved invaluable in that the information from the teacher and the otolaryngologist are virtually the same.

Mary Jane Saathoff in her dissertation (qtd. James McKinney [1982, p182-184]) states that, “vocal development is the result of careful and systematic practice of both

songs and vocal exercises.’ He suggests that parts of songs can be extracted and used as technical exercises, but that this requires more time and expertise on the part of the teacher.”²¹ She adds, “most experts do agree that the use of some form of technical exercise, whether abstract or taken from the music itself, is an important element in the process of learning to sing.”²² An interview with Dr. John Nix, Associate Professor, Voice and Vocal Pedagogy at the University of Texas San Antonio, resulted in the same outcome. He also believes that “vocal warm ups were necessary and should be looked at in a methodical manner from the point of view of process in a pedagogical manner. The optimum result is vocal health.”²³ The process was discussed of how one would go through a series of warm-up exercises.

Jean Callaghan, in her book “*Singing and Voice Science*,” reminds singers and teachers alike that “cooling down has long been advocated after extended athletic effort. While it is rarely mentioned in the vocal literature, it would seem a sensible procedure after extended vocal effort.”²⁴ Vocal cool-down exercises are executed in reverse order of the warm-up process therefore preventing the muscles to tighten.

The overall outcomes from the survey and from those interviewed are that warm-ups are necessary for vocal health and vocal performance. The choices singers and voice teachers make for the warm-up regimen are specialized for the individual singer and vocal range, ability and style of singing. This style is not limited to classical singing, but also includes the contemporary style of singing today. The benefits of warming up the voice and the process by which one builds and develops the instrument are grounded in the traditional methods of the *Bel Canto* style of singing.

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- ¹ Richard Miller, Survey by author, 2.9.09, Email Correspondence, Location unknown.
- ² Ingo Titze <<http://www.ncvs.org/e-learning/warmup.html>>
- ³ Titze, Care of Your Speaking Voice – Voice Treatment Center <<http://www.gbmc.org/body.cfm?id=445>>
- ⁴ Titze, Vocal Warm-ups and Cool-Downs - Voice Treatment Center, <http://www.gbmc.org/body.cfm?id=449>>
- ⁵ Titze, Vocal Warm-ups and Cool-Downs - Voice Treatment Center, <http://www.gbmc.org/body.cfm?id=449>>
- ⁶ Robert T. Sataloff <http://www.phillyent.com/pdf/vocalhealth.pdf>
- ⁷ Sataloff, <http://www.phillyent.com/pdf/vocalhealth.pdf>
- ⁸ Sataloff, <http://www.phillyent.com/pdf/vocalhealth.pdf>
- ⁹ Robert T. Sataloff, *Vocal Health and Pedagogy*. 2nd ed p115
- ¹⁰ Sataloff, <http://www.phillyent.com/pdf/vocalhealth.pdf>
- ¹¹ Sataloff, <http://www.phillyent.com/pdf/vocalhealth.pdf>
- ¹² Brent Jeffrey Monahan, *The Art of Singing: A Compendium P91*
- ¹³ Sataloff, <http://www.phillyent.com/pdf/vocalhealth.pdf>
- ¹⁴ Sataloff, <http://www.phillyent.com/pdf/vocalhealth.pdf>
- ¹⁵ Sataloff, <http://www.phillyent.com/pdf/vocalhealth.pdf>
- ¹⁶ Robert T. Sataloff, M.D. *NATS Journal*, September/October 1985.
- ¹⁷ Jana Holzmeier, <http://music.nebrwesleyan.edu/~jjh/index.html>
- ¹⁸ Jana Holzmeier, (Voice Professor, Wesleyan, Nebraska University), Interview, 2009.
- ¹⁹ Jana Holzmeier, Interview, 2009.
- ²⁰ Jana Holzmeier, Interview, 2009.
- ²¹ Mary Jane Saathoff, Dissertation, p 17.
- ²² Saathoff, Diss p 17.
- ²³ John Nix, (Voice Professor UT San Antonio), Interview, 2009.
- ²⁴ Jean Callaghan, PhD. *Singing and Voice Science*. San Diego, California: Singular Publishing Group 2000.

CHAPTER 6

Recommendations and Conclusion

“Vocalises” and “vocal warm-ups” no matter what they are called are the most necessary activities to singers’ vocal longevity and life for vocal health and vocal performance. From the Greeks and Romans to current day singers, there is a thread that carries over all the boundaries of time and cultures; that beautiful singing, tone, agility, and flexibility are elements that are foundational to the longevity of the music and singing.

Through joint efforts of all the voice professionals and voice users, there will be only positive outcomes for future generations. As the singers, teachers, vocologists, voice scientists, and otolaryngologists continue their quest in finding those connections to vocal health through the past *bel canto* vocal traditions and bridging them with current vocal practices, one can hope that all become collaborators towards the goal of healthy and prosperous singing. There seems to be a continued need for tutoring for teachers, singers, and professional voice users in the educational value of knowing what a traditional vocal method is and its purpose. The question for continued research is whether there is more than a slim margin of teachers, singers, and professional voice users who would benefit from enhancing their educational experience and learning of the traditional vocal singing methods from the past *Bel Canto* generations and what vocal practices are in current use.

Vocal instructors must ask the following questions before teaching: 1) Should I use vocal warm-ups and vocalises? 2) How much lesson time should I spend on a warm-up routine and should it include any physical activity? 3) Which warm-ups and vocalises

actually accelerate my students' vocal technique and progress? 4) How much do I stress the importance of warm-ups and vocalizes to the student? 5) Should I encourage the student to practice these warm-ups and vocalises on his own and at what level? 6) What warm-up routine is the intermediate and advanced transfer student bringing to the lesson and was this routine from a private voice instructor or choral conductor? 7) Should I teach from my own experiences or from the possible training on a broader base having studied the different systems, such as those found in the *Bel Canto* method?

The survey represents some encouraging news to those who sing, teach, and are interested in these two small vocal folds. From this survey it is evident that there is more research and questions needed in the future. Does duration of time warming up or cooling down the voice truly make a difference in vocal health and performance? Is there a correlation between the internal vocal mechanisms and does being physically warm or cold affect the outcome of the sound when produced? Does one have to be externally warm or can one be externally cold and still produce healthy and even tone? Is there a need for standardization or traditional methodology for both warm-ups and vocalises being used currently by voice instructors and professional voice users? Is warming up the voice with a song a result of lack of understanding of the physiological nature of the voice and purpose of a warm-up routine? Why don't teachers use vocalises? Does the student understand what the teacher is communicating? Is there a lack of pedagogical teacher training prior to teaching voice? Is the teacher saying he/she teaches a particular method of vocal warm-ups and actually teaching something else? Is the student actually following the teachers' instructions?

Warming up and cooling down the voice does not have to be drudgery, grueling, or time consuming, but it does have to be consistent and ordered in such a fashion that the exercises fit the individual and have a vocally healthy outcome. The warm-up regimen can have variety, diversity, and assortment, using several different selections for the same vocal task, a wide range of assorted vowels, vowel-consonant combinations, mixture or dynamics, and an abundant choice of rhythmic options. The variations are endless. The amount of time spent on warming up the voice and the time of day is completely left to the discretion of the singer and teacher. Aligning the body and finding a comfortable posture will foster the flexibility and agility exercises, therefore the singer will profit vocally and physically. Cooling down the voice will allow the voice to return to normal, thereby promoting a healthy vocal technique. Ramifications for not using a warm-up regimen, whether physical or vocal, indicates clearly that a singer has the potential for doing harm to the vocal apparatus and thus shortening the performance life span.

Quantifiable research studies are needed in order to find out why the confusion exists among singers teachers, vocologists, vocal scientists, and otolaryngologists in regard to which warm-ups are actually used during the lesson period, what, if any, systematic routine is given to student for work outside the lesson, and what, if any, systematic routine is used by the singers prior to performances. In their recommendations, medical professionals request that there be a more systematized warm-up routine, however, in some cases, the students had a better understanding than the teachers.

APPENDIX A

METHODS

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APPENDIX B

VOCAL WARM-UP METHODS SURVEY

Singers/Performers

Please circle the answer that is most applicable.

1. Do you use a traditional vocal method for vocal warm-up?
a. rarely b. sometimes c. fairly often d. very often
2. Do you warm-up the voice prior to a lesson?
a. rarely b. sometimes c. fairly often d. very often
3. Do you warm-up during the lesson period?
a. rarely b. sometimes c. fairly often d. very often
4. Do you use the same vocal method each lesson?
a. rarely b. sometimes c. fairly often d. very often
5. At the initial first voice lesson were you instructed as to the purpose of vocal warm-up?
a. rarely b. sometimes c. fairly often d. very often
6. At the initial first voice lesson were you instructed as to the function of the vocal warm-up?
a. rarely b. sometimes c. fairly often d. very often
7. At the initial first voice lesson were you instructed as to the physical and acoustic outcome of the vocal warm-up?
a. rarely b. sometimes c. fairly often d. very often
8. Do you use a different warm-up method now than the one you had when you first started singing?
a. rarely b. sometimes c. fairly often d. very often
9. Do you use a more difficult vocal method as an advanced student?
a. rarely b. sometimes c. fairly often d. very often
10. Do you create your own vocal warm-up routine?
a. rarely b. sometimes c. fairly often d. very often
11. Do you gravitate to certain vowels in a warm-up?

- a. rarely b. sometimes c. fairly often d. very often

12. Which vocal method do you prefer?

- a. Marchesi d. Vaccai
b. Viardot e. Other _____
c. Liebling

13. How many minutes during the lesson is devoted to vocal warm-up?

- a. 10 minutes c. 20 minutes
b. 15 minutes d. 30 minutes

14. Do you warm up your student by singing a song?

- a. Yes
b. No
c. Sometimes

15. Is warming up the voice prior to any vocal use essential?

- a. Yes
b. No
c. Sometimes

16. Is warming up the voice prior to any vocal use beneficial?

- a. Yes
b. No
c. Sometimes

17. Does warming up the voice prior to extended use enhance vocal health?

- a. Yes
b. No
c. Sometimes

18. Does warming up the voice prior to extended use enhance vocal quality?

- a. Yes
b. No
c. Sometimes

19. Does warming up the voice prior to extended use enhance register?

- a. Yes
b. No
c. Sometimes

20. Does warming up the voice prior to extended use enhance singing range?

- a. Yes

- b. No
 - c. Sometimes
21. Does warming up the voice prior to extended use enhance agility?
- a. Yes
 - b. No
 - c. Sometimes
22. Does warming up the voice prior to extended use enhance articulation?
- a. Yes
 - b. No
 - c. Sometimes
23. Is there such a thing as warming up the voice to little or too much?
- a. Yes
 - b. No
 - c. Sometimes
24. Is there a risk to vocal health if warming up the voice to little or too much?
- a. Yes
 - b. No
 - c. Sometimes

Circle one or more if applicable.

25. What are the vocal health risk:
- a. Hoarseness
 - b. Raspy voice while speaking or singing
 - c. Complete loss of voice
 - d. Dry throat while speaking or singing
 - e. Irritated or sore throat after voice use
 - f. Throat or neck area feels tired after voice use
 - g. Stiffness, tension or pain in the jaw
 - h. Stiffness, tension or pain in the neck or shoulders
 - i. Fatigue
 - j. All of the above
26. What consequences, if any are there if one does not warm-up the voice prior to extended use?
- a. Hoarseness
 - b. Raspy voice while speaking or singing
 - c. Complete loss of voice
 - d. Dry throat while speaking or singing
 - e. Irritated or sore throat after voice use
 - f. Throat or neck area feels tired after voice use
 - g. Stiffness, tension or pain in the jaw
 - h. Stiffness, tension or pain in the neck or shoulders
 - i. Fatigue
 - j. All of the above

Please circle only one answer.

27. Is there a correlation of a physical and vocal warm-up with regards to vocal health?
- Yes
 - No
 - Sometimes
28. Do vocal problems occur as a result of *not* warming up the voice after a performance?
- Yes
 - No
 - Sometimes
29. Do vocal problems occur as a result of warming up the voice after a performance?
- Yes
 - No
 - Sometimes
30. Is there a perceived relationship between warming up the voice and *not* warming up the voice **prior** to a performance?
- Yes
 - No
 - Sometimes
31. Is there a perceived relationship between warming up the voice and *not* warming up the voice **during** a performance?
- Yes
 - No
 - Sometimes
32. Is there a perceived relationship between warming up the voice and *not* warming up the voice **after** a performance?
- Yes
 - No
 - Sometimes

APPENDIX C

VOCAL WARM-UP METHODS SURVEY

Voice Teachers/Pedagogues

Please circle the answer that is most applicable.

1. Do you use a traditional vocal method for vocal warm-up?
a. rarely b. sometimes c. fairly often d. very often
2. Do you encourage your student to warm-up their voice prior to a lesson?
a. rarely b. sometimes c. fairly often d. very often
3. Do you prefer your student warm-up during the lesson period?
a. rarely b. sometimes c. fairly often d. very often
4. Do you use the same vocal method for all your students?
a. rarely b. sometimes c. fairly often d. very often
5. Do you use a different vocal method for your beginning student?
a. rarely b. sometimes c. fairly often d. very often
6. Do you use a more difficult vocal method for the advanced students?
a. rarely b. sometimes c. fairly often d. very often
7. At the initial first voice lesson do you instruct your student as to the purpose/function of vocal warm-up?
a. rarely b. sometimes c. fairly often d. very often
8. At the initial first voice lesson do you instruct your student as to the physical and acoustic outcome of the vocal warm-up?
a. rarely b. sometimes c. fairly often d. very often
9. Do you create your own vocal warm-up routine?
a. rarely b. sometimes c. fairly often d. very often
10. Do you gravitate to certain vowels in a warm-up?
a. rarely b. sometimes c. fairly often d. very often
11. Do you utilize certain vowels for male singers?
a. rarely b. sometimes c. fairly often d. very often
12. Do you utilize certain vowels for female singers?

- a. rarely b. sometimes c. fairly often d. very often
13. Which vocal method do you prefer?
a. Marchesi d. Vaccai
b. Viardot e. Other
c. Liebling
14. How many minutes of time during the lesson is devoted to vocal warm-up?
a. 10 minutes c. 20 minutes
b. 15 minutes d. 30 minutes
15. Do you warm up your student by singing a song?
a. Yes
b. No
c. Sometimes
16. Is warming up the voice prior to any vocal use essential?
a. Yes
b. No
c. Sometimes
17. Is warming up the voice prior to any vocal use beneficial?
a. Yes
b. No
c. Sometimes
18. Does warming up the voice prior to extended use enhance vocal health?
a. Yes
b. No
c. Sometimes
19. Does warming up the voice prior to extended use enhance vocal quality?
a. Yes
b. No
c. Sometimes
20. Does warming up the voice prior to extended use enhance register?
a. Yes
b. No
c. Sometimes
21. Does warming up the voice prior to extended use enhance singing range?
a. Yes
b. No
c. Sometimes

22. Does warming up the voice prior to extended use enhance agility?
- Yes
 - No
 - Sometimes
23. Does warming up the voice prior to extended use enhance articulation?
- Yes
 - No
 - Sometimes
24. Is there such a thing as warming up the voice to little or too much?
- Yes
 - No
 - Sometimes
25. Is there a risk to vocal health if warming up the voice to little or too much?
- Yes
 - No
 - Sometimes

Circle one or more if applicable.

26. What are the vocal health risk:
- | | |
|--------------------------------------------------------|---------------------|
| a. Hoarseness | i. Fatigue |
| b. Raspy voice while speaking or singing | j. All of the above |
| c. Complete loss of voice | |
| d. Dry throat while speaking or singing | |
| e. Irritated or sore throat after voice use | |
| f. Throat or neck area feels tired after voice use | |
| g. Stiffness, tension or pain in the jaw | |
| h. Stiffness, tension or pain in the neck or shoulders | |
27. What consequences, if any are there if one does not warm-up the voice prior to extended use?
- | | |
|--------------------------------------------------------|---------------------|
| a. Hoarseness | i. Fatigue |
| b. Raspy voice while speaking or singing | j. All of the above |
| c. Complete loss of voice | |
| d. Dry throat while speaking or singing | |
| e. Irritated or sore throat after voice use | |
| f. Throat or neck area feels tired after voice use | |
| g. Stiffness, tension or pain in the jaw | |
| h. Stiffness, tension or pain in the neck or shoulders | |

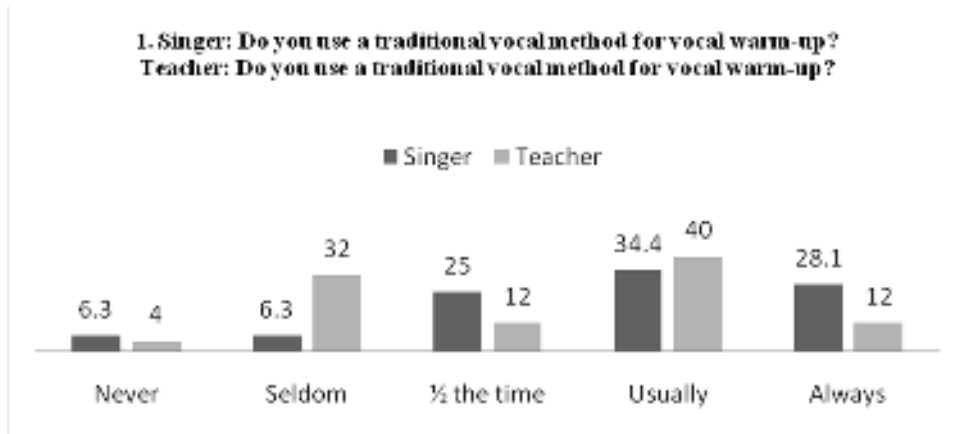
Please circle only one answer.

28. Is there a correlation of a physical and vocal warm-up with regards to vocal health?
- Yes
 - No
 - Sometimes
29. Do vocal problems occur as a result of *not* warming up the voice after a performance?
- Yes
 - No
 - Sometimes
30. Do vocal problems occur as a result of warming up the voice after a performance?
- Yes
 - No
 - Sometimes
31. Is there a perceived relationship between warming up the voice and *not* warming up the voice prior to a performance?
- Yes
 - No
 - Sometimes
32. Is there a perceived relationship between warming up the voice and *not* warming up the voice during a performance?
- Yes
 - No
 - Sometimes
33. Is there a perceived relationship between warming up the voice and *not* warming up the voice after a performance?
- Yes
 - No
 - Sometimes

FINDINGS

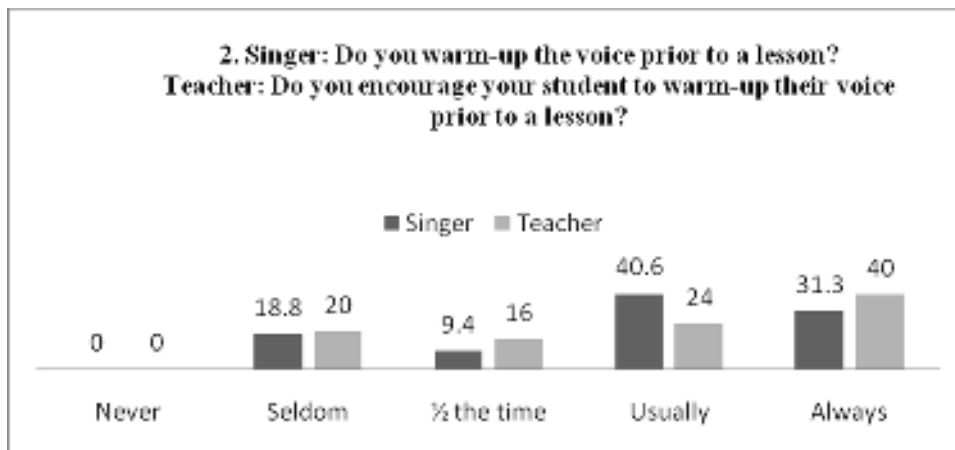
1. Singer: Do you use a traditional vocal method for vocal warm-up?
Teacher: Do you use a traditional vocal method for vocal warm-up?

	Never	Seldom	½ the time	Usually	Always
Singer	6.3	6.3	25.0	34.4	28.1
Teacher	4.0	32.0	12.0	40.0	12.0



2. Singer: Do you warm-up the voice prior to a lesson?
Teacher: Do you encourage your student to warm-up their voice prior to a lesson?

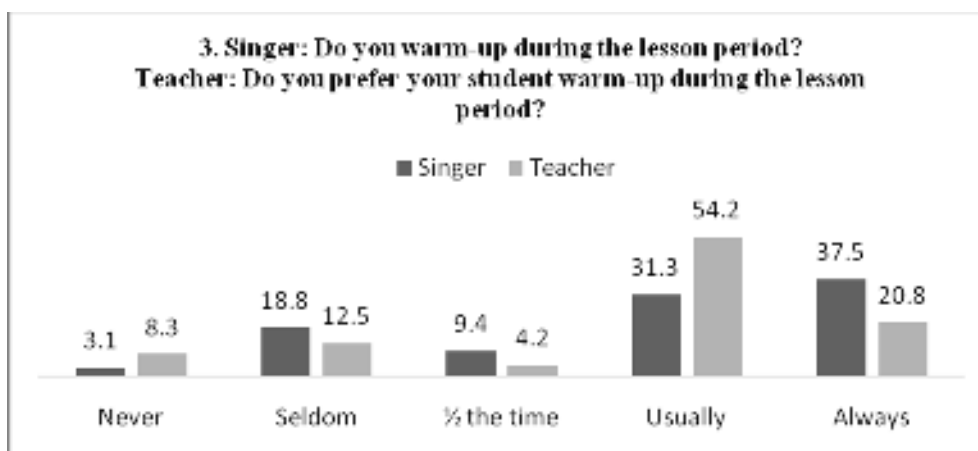
	Never	Seldom	½ the time	Usually	Always
Singer	0.0	18.8	9.4	40.6	31.3
Teacher	0.0	20.0	16.0	24.0	40.0



3. Singer: Do you warm-up during the lesson period?

Teacher: Do you prefer your student warm-up during the lesson period?

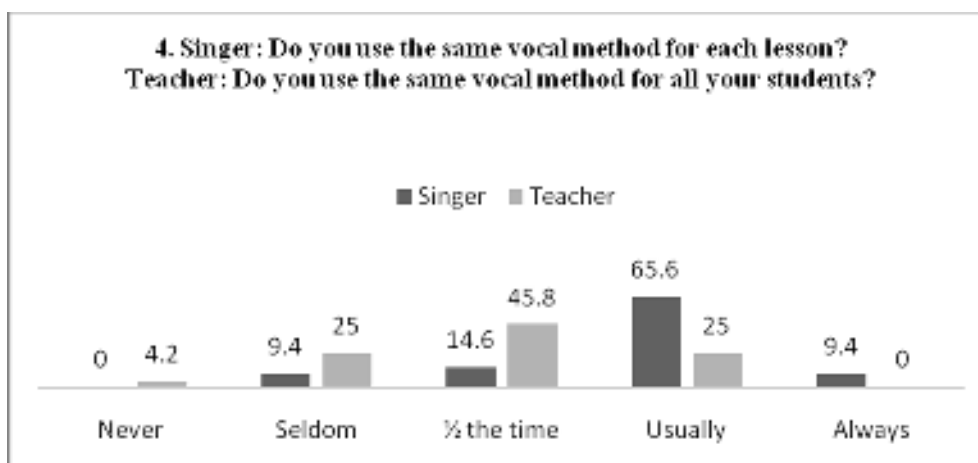
	Never	Seldom	½ the time	Usually	Always
Singer	3.1	18.8	9.4	31.3	37.5
Teacher	8.3	12.5	4.2	54.2	20.8



4. Singer: Do you use the same vocal method for each lesson?

Teacher: Do you use the same vocal method for all your students?

	Never	Seldom	½ the time	Usually	Always
Singer	0.0	9.4	14.6	65.6	9.4
Teacher	4.2	25.0	45.8	25.0	0.0

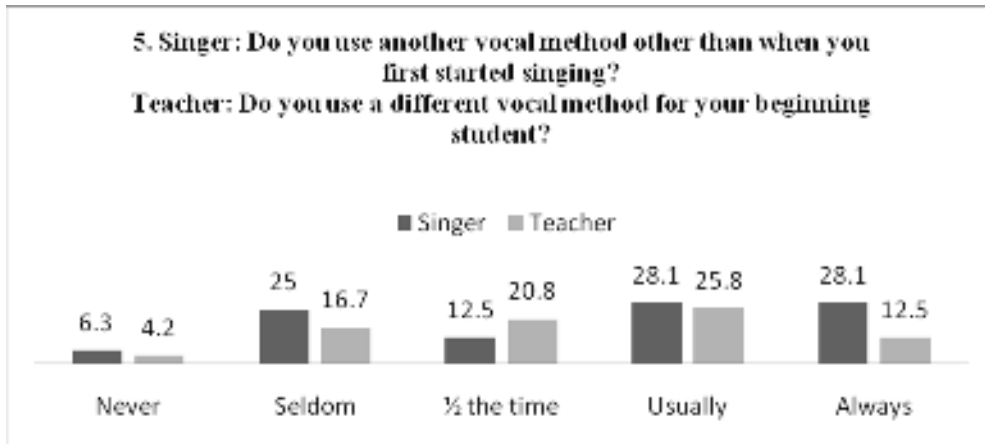


5. Singer: Do you use another vocal method other than when you first started singing?

Teacher: Do you use a different vocal method for your beginning student?

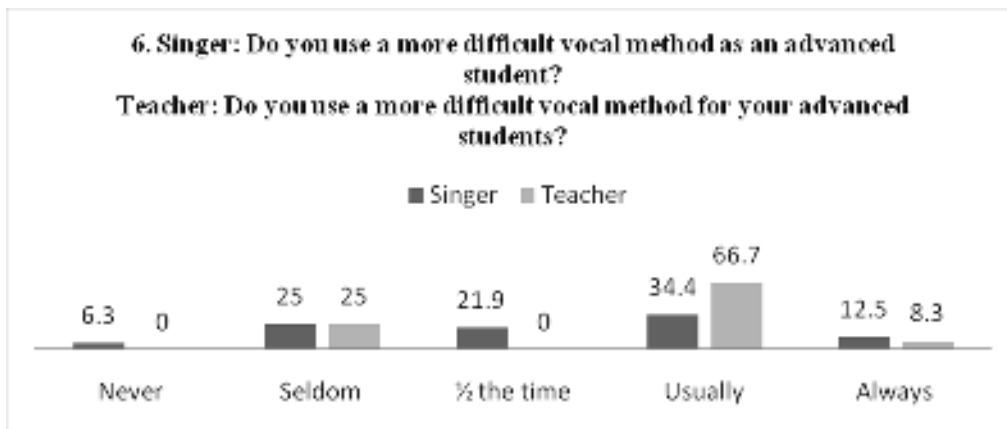
	Never	Seldom	½ the time	Usually	Always
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Singer	6.3	25.0	12.5	28.1	28.1
Teacher	4.2	16.7	20.8	25.8	12.5



6. Singer: Do you use a more difficult vocal method as an advanced student?
 Teacher: Do you use a more difficult vocal method for your advanced students?

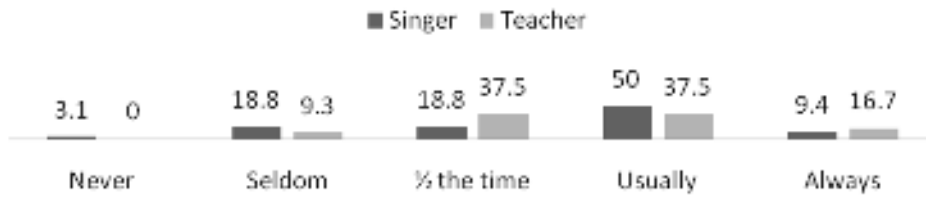
	Never	Seldom	1/2 the time	Usually	Always
Singer	6.3	25.0	21.9	34.4	12.5
Teacher	0.0	25.0	0.0	66.7	8.3



7. Singer: Do you create your own vocal warm-up routine?
 Teacher: Do you create your own vocal warm-up routine?

	Never	Seldom	1/2 the time	Usually	Always
Singer	3.1	18.8	18.8	50.0	9.4
Teacher	0.0	9.3	37.5	37.5	16.7

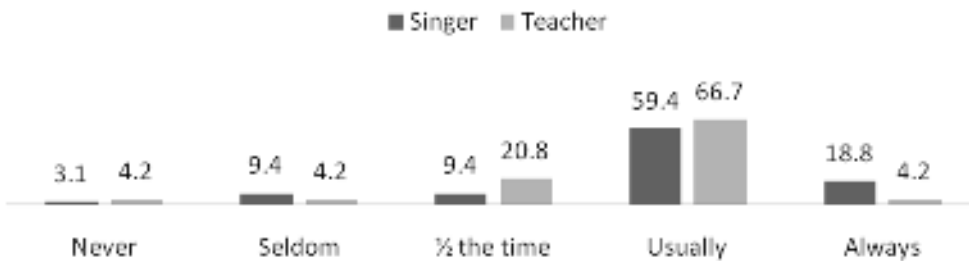
7. Singer: Do you create your own vocal warm-up routine?
 Teacher: Do you create your own vocal warm-up routine?



8. Singer: Do you gravitate to certain vowels in a warm-up?
 Teacher: Do you gravitate to certain vowels in a warm-up?

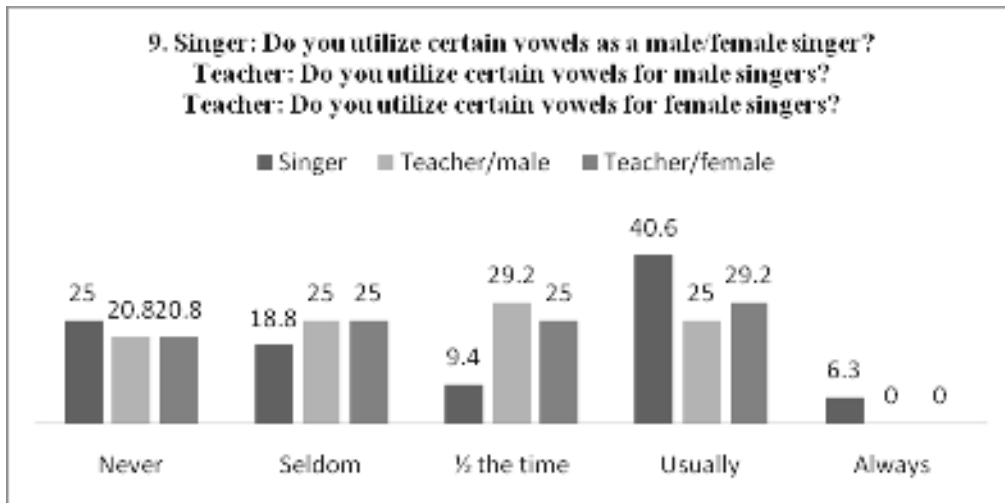
	Never	Seldom	1/2 the time	Usually	Always
Singer	3.1	9.4	9.4	59.4	18.8
Teacher	4.2	4.2	20.8	66.7	4.2

8. Singer: Do you gravitate to certain vowels in a warm-up?
 Teacher: Do you gravitate to certain vowels in a warm-up?



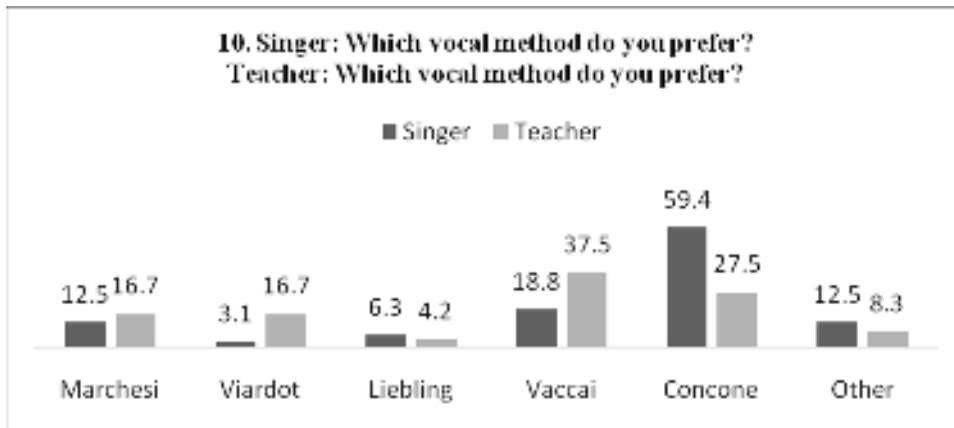
9. Singer: Do you utilize certain vowels as a male/female singer?
 Teacher: Do you utilize certain vowels for male singers?
 Teacher: Do you utilize certain vowels for female singers?

	Never	Seldom	1/2 the time	Usually	Always
Singer	25.0	18.8	9.4	40.6	6.3
Teacher/male	20.8	25.0	29.2	25.0	0.0
Teacher/female	20.8	25.0	25.0	29.2	0.0



10. Singer: Which vocal method do you prefer?
 Teacher: Which vocal method do you prefer?

	Marchesi	Viardot	Liebling	Vaccari	Concone	Other
Singer	12.5	3.1	6.3	18.8	59.4	12.5
Teacher	16.7	16.7	4.2	37.5	27.5	8.3



11. Singer: What percentage of time during the lesson is devoted to vocal warm-up?
 Teacher: How many minutes of a lesson are devoted to vocal warm-up?

	>10 min	15min	20min	25min	N/A
Singer	40.6	31.3	15.6	12.5	0.0
Teacher	20.8	45.8	20.8	8.3	8.3

11. Singer: What percentage of time during the lesson is devoted to vocal warm-up?

Teacher: How many minutes of a lesson are devoted to vocal warm-up?

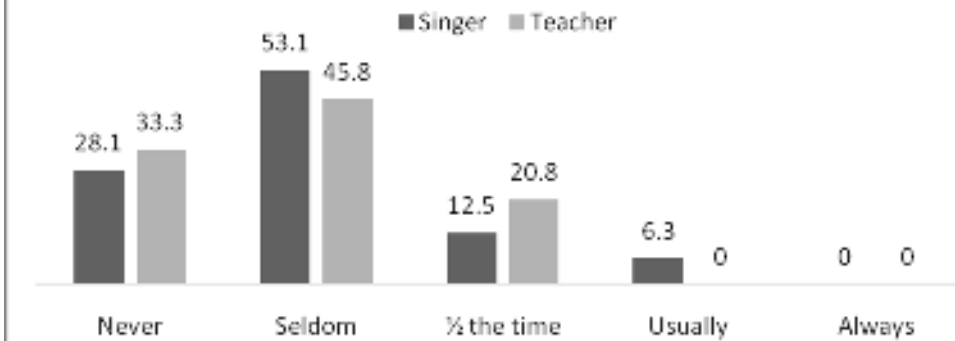


12. Singer: Do you warm-up by singing a song?

Teacher: Do you warm-up your student by singing a song?

	Never	Seldom	½ the time	Usually	Always
Singer	28.1	53.1	12.5	6.3	0.0
Teacher	33.3	45.8	20.8	0.0	0.0

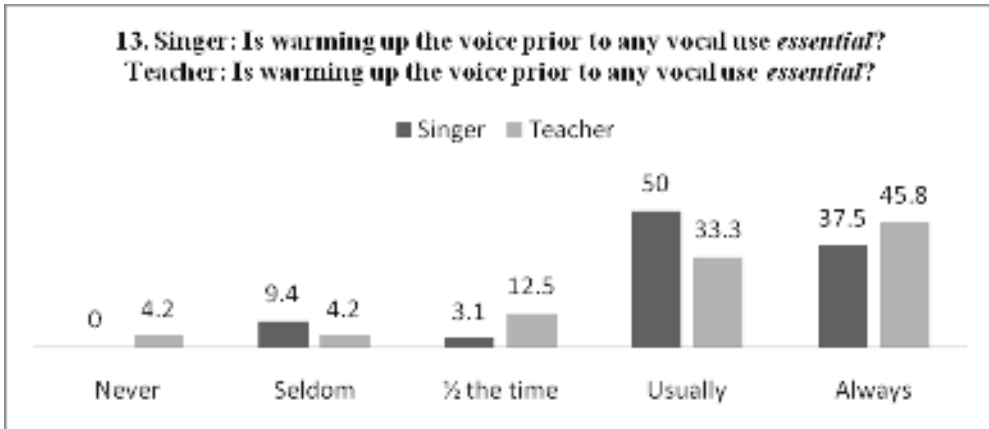
12. Singer: Do you warm-up by singing a song?
Teacher: Do you warm-up your student by singing a song?



13. Singer: Is warming up the voice prior to any vocal use *essential*?

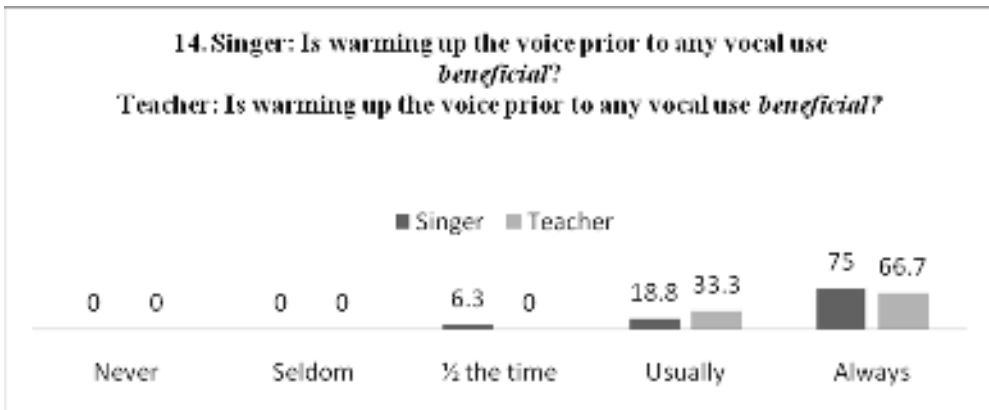
Teacher: Is warming up the voice prior to any vocal use *essential*?

	Never	Seldom	½ the time	Usually	Always
Singer	0.0	9.4	3.1	50.0	37.5
Teacher	4.2	4.2	12.5	33.3	45.8



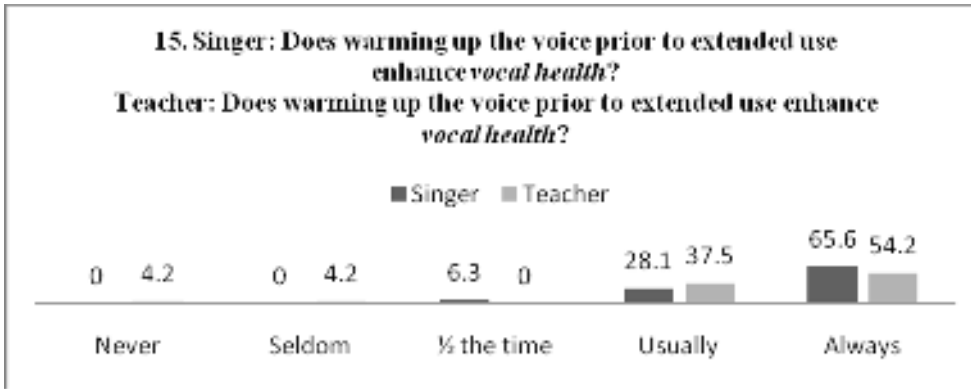
14. Singer: Is warming up the voice prior to any vocal use *beneficial*?
 Teacher: Is warming up the voice prior to any vocal use *beneficial*?

	Never	Seldom	1/2 the time	Usually	Always
Singer	0.0	0.0	6.3	18.8	75.0
Teacher	0.0	0.0	0.0	33.3	66.7



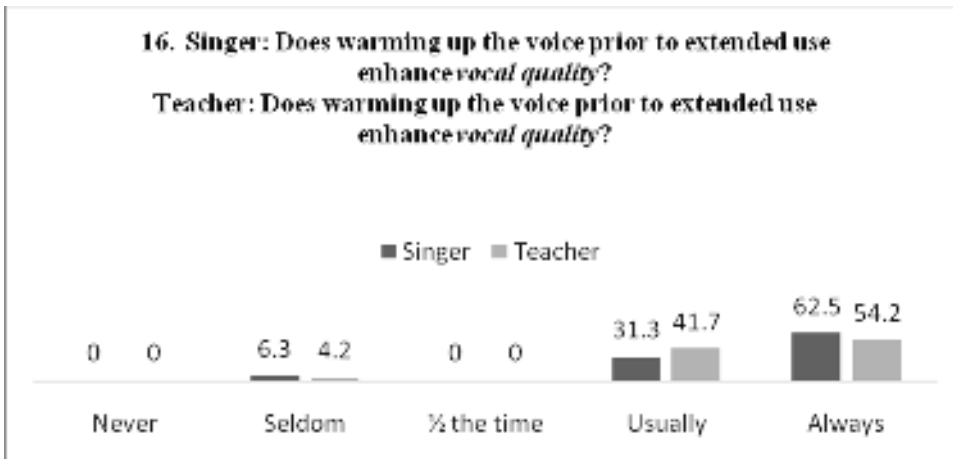
15. Singer: Does warming up the voice prior to extended use enhance *vocal health*?
 Teacher: Does warming up the voice prior to extended use enhance *vocal health*?

	Never	Seldom	1/2 the time	Usually	Always
Singer	0.0	0/0	6.3	28.1	65.6
Teacher	4.2	4.2	0.0	37.5	54.2



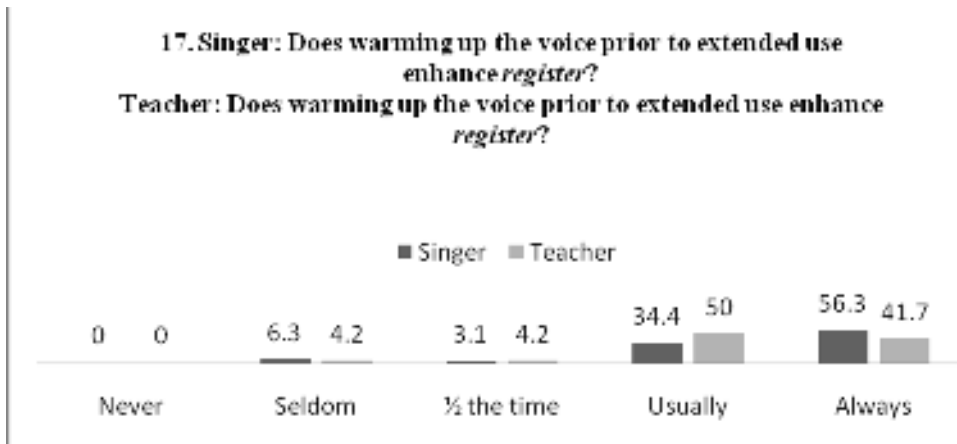
16. Singer: Does warming up the voice prior to extended use enhance *vocal quality*?
 Teacher: Does warming up the voice prior to extended use enhance *vocal quality*?

	Never	Seldom	1/2 the time	Usually	Always
Singer	0.0	6.3	0.0	31.3	62.5
Teacher	0.0	4.2	0.0	41.7	54.2



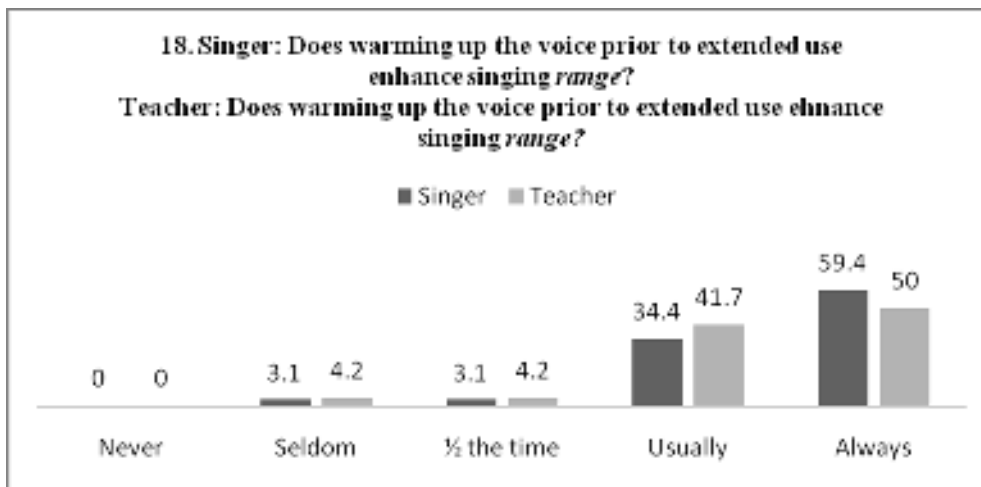
17. Singer: Does warming up the voice prior to extended use enhance *register*?
 Teacher: Does warming up the voice prior to extended use enhance *register*?

	Never	Seldom	1/2 the time	Usually	Always
Singer	0.0	6.3	3.1	34.4	56.3
Teacher	0.0	4.2	4.2	50.0	41.7



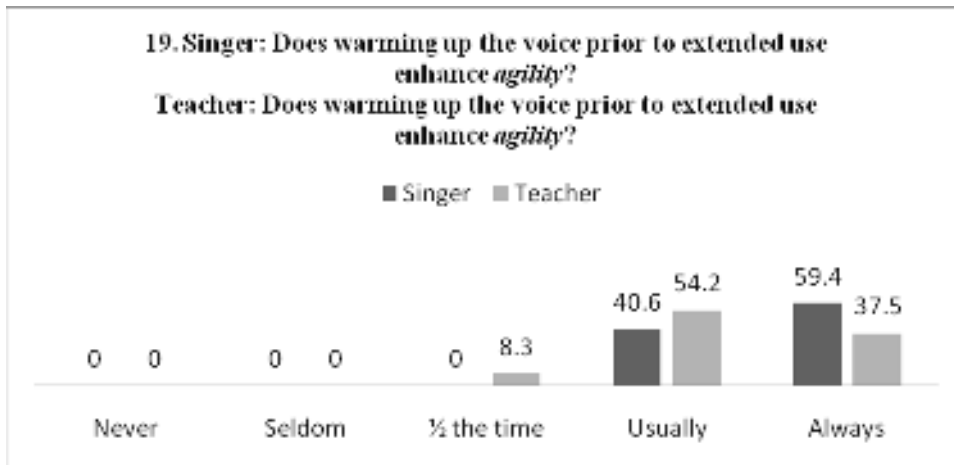
18. Singer: Does warming up the voice prior to extended use enhance singing *range*?
 Teacher: Does warming up the voice prior to extended use enhance singing *range*?

	Never	Seldom	1/2 the time	Usually	Always
Singer	0.0	3.1	3.1	34.4	59.4
Teacher	0/0	4.2	4.2	41.7	50.0



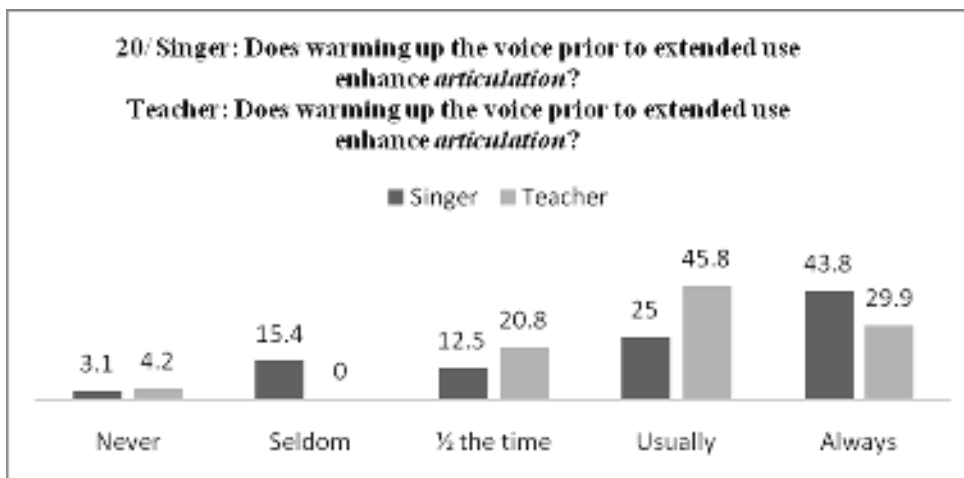
19. Singer: Does warming up the voice prior to extended use enhance *agility*?
 Teacher: Does warming up the voice prior to extended use enhance *agility*?

	Never	Seldom	1/2 the time	Usually	Always
Singer	0.0	0.0	0.0	40.6	59.4
Teacher	0.0	0.0	8.3	54.2	37.5



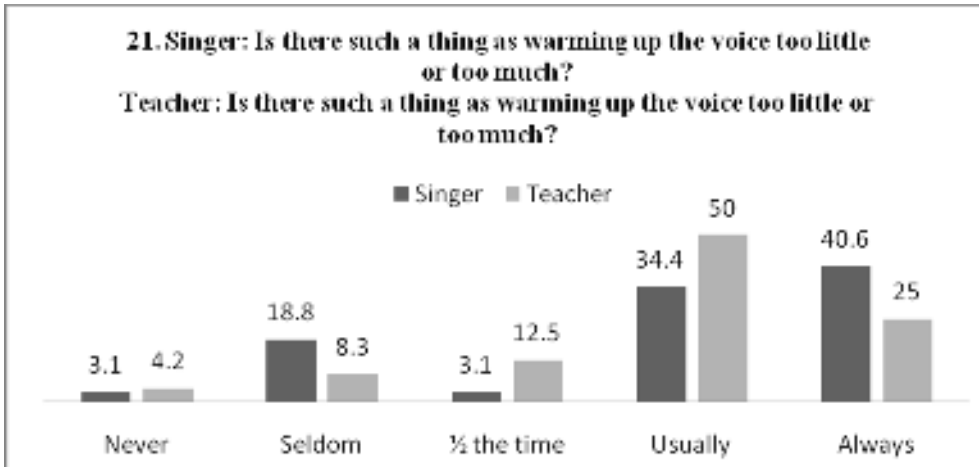
20. Singer: Does warming up the voice prior to extended use enhance *articulation*?
 Teacher: Does warming up the voice prior to extended use enhance *articulation*?

	Never	Seldom	1/2 the time	Usually	Always
Singer	3.1	15.4	12.5	25.0	43.8
Teacher	4.2	0.0	20.8	45.8	29.9



21. Singer: Is there such a thing as warming up the voice too little or too much?
 Teacher: Is there such a thing as warming up the voice too little or too much?

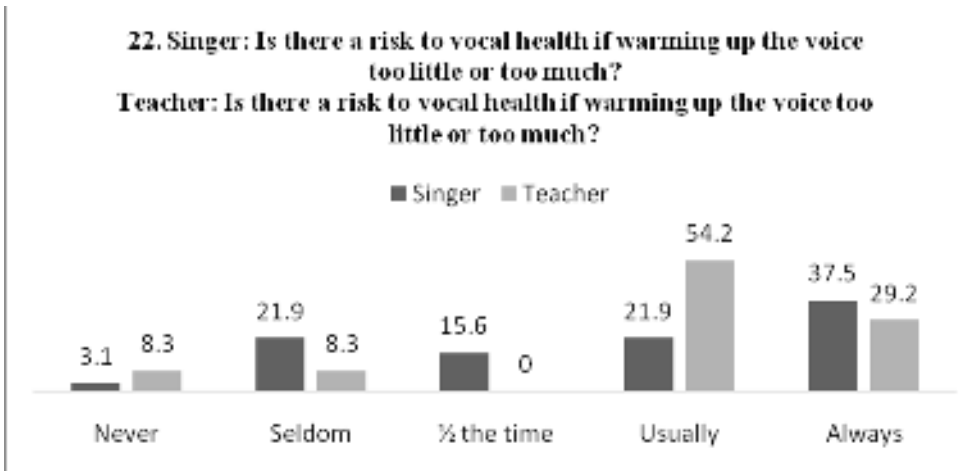
	Never	Seldom	1/2 the time	Usually	Always
Singer	3.1	18.8	3.1	34.4	40.6
Teacher	4.2	8.3	12.5	50.0	25.0



22. Singer: Is there a risk to vocal health if warming up the voice too little or too much?

Teacher: Is there a risk to vocal health if warming up the voice too little or too much?

	Never	Seldom	1/2 the time	Usually	Always
Singer	3.1	21.9	15.6	21.9	37.5
Teacher	8.3	8.3	0.0	54.2	29.2



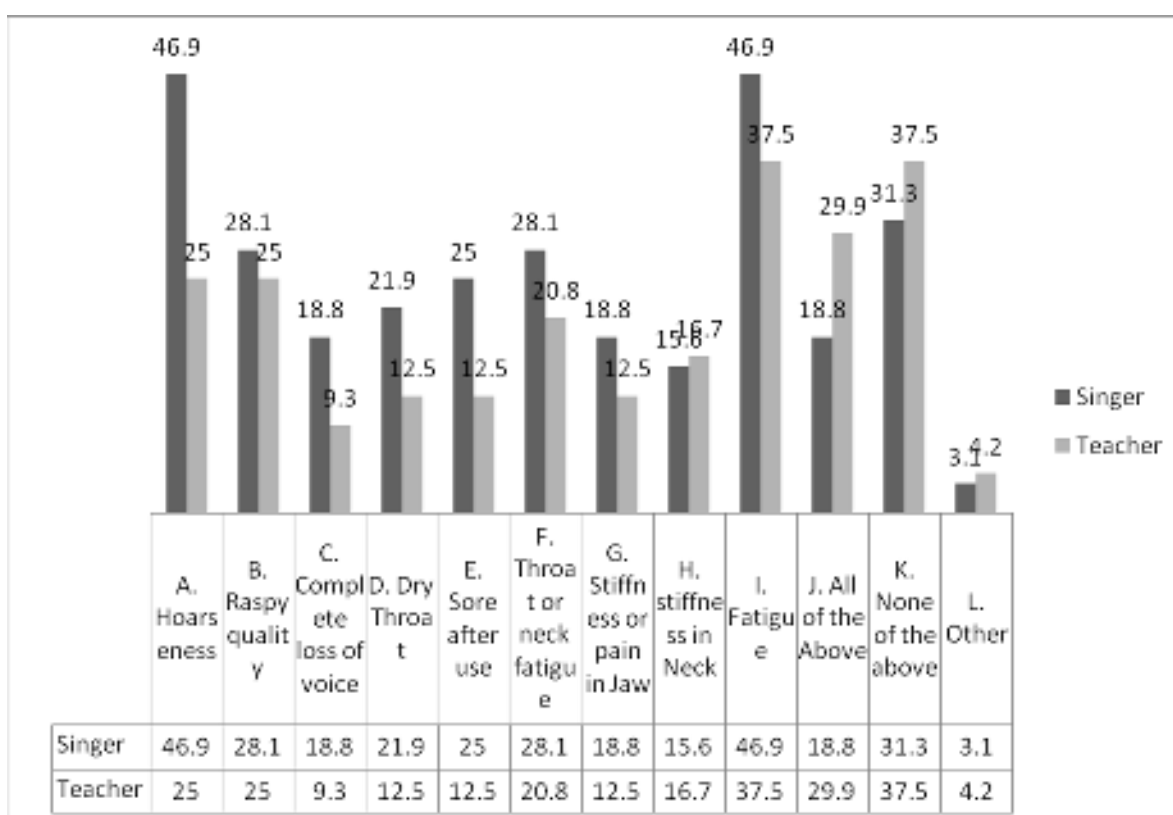
Questions 23 and 24 contain the same list of vocal disorders.

- A. Hoarseness
- B. Raspy voice while speaking or singing
- C. Complete loss of voice
- D. Dry throat while singing
- E. Irritated or sore throat after voice use
- F. Throat or neck area feels tired after voice use
- G. Stiffness, tension or pain in the jaw

- H. Stiffness or pain in the neck or shoulders
- I. Fatigue
- J. All of the Above
- K. None of the Above
- L. Other

23. If so, what are the vocal health risk:

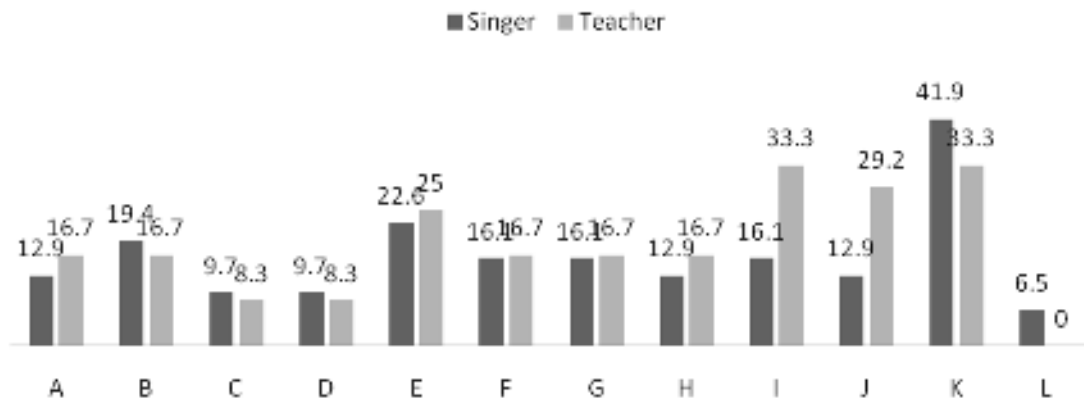
	A	B	C	D	E	F	G	H	I	J	K	L
Singer	46.9	28.1	18.8	21.9	25.0	28.1	18.8	15.6	46.9	18.8	31.3	3.1
Teacher	25.0	25.0	9.3	12.5	12.5	20.8	12.5	16.7	37.5	29.9	37.5	4.2



24. What consequences, if any, are there if one does *not warm-up* the voice prior to extended use?

	A	B	C	D	E	F	G	H	I	J	K	L
Singer	12.9	19.4	9.7	9.7	22.6	16.1	16.1	12.9	16.1	12.9	41.9	6.5
Teacher	16.7	16.7	8.3	8.3	25.0	16.7	16.7	16.7	33.3	29.2	33.3	0.0

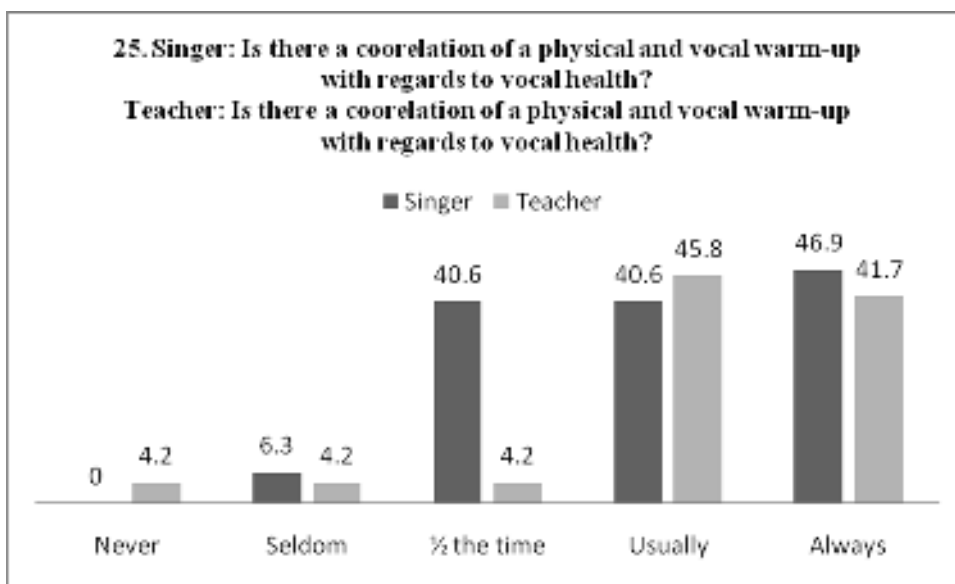
24. What consequences, if any, are there if one does *not* warm-up the voice prior to extended use?



25. Singer: Is there a correlation of a physical and vocal warm-up with regards to vocal health?

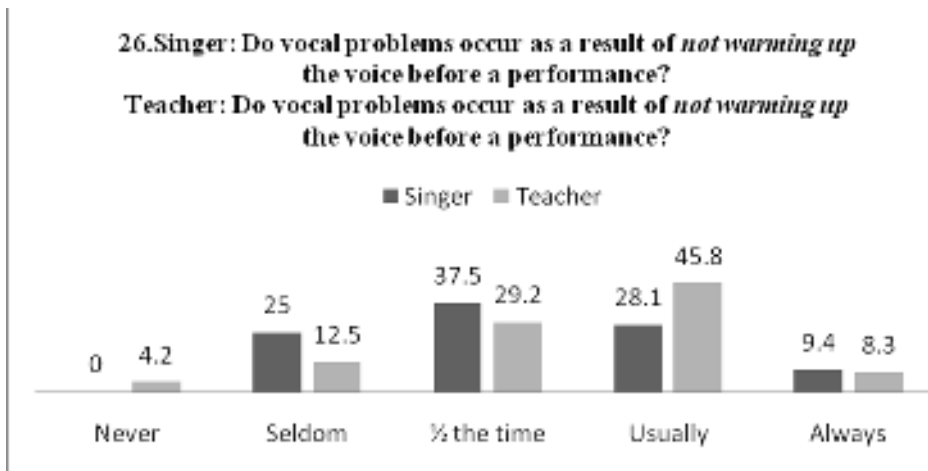
Teacher: Is there a correlation of a physical and vocal warm-up with regards to vocal health?

	Never	Seldom	½ the time	Usually	Always
Singer	0.0	6.3	40.6	40.6	46.9
Teacher	4.2	4.2	4.2	45.8	41.7



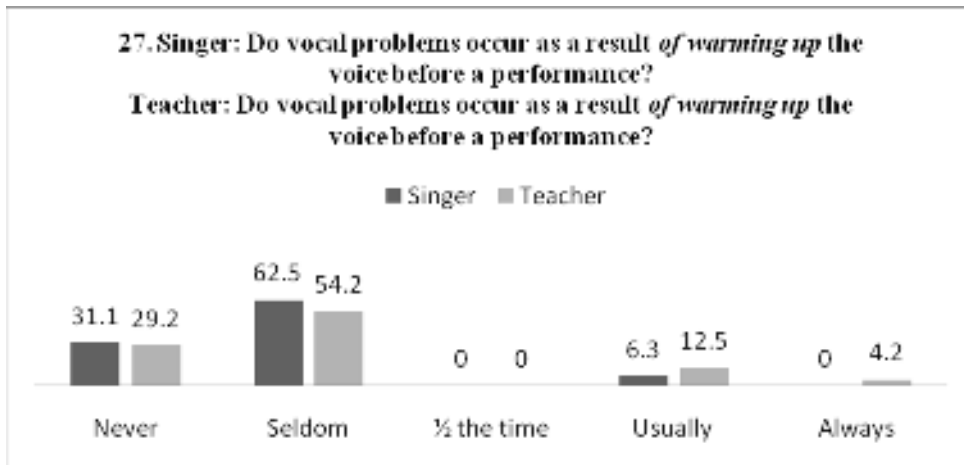
26. Singer: Do vocal problems occur as a result of *not warming up* the voice before a performance?
 Teacher: Do vocal problems occur as a result of *not warming up* the voice before a performance?

	Never	Seldom	½ the time	Usually	Always
Singer	0.0	25.0	37.5	28.1	9.4
Teacher	4.2	12.5	29.2	45.8	8.3



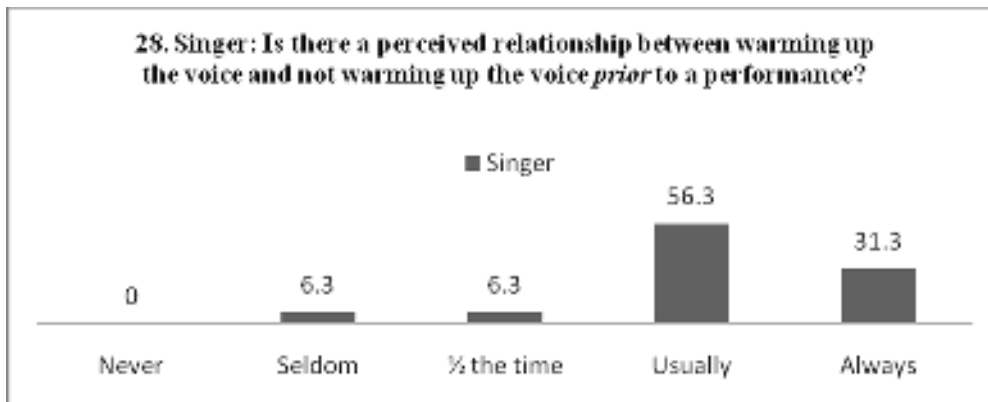
27. Singer: Do vocal problems occur as a result of *warming up* the voice before a performance?
 Teacher: Do vocal problems occur as a result of *warming up* the voice before a performance?

	Never	Seldom	½ the time	Usually	Always
Singer	31.1	62.5	0.0	6.3	0.0
Teacher	29.2	54.2	0.0	12.5	4.2



28. Singer: Is there a perceived relationship between warming up the voice and not warming up the voice *prior* to a performance?

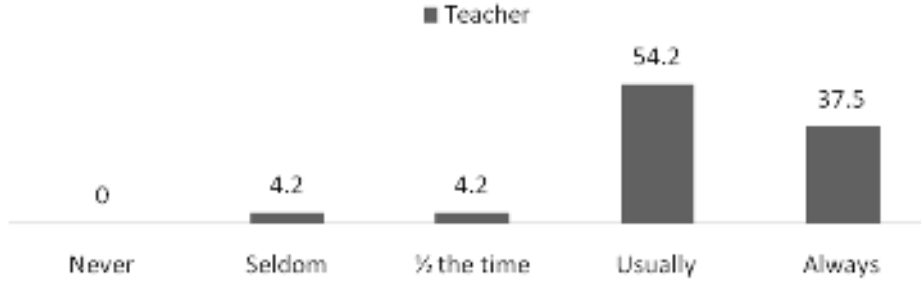
	Never	Seldom	1/2 the time	Usually	Always
Singer	0.0	6.3	6.3	56.3	31.3



29: Teacher: Do you perceive a relationship between warming up the voice or not warming up the voice prior to a performance and vocal quality during the performance?

	Never	Seldom	1/2 the time	Usually	Always
Teacher	0.0	4.2	4.2	54.2	37.5

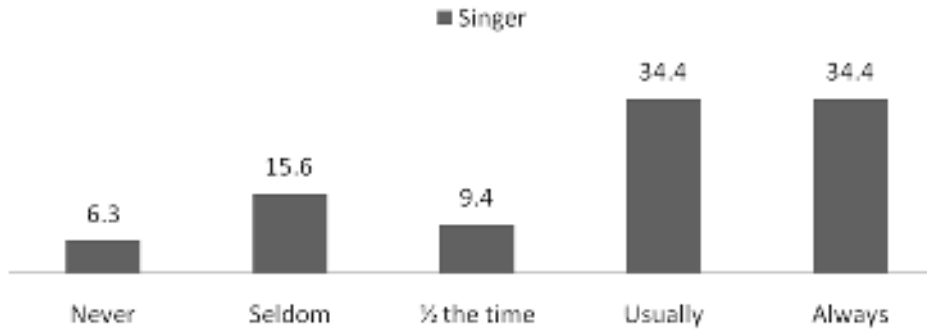
29. Teacher: Do you perceive a relationship between warming up the voice or not warming up the voice prior to a performance and vocal quality during the performance?



29. Singer: Is there a perceived relationship between warming up the voice and not warming up the voice *during* a performance?

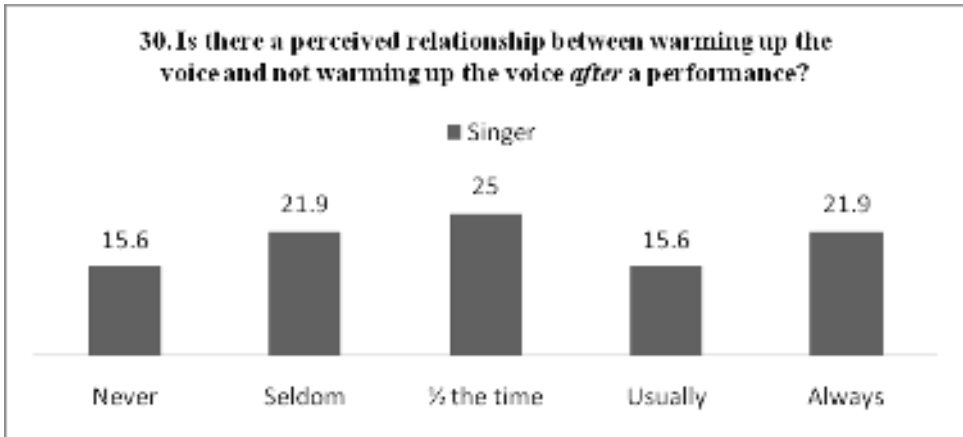
	Never	Seldom	1/2 the time	Usually	Always
Singer	6.3	15.6	9.4	34.4	34.4

29. Singer: Is there a perceived relationship between warming up the voice and not warming up the voice *during* a performance?



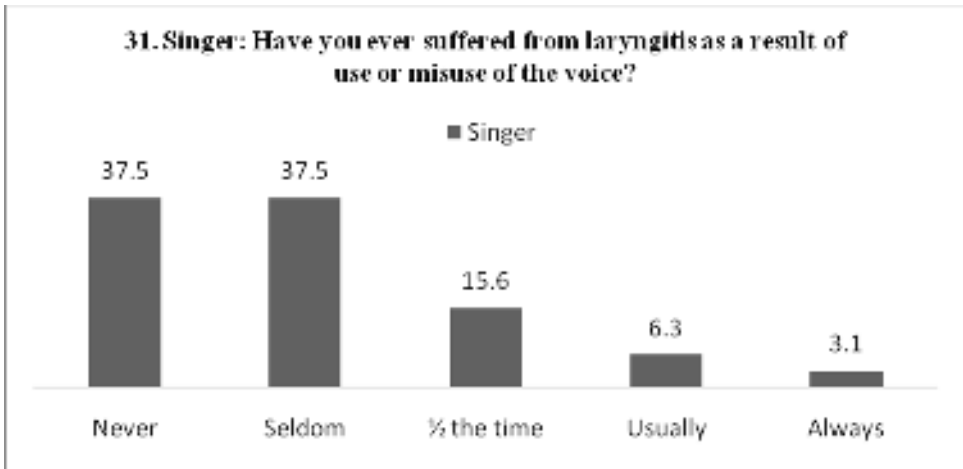
30. Is there a perceived relationship between warming up the voice and not warming up the voice *after* a performance?

	Never	Seldom	1/2 the time	Usually	Always
Singer	15.6	21.9	25.0	15.6	21.9



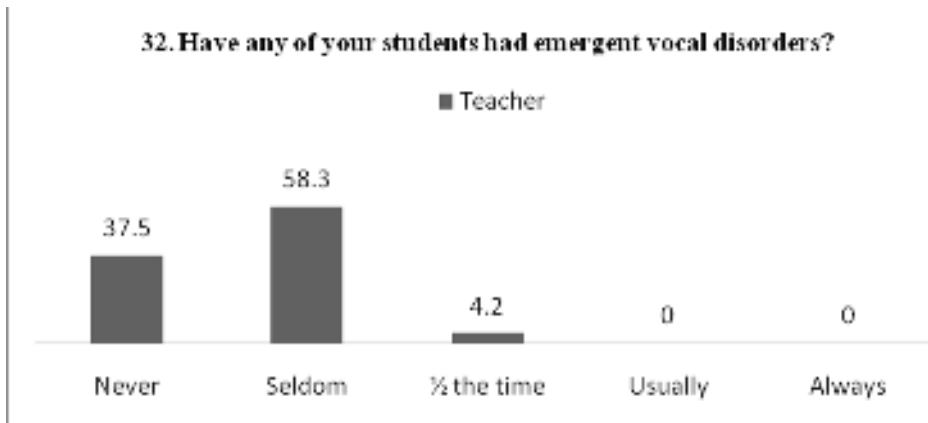
31. Singer: Have you ever suffered from laryngitis as a result of use or misuse of the voice?

	Never	Seldom	1/2 the time	Usually	Always
Singer	37.5	37.5	15.6	6.3	3.1



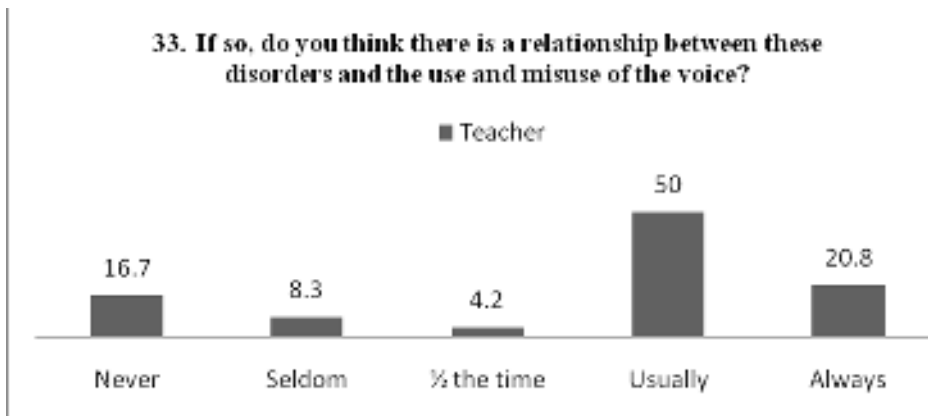
32. Teacher: Have any of your students had emergent vocal disorders?

	Never	Seldom	1/2 the time	Usually	Always
Teacher	37.5	58.3	4.2	0.0	0.0



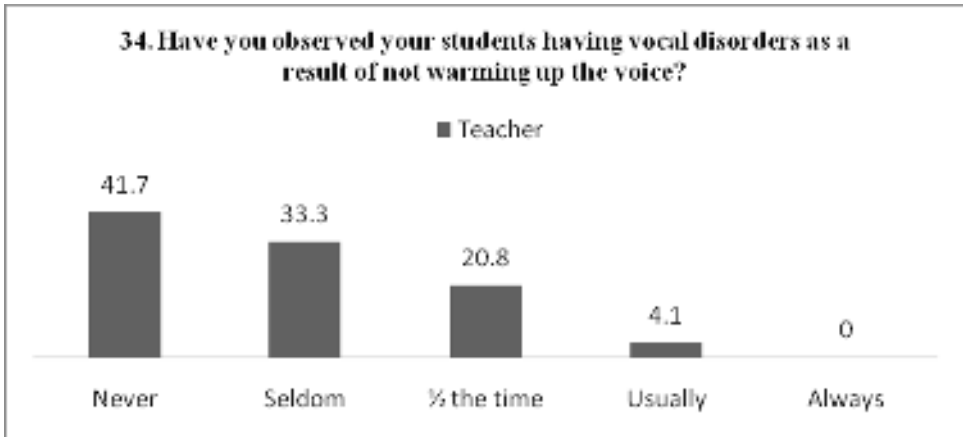
33. Teacher: If so, do you think there is a relationship between these disorders and the use and misuse of the voice?

	Never	Seldom	1/2 the time	Usually	Always
Teacher	16.7	8.3	4.2	50.0	20.8



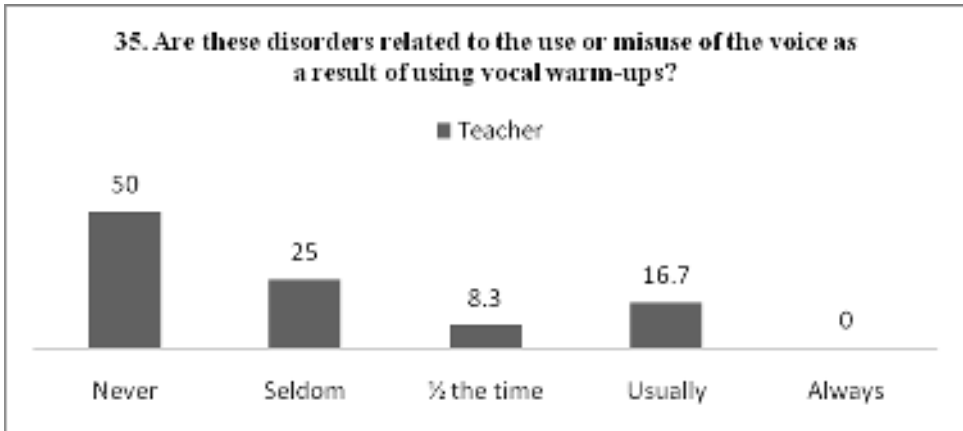
34. Have you observed your students having vocal disorders as a result of *not warming up* the voice?

	Never	Seldom	1/2 the time	Usually	Always
Teacher	41.7	33.3	20.8	4.1	0.0



35. Are these disorders related to the use or misuse of the voice as a result of using vocal warm-ups?

	Never	Seldom	½ the time	Usually	Always
Teacher	50.0	25.0	8.3	16.7	0.0



Singer Comments

1. I always find that a physical warm-up is always beneficial to my vocal production and technique. When my body is physically warm and I have an awareness of my spine as well as the entirety of my vocal instrument, I find greater freedom.
2. I find that warm up is both a physical and mental state that does help the singer use the vocal mechanism to its fullest potential. It centers the singer and helps keep the vocal folds in top shape.
3. I'm a professional international opera singer and was sent this by a colleague. There is no such thing as warming up the voice itself, but the mechanism as a whole (particularly the breath/body) is what needs the warming up.

4. The "Other" questions would not allow an input. For warm-up, I use specific vowels and arpeggios to prepare the body and vocal mechanism. I have not impaired vocal health when not warming up, but there is a definite correlation between technical proficiency and a warm-up.
5. I have had only one real vocal crisis in my singing life and that was related to a soft node that developed as a result of severe reflux.
6. I wish it was "Sometimes" instead of "About Half the Time." #28-30 is confusing to me. I am a freshman student in music, but a description for choices in #10 may have been helpful. On those I answered "Other," I only did so because I had to answer the question
7. There needs to be a place for "I don't know"
8. I think that perhaps it might benefit this survey to also request the age and or level of experience of the singers that are answering these questions. A more experienced singer will probably have different answers than a less experienced one.
9. I didn't understand exactly the questions asking about the perceived relationships between warming up the voice and not warming up the voice therefore those answers may not be accurate.
10. Blessings on your survey!
11. I prefer the Hal Leonard "teach yourself to sing in 10 easy lessons" method for most private voice students, as it brings the concepts to an accessible level for today's singer. Also, I expect my students to warm themselves up before their lesson themselves. I provide warm-up exercises and vocalises for them to practice and use to warm up. Many of them choose to sing easy songs as a warm up instead. I generally experience laryngitis at least once a year because I find it impossible as a voice teacher to rest my voice adequately when I have students to teach, and I can't afford to cancel students just because I'm hoarse, and then I talk (or worse, sing) during lessons and end up losing my voice completely as a result.

Teacher Comments

1. Great question!
2. Vocalises are like stretching before a race. You will be able to run more efficiently if you take the time to warm up. If you don't, you might finish the race fine, but you have a greater risk of injury. When it comes to the voice, that is not a risk I want my students to take.
3. You make no distinction between "warming up" in a lesson, and "vocal conditioning" that happens in the lesson. I see "warming up" as being a different activity than "vocal conditioning" to build muscular strength and flexibility.
4. We aim for performance readiness, not "vocal health" in my preparation training. Any detriment caused by "warming up" indicates a lack of understanding of vocal processes. The answers "required" are slightly phony and it would have been better if it had been possible to add personal explanations to the "other" blanks.

5. There are some teachers who are not trained to teach singing. They may have natural talent as singers but have never received a degree or studied voice for a long enough time period. Such teachers are dangerous and use what I consider "experimental" techniques on their students. You left out Concone as a choice for traditional methods. A song for a warm-up may be useful if it is a simple song which proceeds an almost equally simple singing task after the warm up. Church choirs often use a hymn as a warm-up on Sunday morning for lack of time. As for performance, I believe that if a singer has been well trained and prepared for the performance, depending on the difficulty, warm-ups are not always essential. Shortening the warm-up and saving their energy for the performance may be best in some cases. Performance can mean so many different things to a singer, i.e., auditions, repertoire, length of performance, style of singing, time of day, how rested the singer is, and, of course, difficulty level. A seasoned performer who has sung the song many, many times can often begin and end without much preparation. However, newly trained singers almost always need a warm-up.
6. "too little or too much": It all depends on the individual. The issue with certain vowels for male/female have to do with how the individual is singing....not necessarily the gender.
7. The students that I have had with vocal problems did not have those problems because of too much or too little warming up. They had to do with other factors such as over use, and smoking.
8. I liked having all the questions visible throughout the survey; I hate those one-question, one-screen surveys. But I did grow frustrated with the invariable Never/Seldom/Half etc. answer options, when some of these questions (e.g., #22) are yes/no questions, and others demand more nuanced answers. The proper answer to most of the questions #14-33 is "It depends entirely on what the singer is doing to warm up, how s/he is doing it, and how/whether s/he is paying any actual attention as s/he is warming up!" That last is the big issue. Just mindlessly singing a bunch of exercises for 10, 20 or 30 minutes is a total waste of time; it is the MINDFUL quality of the warm-up, in which the singer makes discriminating judgments about what is happening and responds to those judgments by carefully modifying behavior that makes it beneficial (or not, if the student is just going through the motions). Without mindfulness, "warm-ups" can indeed be counter-productive or damaging, but with true mindfulness, that is nearly impossible. Also, it's silly to REQUIRE an answer to #11 when you ask whether we even use them. If not, then clearly we don't prefer one. (Perhaps a "None" option would have been useful.)
9. Warm-ups, depending on how they are executed can teach and re-enforce beneficial vocal habits or just the opposite. If bad, warm-up are not good to use. Moreover, if they are performed badly, generally all the singing that singer will do will be inefficient and harmful over time.

APPENDIX E

Dr. Titze's Favorite Five vocal warm-ups for singers¹

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1. Lip trill, tongue trill, humming, or phonation into narrow tubes (all partial occlusions of vocal tract) on glides, scales, or arpeggios
 - Gets respiratory muscles into full action rapidly
 - Minimizes upward force on vocal folds because of positive oral pressure
 - Spreads the vocal folds to vibrate their edges only
 - Lowers phonation threshold pressure by providing an inertive acoustic load
2. Two-octave pitch glides, up and down, high vowels /i/ or /u/
 - Low chest to high pure falsetto
 - mixed voice
 - Gives maximal stretch to vocal folds (first ligament, then muscle)
 - Maximum dichotomy between Thyroid-arytenoid and Cryco-thyroid muscles; then unity between them
 - Avoids the difficult passaggi
 - Gets F_0 above F_1 for varying acoustic loads
3. Forward tongue roll and extension, vowel sequence /a/-/i/, scales
 - Creates independence between the phonatory and articulatory structures
 - Loosens tongue and jaw
 - Helps keep vertical larynx position stable during articulation
4. Messa di voce, proceeding from a partially occluded tract, to high vowels, to low vowels
 - Engages the layers of vocal fold tissue gradually in vibration, medial to lateral
 - Help singer match tension in muscle to tension in ligament
 - Tests symmetry of crescendo versus decrescendo control under changing respiratory conditions
 - Makes all intrinsic muscles of the larynx work in coordination with changing lung pressure
5. Staccato on arpeggios
 - Elicits clean and rapid voice onset, establishing a dominant mode of vibration
 - Trains adductor/abductor muscles simultaneously with tensor muscles during pitch change

APPENDIX F

Dudley Ralph Appelman

The Science of Vocal Pedagogy: Theory and Application

Great explanation of objectives of the drills.

“The objectives of the drills and these exercises are as follows:

1. To unify and coordinate the forces of respiration and phonation through action in song.
2. To provide an awareness of the physical sensation and action of the abdominal and back musculature, consciously controlled.
3. To refine to a point of perfection this basic action of pulsated tones throughout the vocal range.
4. To bring to the student the awareness that the total body is the vocal instrument.

Three goals must be attained in each exercise:

1. The breath must precede the sound. To create such a physiological condition a state of suspended muscular tension must be present at the start of phonation. Such a condition is identified by the absence of glottic shock; the absence of a metallic sound. The presence of a very slight aspirate which is coordinated instantaneously with the phonated sound.
2. The breath pressure must sustain the sound. The sensation of effort must be felt at the belt line. The connect of sustaining the breath pressure is one of constantly and firmly closing a circle around the middle part of the body.
3. The integrity of the vowel must be preserved in diatonic and intervallic pattern. The movement of each vowel from its position within the stable vowel pitch range to that of the first and second migration pitch ranges must be conceived and employed. To assure the student that he is properly employing abdominal control of breathing for singing, he may be permitted to over pulsate each line to assure the achievement of the concept of sustaining the sound with the breath.”²

APPENDIX G -1

SAMPLE WARM-UPS

5 Minute Warm-Up by Rachelle Randeen

Vocalists often find it difficult to warm-up their voices before they speak or sing: they either do not have the time or the resources available. Most vocalists do not argue about the need to warm-up, but are hard pressed to find a system that fits their lifestyle and singing level. Here are some suggestions you may find useful, but it is not intended to be a comprehensive warm-up experience.

1. Inhale a few deep breaths.
2. Hum descending from the middle to lower part of your range. (5-7 Repetitions)
3. On “Ah”, and softly, glide from the higher range of your voice to the lower range. (5-7 repetitions).
4. Repeat #3, but increase the volume.
5. Repeat #3, with increased volume, on “Oh” (or another vowel of your choice). Experiment with the same exercise on different vowels.
6. Choose two vowels; slide from high to low, sliding between the two vowels as you descend (5-7 times).
7. Choose a consonant, and add it to your two vowels, ensuring that you release the consonant in order to create a pure vowel sound (5-7 repetitions).
8. Sing a few of your favorite songs on a hum (or Zzz or Vvv).
9. Sing a few songs on “Ah” only in your high voice (it may be a bit uncomfortable; focus on not pushing the sound out; do not be discouraged by the tone you may find undesirable).³

http://www.musictranscription.com/articles/5_min_warmup.htm accessed March 5.2009

APPENDIX G - 2

Tracy Lane Ford, Popular Vocalises (Excerpts)

Five Minutes: Vocalize!

Minute 1: Stretching up and down drawing in a low breath through the nose and do some whoops and sirens.

Minute 2: Humming or lip trills (1-3-5-3-1, 1-2-3-4-5-4-3-2-1, or 5-4-3-2-1).

Minute 3-4: Consonant + vowel (practicing vowel clarity, legato and breathing between repetitions. Practice the above patterns with (mi, vi, zi, ma, za, za, etc.) and ascend by half step.

Minute 5: Extend your voice to the octave 1-3-5-8-5-3-1 on one of the patterns above, or, practice the most difficult phrase in your song, or memorize one phrase in your song.

10-15 minutes: Vocalize and put it to song!

Use 10-15 minutes to vocalize and extend your 5-10 minute warm-ups or add practicing a short section in your song.

Spend 5-8 minutes vocalizing, starting with stretches and breathing exercises. Select exercises that warm you up quickly!

Spend 2-3 minutes reviewing the text, rhythm, dynamic marking and melody of a short section.

Spend 3-5 minutes making progress on a short section. You can: memorize a short section, make interpretative decisions, sing through a section several times in front of a mirror.

30 minutes: Vocalize, and put it to song.

In 30 minutes you can focus on warming up slowly and deliberately, and have 15-20 minutes to work on a larger section of a song or an entire song. Spend 15 minutes vocalizing, starting with stretches and breathing exercises and then move to scales, octaves, arpeggios, staccato, legato exercises, etc.

Study your music. 5 minutes.

Review the following details:

Text: speak it aloud at various dynamic and pitch levels

Rhythm: practice challenging rhythmic sections

Dynamic markings and interpretation guidelines

Melody: Sing on lip trills, or a vowel like, oo or ah

Put it to song! 15 minutes. Work deliberately on your song. Do not just sing it over and over! Select phrases that are challenging and work on those the most. Apply techniques that you learned in your voice lesson to your song. Start memorizing! Select short phrases or sections and practice memorizing while you practice!

Finally, sing your piece through from beginning to end in front of a mirror and work on your appearance, posture and facial expressions while you sing.

If you finish early, with time and energy to spare, move on to a new song or review old songs! ⁴

<http://www.singbeautifully.com/index.php/resources-for-students>

APPENDIX G - 3

Amanda Gray - The Purpose of a Warm-up

1. To *relax* and relieve any tension.
2. To prepare the *voice* for speaking.
3. To prepare the *body* for moving.
4. To get *creativity* flowing.
5. To *focus* your mind on the task.
6. To *communicate* with others.

Relaxation

Most people experience mental and physical tension and have come to accept this tension as a part of their natural condition. As people age, tension accumulates and we forget how it is to feel relaxed. Tension produces undue fatigue, breaks down concentration ability, and makes it difficult to maintain a patient and calm exterior. Practicing relaxation, preferably at the same time every day, should be part of your Warm-up routine.

Relaxation Exercise (excerpts from list)

1. Lie down on your back with your arms lying loosely at your sides. Do a quick scan of your body and adjust any areas of discomfort. As you proceed with the exercise you may find your thoughts wandering. This is ok, just bring your thoughts back to the task and resume concentration.
2. Lie still and begin to concentrate on your feet. Try to feel the muscles in your feet release and relax. It may help to tighten them up and let go all at once. Imagine that they feel heavy, like lead weights.

Deep Breathing Exercise (excerpts from list)

1. Take a deep breath. Concentrate on feeling the expansion in the front of the body. Continue to breath in and out slowly, focusing on the smoothness of the action and the air filling the body cavities. Feel your muscles release their tension as you breathe.
2. Start to focus on the breath as it fills your sides. Feel your body expanding on the left and the right.
3. Start to focus on the breath as it fills your back. If you have difficulty feeling the breath expanding through your back, bend down on your haunches, drawing your chest against your knees. In this position, you should be able to experience this sensation quite easily.
4. Your breathing control is very important when you're warming up and controlling the voice.

Vocal Warm-Up

A vocal warm-up prepares the voice for speaking. You need to warm up the vocal folds just as you would warm up any other muscle in your body. They need to be ready for long duration of use and without proper vocal preparation, you can damage the chords.

Vocal Exercises (excerpts from list)

1. Take a deep breath and expel the air with a "sh" sound on an imaginary count from 1 to 5. Repeat as necessary.
2. Repeat the exercise using a "soft z" sound.
3. Open your mouth as wide as you can and then scrunch it up as small as you can. Repeat as necessary.
4. Keeping your lips loosely together, blow air through them so they flap together (I call this 'Horse Lips').
5. Stick out your tongue and roll it around. Reach up to your nose (or as close as you can), reach down to your chin, reach out to your left ear, reach out to your right ear.
6. Do a few tongue twisters. Focus on pronunciation and enunciation:
 - a. Theophilus Thistle, the successful thistle sifter, in sifting a sieve full of unsifted thistles, thrust three thousand thistles through the thick of his thumb. Now if Theophilus Thistle, the successful thistle sifter, in sifting a sieve full of unsifted thistles, thrust three thousand thistles through the thick of his thumb, see that thou, in sifting a sieve full of unsifted thistles, thrust not three thousand thistles through the thick of thy thumb. Success to the successful thistle sifter.
 - b. Practice reading aloud any material you want.

Physical Warm-Up

If you've ever taken an exercise class you probably know how to warm up your body. The general idea is to get the muscles moving and the blood flowing but not to do so much that you're exhausted by the end of it. Here's a short list of some of the things I like to do:

1. Basic stretches. Stretch out all major muscle groups.
2. Jumping jacks or some other cardiovascular exercise.
3. Rotate arms, rotate wrists, rotate ankles, rotate shoulders.
4. Smack myself all over (it gets the blood moving in the skin).
5. Shake out (go nuts).⁵

APPENDIX G - 4

English National Opera – Re-Printed by Permission

Warming up the voice

A vocal warm up is essential in order to maintain a healthy voice and to make the most of the rehearsal session to follow. Warm-ups cover everything from stretching the body to preparing the muscles of the face, as well as introducing good vocal technique and focusing the mind. Below are some ideas for warming up the voice, body and face / tongue.

1. Stretching

Any warm-up should begin with a systematic stretch of the body. Start with the head and face and move down the body;

- Head: nodding, shaking, tipping gently to one side then the other.
- Face: chewing, massaging, gentle 'rain' with the fingertips all over the face
- Shoulders: circles backwards and then forwards, raising to ears and dropping
- Arms: wiggle fingers, wrists, elbows, stretch arms out to side
- Waist/hips: draw circles with the hips
- Legs: using each leg in turn, draw imaginary circles on the floor, first using ankle, then knee, then hip
- Back: stand with legs apart in A-frame, drop head down and follow through with each bone of spine until folded over completely. Swing gently forward and back through legs, then side to side, then slowly uncurl back to count of 8.

2. Vocalising

The voice should be introduced gently, using sound effects rather than sung words;

- Sinnnggggggg: say the word "sing", then repeat it holding onto the final sound "ng". Repeat it once more, this time raising the pitch up and down on the "ng".
- Mmm/ugh: make an "mmm" sound and an "ugh" sound and slide from one sound into the other by starting either high or low and gradually lowering/raising the pitch.
- vibrate your lips to form a "brrrr" sound. If you find this hard, try a rolled "rrr", or even a long "vvvv" sound instead.

3. Breathing & Posture

Keep an eye on breathing and posture as you're doing the warm-up. You can go through a regular posture-drill:

- Feet flat on floor, weight evenly spread and feet hip-width apart
- Knees loose and not locked
- Bottom tucked in
- Tummy relaxed
- Shoulders and arms loose
- Back of the neck long
- Chin pointing straight down

Breathing in should not involve the shoulders going up! Fill your stomach with air when you breathe in.

4. Exercises for range and strength

We have covered some of the major techniques for developing the voice in our warm up. All of these exercises should be used right up to adult age to help develop and maintain good vocal health.

The warm-up which follows develops the voice in both chest and head register, focusing on releasing tension and freeing the breath. Some people find it more useful to exercise the head voice before the chest – this is an individual decision. It is crucial that both registers are used in the warm up, and that the beginning and end exercises should gently link the two ranges together.

5. Don't be a shop dummy!

Often a large gesture can be used to demonstrate what we are trying to achieve internally. Visualising the process in this way helps to take the mind off the sound you are making! This is crucial – if you can stop censoring the sound you'll surprise yourself. You are in charge of the sound you make – many people sit on a note waiting to see if they like it before they really commit to it – this leads to late sound and a habit of swelling on each note. Some techniques are listed below:

- Sit on a chair and place your hands around the seat of the chair. As you sing, pull on the seat without letting your shoulders rise. This is useful when looking for a bigger tone, or when approaching a scary high note.
- Place your hands on the wall in front of you. Lean into the wall, bending your elbows, as you sing. Again, keep the shoulders relaxed. This has a similar effect to the previous exercise
- Flop the upper body over and hang the arms. Make sure that the neck is completely relaxed. Now sing the exercise or phrase. This helps to eliminate neck tension
- Team up with another student and join hands. Place the feet reasonably close together, and as you sing drop your weight as though you're going to sit down, trusting your partner to balance your weight. This takes a few goes, but once you're used to it you can feel the support muscles being engaged
- Massage the face and jaw as you sing – this helps to prevent any lower jaw tension
- Circle the shoulders or swing the arms to eliminate any upper body tension

6. Tongue twisters

Warm up your mouth and work on your diction using one of the following, or any others that you may know:

Red lorry yellow lorry

Mister Mick's mixed biscuits

Three tree toads tied together tried to trot to town

Wicked cricket critic

Swan swam over the sea, swim swan swim!

Swan swam back again, well swum swan!

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APPENDIX G - 5

Bruce Schoonmaker - How To Practice Voice (Excerpts)

Each singer has to develop a practice strategy that leads to success in developing technique, learning repertoire, performing different styles of music, and in memorizing. The following are suggestions that I hope you find helpful. In order to understand the steps referring to "goals" in this hand-out, refer to "On Becoming a Singer."

Selected Rules for practicing

1. Always have a goal or several goals when you enter the practice room.
2. Include some of the following as your goals for each practice time:
 - a. Warm-up the voice
 - b. Work on technique
 - c. Learn music
 - d. Memorize music
 - e. Work technique in songs that are memorized or already under your belt.
3. When you enter the practice room, let all anxieties and problems recede from your mind. Take a break from the rest of your life. Keep working toward this peacefulness.
4. Adopt the following strategy in preparing for your voice lessons: "I will prepare so well for my next lesson that my teacher will have nothing to say about my singing except to praise it." Treat your lessons as performances.
5. Never expect #4 to come true.
6. The most important vocalises are generally the ones you like the most and the ones you dislike the most. Do these often.
7. Break up your time into segments that work for your voice (10 minutes' voice practice, 5 minute break [score study], 15 minutes' voice practice, 5 minute break [work on pronunciation]). Remember that singing is an intermittent activity.
8. Keep yourself hydrated.
9. Maintain a positive mental attitude.
10. Use a mirror to check for extraneous tension.
11. Practice to a tape of your lessons.
12. Always warm up your voice (on your own) before attending choral rehearsals.

13. If you tend to be undisciplined: Set regular times for practicing and keep it a top priority. Don't let things come in the way of these times. Compensate for your weaknesses.
14. If you tend to be overly disciplined: Take creative breaks from your practicing. Find ways to vary your activities while practicing. Don't let yourself be caught unawares in a rut. Compensate for your weaknesses.
15. Don't let yourself spend more than 10% of your practice time seated (at a keyboard).
16. Never hurry while practicing. 10 minutes of unhurried vocalizing is better than 2 hours of rushed practice.
17. Practice six days a week.⁷

APPENDIX G - 6

Dr. Jana Holzmeier - Vocal Conditioning

< <http://music.nebrwesleyan.edu/~jjh/courselinks/links.html> >

Components of Training

Conditioning is a three-part equation including frequency, duration, and intensity. You can vary—up or down—any part of the equation as long as you decrease or increase the other two proportionally. In general, the lower the intensity you use to train, the longer you need to train.

A. Frequency

The number of times per week you train is important. Studies show that if you train 2 days or less a week you do not achieve any conditioning; muscles perform no better than baseline. Further studies indicate we should schedule exercise sessions at least three times a week (3-5 days a week for optimal benefit).

Overtraining is also possible. Studies show that training 6 or 7 times per week, for example, provides minimal additional training improvement and greatly increase the risk of overuse injury. But remember, if you work out at a decreased duration and or intensity, the frequency needs to be increased.

B. Duration

The duration of the training session depends on the intensity of the exercise. An important factor to consider up-front is the total amount of work completed in an exercise session. Most of us know how much time we will spend at the gym, what machines we will use, what weights, how many sets and reps, etc. Why then would we go into a practice room with no idea of the time we will spend, or the amount of work we could or should accomplish in that amount of time?

Don't go into a practice room without a plan! This will prevent you, hopefully, from using the practice room for "brute repetition" (repeating your songs, over and over, from beginning to end, usually without warm-up, in the futile hopes of

simultaneously learning notes, memorizing, and getting the song “into the voice”).

Studies have recommended training sessions 20 minutes or longer, if the intensity is low. Researchers have also found that 10 minutes of exercise, three times per day, results in a conditioning effect. In other words, you don’t have to practice 30-60 minutes without a break; you can achieve good training results by breaking up your practice sessions.

C. Intensity

The most critical component of exercise training is establishing the exercise intensity. Desirable physiological changes from training occur primarily from intensity overload. A key factor, however, is the initial level of fitness. As in cardiorespiratory exercise, it is recommended that singers monitor the rate of perceived exertion. Try using a scale from 1-10, with 1 being zero effort or zero volume, and 10 representing maximum effort and volume; right at or just beyond 10 would begin to represent strain or excess effort. Training benefits will be greatest when the singer overloads gradually, especially within the first 6-8 weeks of the training program.

Singers must learn to pay close attention to the muscles in the head, neck, shoulders, and the tongue. Any sense of tension, strain, or fatigue, especially in the throat or neck, is a definite sign that you are working “out of the zone.” Additionally, a sensation of pain or strain in the throat or neck occurs after it's too late—when you begin to feel pain, you have already caused some vocal damage (pain does not occur immediately in the muscles of the larynx).

An interesting procedure for the singer is the practice of marking in a choir or opera rehearsal, which is singing silently or with very little volume. As a singer thinks the pitches but does not sing them with maximum intensity, the larynx still moves in its appropriate fashion, and the vocal folds have been shown to continue to lengthen and shorten themselves for the various pitches. For the singer, then, marking is a legitimate training technique, which contributes to the overload process while building gradually in intensity. However, marking will not build endurance or strength, so marking must be gradually replaced with muscle overload to bring the voice up to performance level.

Stages of Exercise Progression

A. Initial Conditioning

During the first 4-6 weeks, the initial conditioning should be light, dynamic, low intensity, and short duration.

B. Improvement Conditioning

This period (16-20 weeks) should maintain a more rapid rate of progression. The overload process increases. Intensity and duration increase progressively during this phase.

C. Maintenance Stage

Once the desired fitness level is reached, the individual enters the maintenance stage, which usually begins approximately 6 months into the exercise program and continues, hopefully, as a lifetime commitment.

During this stage, varying the type of activity is essential to prevent boredom (we could think of this as "circuit training").

In your lessons, you will begin to learn how to adapt your practice techniques to these training principles. But what about rehearsals? Singers rarely, if ever, get to choose the length of a choral or opera/musical rehearsal; this is chosen by the director or by the school. Operas and musicals often rehearse in two-hour (or more) blocks of time. Is a choir or opera rehearsal a training session, in this sense? Why or why not? The frequency of these sessions is may be within the above recommendations. However, the duration of these rehearsals goes far beyond the recommended 10-20 minutes in the initial and improvement conditioning stages; furthermore, the intensity could be far above the recommended equation levels for the duration and frequency involved.

For long and frequent rehearsals (choir, opera, musical), the following two assumptions should be made: (1) It should be the goal of the individual singer to train properly before the rehearsal period begins; the overload process has been followed and stamina should be at the desired mark for the duration, intensity and frequency of the rehearsal period; skills (flexibility, coordination) are also reliably in place. (2) Individuals must learn to pace themselves in a choral or opera/musical rehearsal, striving to neither mark too much, resulting in a perpetual state of underenergized or "held-back" singing (which is tense and restricted, nor over-sing too much. The second scenario is particularly damaging; studies have shown that singers consistently adjust volume levels and pitch levels up so that they may distinguish their own voices from masses of sound involved in choruses or choruses+instruments!

And what about the frequent repetition involved in rehearsals, especially in reading sessions? Singers should monitor these repetitions, especially in large groups. You should consider setting a baseline number for repetitions based on your own fitness level; after you reach your personal limit (before you feel strain in your neck or throat), you should vary the intensity (marking, decreasing volume, singing down the octave if this is acceptable to the conductor, etc.—all accepted and legitimate rehearsal techniques for opera and choir). Frequent repetition, if a singer is in good condition, can help build a voice and also work to build concentration, a critical mental skill in music. Use repetitions to your advantage, to build physical and mental skills.

Choir rehearsals and opera/musical rehearsals do indeed represent a mental ideal of training; you are learning notes, rhythms, harmonies, texts, blocking,

choreography, or movement, expression, and how to work together toward a common goal. It is hoped that this information about training and exercise physiology will help you to combine the highest ideals of music-making with a common-sense approach to the physical aspect of singing.

Saxon, Keith and Carol M. Schneider, *Vocal Exercise Physiology*, (San Diego: Singular Publishing, 1995), 5, 47-68.⁸

APPENDIX G – 7

Leon Thurman, Alex Theimer, Graham Welch, Elizabeth Grefsheim, Patricia Feit. “Vocal efficiency and vocal conditioning in expressive speaking and singing”

“Before vigorous use, optimum warm up of any muscle takes about 15-20 minutes of relatively steady use. The vocal warm up process begins with minimally strenuous vocal muscle use and tissue collision forces, plus slower, simpler muscle movement. Then there is a gradual progression of increased vigorous use. Vigorous voicing in order of importance includes:

1. Gradually higher and higher pitches (increased effort in the shortener-lengthener and closer-opener muscles. And others, plus stretching of the vocal fold cover tissues, and increased refinement of neuromuscular programs for pitch accuracy and so forth);
2. Gradually louder and louder vocal volume throughout the capable pitch ranged (increased effort in the shortener-lengthener and closer-opener muscles, and others plus increased refinement of neuromuscular programs for coordinated pitch accuracy, vocal volume and consistency of voice quality);
3. Gradually faster and faster speeds of larynx muscle movement in the context of increasing precision (pitch interval agility is wider and wider pitch skips with increasing pitch accuracy; pitch speed agility is smaller pitch intervals at high speeds with increasing pitch accuracy; speed and accuracy in the vocal tract articulator muscles also will be important for avoiding acoustic loading continuity of voice quality, musical time, clarity of language communication, and so forth);
4. Use of the lower four or five pitches within the capable pitch range (increased effort in the shortener muscles, and other-particularly applicable to basses and altos in choirs who must repeat many lower pitches in particular muscle selection).⁹

APPENDIX G – 8

ALIGNMENT & POSTURE

Suggested Warm-up exercises

James McKinney, *The Diagnosis and Correction of Vocal Faults: A Manual for Teachers of Singing and for Choir Directors*” TN: Broadman Press 1982, p 35-36.

“Until you have decided on your own warm-up system, the following suggested routine may be helpful:

- a. Begin with general bending and stretching exercises, such as, reaching as high as you can; touching the left foot with the right hand and the right foot with the left hand alternately; rolling the body around in circles from your waist, deep knee bends; touching both toes simultaneously; and so forth.
- b. Roll your head around gently in circles clockwise several times and then reverse the direction, letting your head flop freely. Be very careful not to force the head in any direction.
- c. Move your shoulders around in circles, first to the back and down several times, and then reverse the direction.
- d. With your arms hanging loosely at your sides, shake your hands back and forth as fast as you can while keeping your upper arms as loose as possible.
- e. Stand with your feet close together and without lifting your toes from the floor, raise each heel alternately as if you are walking in place, gradually increasing the tempo until your legs seem to be shaking all over.
- f. Nod your head back and forth gently, being careful not to force in either direction.
- g. Flop your jaw up and down freely while saying “yah”; gently rub the muscles around the jaw joint on each side of your face and stroke downward towards your chin.
- h. Bubble air between your lips until you are making a sound resembling that of a motorboat or motorbike.
- i. Pretend you are chewing a large bite of food.
- j. While standing tall, start bending over slowly, letting the head lower first, then roll the shoulders forward as if you are trying to stretch the spine and separate each vertebra from the one below it until you are fully bent over. Stay in this position a few seconds and breathe deeply, being conscious of where you feel expansion; then reverse the process returning to the upright position as slowly as you can; repeat the exercise several times.

Note how free your posture feels afterward.

These exercises are designed to improve your muscle tone in general and to remove interfering tensions from those areas surrounding the vocal mechanism in particular.¹⁰

APPENDIX H

SAMPLE CORRESPONDENCE

Janeal Sugars
3904 Mitchell Cove
Round Rock, Texas 78681
E-mail – JM_Sugars@hotmail.com
Cell XXX-723-9040

February 5, 2009

Dr. NAME
Dr. TITLE
Dr. ADDRESS

Dear Dr. NAME,

Thank you for taking the time in responding to my letter. I would like to have a telephone interview with you regarding questions related to vocal warm-ups for the solo voice.

Perhaps if you have antidotal stories as they relate to vocal health and vocal warm-ups they might serve as better tools for assimilation in the data.

My goal is completion of my dissertation by April 1, 2009. Attached is a copy of the abstract.

To confirm your phone number: 555-555-5555, if there is an alternate number that would be better please do not hesitate to contact me. Please also let me know what possible time that is best to reach you.

I look forward to speaking with you further.

Sincerely,

Janeal Sugars
DMA in progress
Vocal Performance and Vocal Pedagogy Specialization

Encl – Abstract

APPENDIX I - 1

Date: Fri, 25 Apr 2008 09:15:50 -0600 [04/25/2008 10:15:50 AM CDT]
From: [Ingo Titze <ITitze@dcpa.org>](mailto:ITitze@dcpa.org)
To: JM_Sugars@mail.utexas.edu
Subject: RE: Sugars - Request for Permission
Headers: [Show All Headers](#)

Janeal,

Permission is granted, provided that the appropriate reference is given for the work, which was first published in J. of Singing and is also on the NCVS website.

Best wishes,

Ingo R. Titze

-----Original Message-----

From: JM_Sugars@mail.utexas.edu [mailto:JM_Sugars@mail.utexas.edu]
Sent: Thursday, April 24, 2008 2:10 PM
To: Ingo Titze
Subject: Sugars - Request for Permission

Dear Dr. Titze,

I am requesting permission to use information within your handout entitled "Dr.Titze's Favorite Five vocal warmups for singers" for my research and dissertation. The dissertation is "Philosophy and Rational for Vocal and Physical Warm-ups."

Thank you for your consideration.

Janeal Sugars

DMA in Progress

Expected Graduation Dec 2008

Date: Sat, 11 Oct 2008 10:31:58 -0600 [10/11/2008 11:31:58 AM CDT]
From: [Ingo Titze <ITitze@dcpa.org>](mailto:ITitze@dcpa.org)
To: JM_Sugars@mail.utexas.edu
Subject: RE: Vocal warm-up Survey and Dissertation Questions
Headers: [Show All Headers](#)

Dear Janeal Sugars,

I refer you to my short articles about vocal warm-ups in Journal of Singing. Also, the Choral Singing Journal next month will carry an article by me that has a synopsis on vocal warm-up for choirs.

Best wishes,

Ingo R. Titze

-----Original Message-----

From: JM_Sugars@mail.utexas.edu [mailto:JM_Sugars@mail.utexas.edu]
Sent: Thursday, October 09, 2008 11:00 AM
To: Ingo Titze
Subject: Vocal warm-up Survey and Dissertation Questions

Dear Dr. Titze,
The dissertation I am writing is entitled "Current Trends of Vocal Warm-Up and Vocal Health from the Perspective of Medical and Singing Professionals."
Would you be available to answer a few questions regarding this topic in the next two weeks?
Attached is the abstract. This Document is Word 2003. Please let me know if it does not open.
Below is a survey for Vocal Warm-ups. If you know of a voice teacher or singer I encourage you to send this survey on to them.
This survey is in fulfillment for a dissertation entitled "Current Trends of Vocal Warm-ups and Vocal Health from the Perspective of Medical and Singing Professionals." It is anonymous and can be filled out in less than 20 minutes.
Thank you in advance for participating in this survey.
http://www.surveymonkey.com/s.aspx?sm=g46g_2fpJsySOvXbFloUaZPQ_3d_3d_singer
http://www.surveymonkey.com/s.aspx?sm=SnPHAOnlc9BsJApHJXQxJw_3d_3d_teacher

Please forgive if this comes as a duplicate. The final day for participating in this survey is December 15, 2008.
Thank you for your participation.
Janeal Sugars
DMA in Progress
UT in Austin, Texas

APPENDIX I - 2

Date: Mon, 9 Feb 2009 09:13:12 -0500 [02/09/2009 08:13:12 AM CDT]
From: [Richard Miller <Richard.Miller@oberlin.edu>](mailto:Richard.Miller@oberlin.edu)
To: "JM_Sugars@mail.utexas.edu" <JM_Sugars@mail.utexas.edu>
Subject: Re: Sugars - Interview
Headers: [Show All Headers](#)

Dear Janiel Sugars,

I really cannot be of service in providing anecdotal stories (if I understand your request properly) because I hold a different viewpoint on vocalization either before or during lessons than that its main service is one of warming-up. Let me explain briefly, which is what I would have had to say in a telephone conversation.

First of all, no vocalization patterns should be undertaken without a specific pedagogic goal. Each must deal with specific aspects of the singing voice. I do not want a student to do some sort of warm-up

run-through unless it directly relates to principles being enunciated in the studio. Because of that, in the early weeks of instruction I usually ask the student not to vocalize before coming to the lesson, except for a few brief patterns. We hear the subject sing, then make an analysis of what should be immediate and primary goals. Then she/he is given a set of exercises tailored to the specific need, which vocalizes are practiced daily, then reviewed in the first part of the subsequent lesson. This policy is extended to include the several main areas of voice technique:

breath-management (including onset, release, and breath renewal); resonance balancing; agility; sostenuto, registration; vowel modification, and achieving the even great scale. In most of my lessons, the first half of the period is devoted to the vocalization routine, the rest to its application to vocal literature and artistic communication. The amount of time to which any of these designated areas is devoted is dependent on the current capability and performance level of the student.

Finally, I want to stress that I do not consider the purpose of vocalization exercises to be solely "warming-up the voice." After basic principles in each area of technique have been fairly well established, then the singer is to follow a daily routine of patterns taken from each of the areas. An abbreviated run-through of some of them- -depending on the nature of the performance- -should be adopted as a brief warm-up maneuver.

Good luck to you. I feel more comfortable in explaining my basic pedagogic approach than to answering questions regarding anecdotal example of favorable or unfavorable warming-up exercises. So I hope this will serve your purposes adequately. Feel free to quote this as coming from a private communication. However, if you do use it, I request that it be done in its entirety.

Once again, all the best in your continued study and work.

Sincerely,

Richard Miller

On 2/8/09, JM_Sugars@mail.utexas.edu <JM_Sugars@mail.utexas.edu> wrote:

[\[Hide Quoted Text\]](#)

Dear Mr. Miller,

Thank you for taking the time in responding to my e-mail. I would like to have a telephone interview with you regarding questions related to vocal warm-ups for the solo voice.

Perhaps if you have antidotal stories as they relate to vocal health and vocal warm-ups they might serve as better tools for assimilation in the data.

My goal is completion of my dissertation by April 1, 2009. Attached is a copy of the abstract.

Please let me know what number is best to reach you and a possible

time.

I forward to speaking with you further.

Janeal Sugars
DMA in progress

APPENDIX I - 3

Your letter regarding your dissertation

From:  John Nix (John.Nix@utsa.edu)

 You may not know this sender. [Mark as safe](#) [Mark as junk](#)

Sent: Tue 2/10/09 10:41 PM

To: JM_Sugars@hotmail.com

Cc: jandcnix@juno.com

 3 attachments



[TMEA hand...doc](#) (26.6 KB), [first for...jpg](#) (104.4 KB), [F1 versus...jpg](#) (429.2 KB)

Hello,

I received your letter regarding your study today. I would very much like to talk with you regarding your project. In general, a Wednesday morning before noon, or a Sunday evening would be best. If we speak on Sunday, you could call me at my home, 210-695-8020. You do have my correct office phone number.

Before we speak, I think it would be helpful, if you haven't read it already, for you to read the following article I wrote about practicing and teaching from a vocology perspective. I certainly take up the topic of vocalizing (and how vocalizing is different from warming up, at least in my view). Please visit: <http://www.ncvs.org/ncvs/svi/voicetalk.htm> This might help you better understand my take on this subject, and help you formulate questions you want to ask me. With regards to the second paragraph of your abstract, I would also like to suggest Richard Miller's books on training specific voice types, his book *The Structure of Singing*, Berton Coffin's books *The Sounds of Singing* and *Overtones of Bel Canto*, Oren Brown's book, *Discover Your Voice*, the writings of Ingo Titze on vocalizing in the column he writes for the *Journal of Singing*, the article I wrote reviewing the work of Mathilde Marchesi and the articles I have written on lip trills and raspberries, on semi-occluded vocal tract postures and on using vocal fry in the *Journal of Singing*, and the work of Katherine Verdolini (vocal motor learning). I feel rather strongly there are a wide variety of resources on vocalizing available for solo singers. I must also tell you that I am in the midst of writing a major article on this topic, and there may be some things which I wish to decline from speaking about because they are part of my article.

I am presenting at TMEA on Thursday of this week on designing vocalises for choirs. This is an adaptation of a presentation I use regularly in teaching solo voice pedagogy at UTSA and at off campus workshops. Perhaps you can attend - this might answer questions even better than an interview. My presentation is on Thursday at 2 pm in room CC101. I have attached a portion of my handouts for your information.

I look forward to speaking with you. As you can see, this is a topic that I am very interested in.

Sincerely,

John Nix
 First Formants Musical Score.JPG

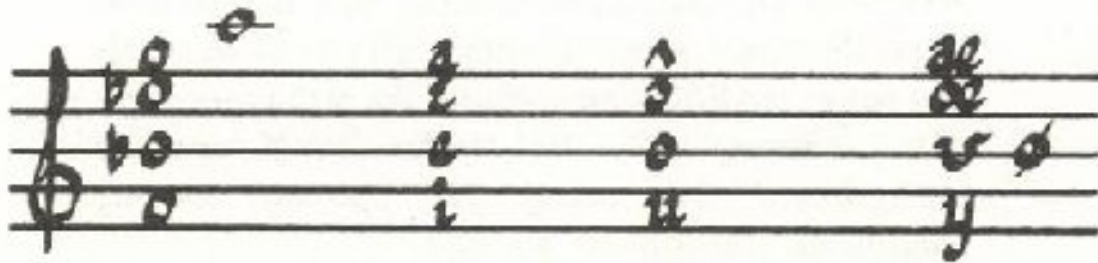


Fig. 44 Mean Frequencies of First Formants

F1 versus F2 plot in HZ.jpg

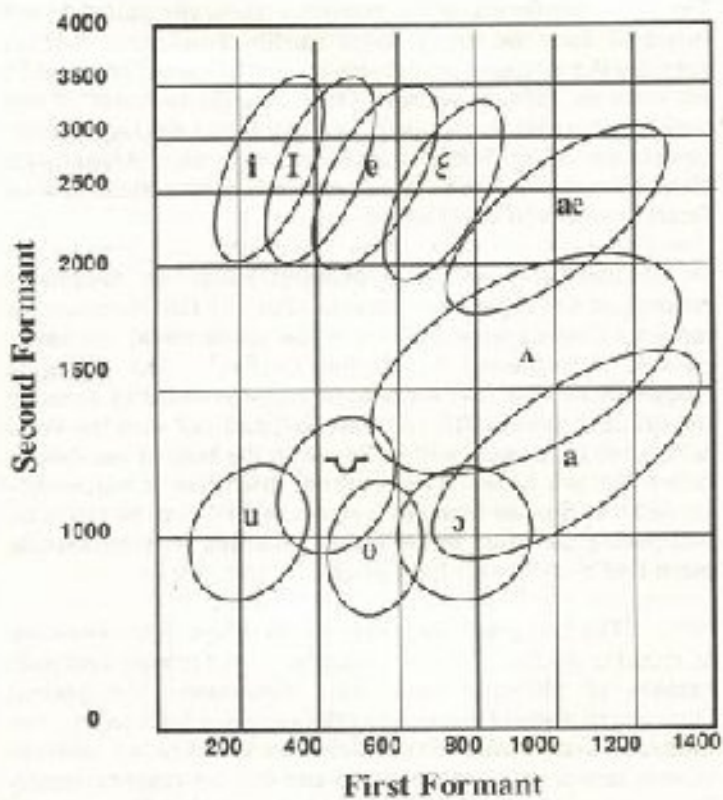


Fig. 40 Formant Ranges (based on data from
 Denes and Pinson, Luchsinger and Arnold,
 Wood, Vennard, Bunch, and Coffin)

APPENDIX I - 4

Date: Sat, 6 Jun 2009 15:03:23 +0100 [06/06/2009 09:03:23 AM CDT]
From: [Baylis <Baylis@eno.org>](mailto:Baylis@eno.org)
To: JM_Sugars@mail.utexas.edu
Subject: RE: Request for Permission
Headers: [Show All Headers](#)

Yes, that will be fine for you to use the document as long as just for education purposes. Please can you include a credit to ENO / Inside Out in your dissertation?

Good luck!

Teresa Deacon,
Administrator, ENO Baylis, English National Opera,
London Coliseum, St. Martin's Lane, London, WC2N 4ES.
Tel: 020 7845 9595
Email: tdeacon@eno.org
Website: www.eno.org/baylis
ENO Interactive: http://www.eno.org/eno_interactive/hub.html
[w.eno.org/carmen](http://www.eno.org/carmen)

-----Original Message-----

From: JM_Sugars@mail.utexas.edu [mailto:JM_Sugars@mail.utexas.edu]
Sent: 05 June 2009 16:40
To: Baylis
Subject: Request for Permission

Dear Colleague,
At this present time I am writing a dissertation on Vocal Warm-ups for the solo singer. This paper is strictly for educational purposes and am asking for permission to include the pdf on vocal warm-ups that you have online.

Thank you for your consideration.
Janeal Sugars
Doctoral Candidate
Voice Performance and Vocal Pedagogy.

APPENDIX J

IRB# 2008-06-0061

Informed Consent to Participate in Research

The University of Texas at Austin

You are being asked to participate in a research study. This form provides you with information about the study. The Principal Investigator (the person in charge of this research) or his/her representative will provide you with a copy of this form to keep for your reference, and will also describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study: VOCAL WARM-UP SURVEY

Principal Investigator – Miss Janeal Sugars – Phone 832-723-9040
Faculty Sponsor – Professor Darlene Wiley, Department of Music, Butler School of Music
Phone 512-471-7764.

Funding source: “Not applicable”

What is the purpose of this study? Survey will investigate vocal warm-up methods from the perspective of the vocal instructor, singer and Ear, Nose and Throat specialist. Anticipated participants range from 60-250.

What will be done if you take part in this research study? The risk associated with this study is no greater than everyday life. Participants will be able to see results of the survey.

The Project Duration is: Two month window for participation. Survey will close as of August 10, 2008.

What are the possible discomforts and risks?

The risk associated with this study is no greater than everyday life.

“If you wish to discuss the information above or any other risks you may experience, you may ask questions now or call the Principal Investigator listed on the front page of this form.”

What are the possible benefits to you or to others? “No benefit exists at this time”

If you choose to take part in this study, will it cost you anything? N/A

Will you receive compensation for your participation in this study? The University has no plan to provide compensation for a physical or psychological injury.

What if you are injured because of the study? The risk associated with this study is no greater than everyday life.

If you do not want to take part in this study, what other options are available to you? *Your participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with The University of Texas at Austin.*

How can you withdraw from this research study and who should you call if you have questions?

If you wish to stop your participation in this research study for any reason, you should contact the principal investigator: Miss JANEAL SUGARS at (832-723-9040). You should also call the principal investigator for any questions, concerns, or complaints about the research. You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits for which you may be entitled. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

In addition, if you have questions about your rights as a research participant, or if you have complaints, concerns, or questions about the research, please contact Jody Jensen, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects at (512) 232-2685 or the Office of Research Support and Compliance at (512) 471-8871.

How will your privacy and the confidentiality of your research records be protected?

Research data will be retained by the PI for the period of one year and will be stored on a coded jump drive with no access to internet. No personal information, (name, address, phone numbers will be gathered for this survey). Participation in this survey will be strictly confidential.

If in the unlikely event it becomes necessary for the Institutional Review Board to review your research records, then the University of Texas at Austin will protect the confidentiality of those records to the extent permitted by law. Your research records will not be released without your consent unless required by law or a court order. The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate you with it, or with your participation in any study.

***Please note that for studies with audio or video recordings, participants must be told: “(a) that the interviews or sessions will be audio or videotaped; (b) that the cassettes will be coded so that no personally identifying information is visible on them; (c) that they will be kept in a secure place (e.g., a locked file cabinet in the investigator’s office); (d) that they will be heard or viewed only for research purposes by the investigator and his or her associates; and (e) that they will be erased after they are transcribed or coded. If you wish to keep the recordings because of the requirements of your professional organization with respect to data or because you may wish to review them for additional analyses at a later time, the statement about erasing them should be omitted and you should state that they will be retained for possible future analysis.”

Will the researchers benefit from your participation in this study? There is no expected benefit beyond publishing and presenting the results.

Signatures: [Please include all of this bolded text:]

As a representative of this study, I have explained the purpose, the procedures, the benefits, and the risks that are involved in this research study:

Signature and printed name of person obtaining consent Date

You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights.

Printed Name of Subject Date

Signature of Subject Date

Signature of Principal Investigator Date

June 25, 2008

-
- ¹ Ingo Titze, "Warm-Up," <<http://www.ncvs.org/e-learning/warmup.html>>
- ² Dudley Ralph Appelman, *The Science of Vocal Pedagogy: Theory and Application*, (IN: Indiana University Press, 1986) 260.
- ³ Rachele Randeem "5 Min Warmup," <http://www.musictranscription.com/articles/5_min_warmup.htm> accessed March 5, 2009
- ⁴ Tracy Lane Ford, "Popular Vocalises" <http://www.singbeautifully.com/index.php/resources-for-students>
- ⁵ Amanda Gray, "The Purpose of a Warm-up" <http://thunder.prohosting.com/~jex/warmup.html#4>
- ⁶ ENO, English National Opera, "Warming up the Voice," http://www.enoinsideout.org.uk/assets/pdf/warming_up_voice.pdf
- ⁷ Bruce Schoonmaker, "How to Practice," <http://facweb.furman.edu/~bschoonmaker/essays.html> Accessed March 18, 2009
- ⁸ Jana Holzmeier, "Vocal Conditioning," <<http://music.nebrwesleyan.edu/~jjh/courselinks/links.html>>
- ⁹ Leon Thurman, et al, "Vocal Efficiency and Vocal Conditioning in Expressive Speaking and Singing" (MN: Voice Care Center, 2001), 207.
- ¹⁰ James McKinney, *The Diagnosis and Correction of Vocal Faults: A Manual for Teachers of Singing and for Choir Directors*, (IL: Waveland Press, 2005), 35-36.

GLOSSARY

Scientific Terminology

Abduct: To move apart, separate.

Adduct: To bring together, approximate.

Anterior commissure: The joining together of the vocal folds in the front of the larynx.¹

Arytenoid cartilages: Two small, pyramid-shaped cartilages located on either side of the superior posterior aspect of the cricoid cartilage. The outermost base of each comprises the muscular process while the bases, which are towards the inside of the cricoid ring, are the vocal processes.

Aspiration: The sound made by turbulent airflow preceding or following vocal fold vibration, as in [ha] or [ah].²

Aural: 1. Pertaining to the ear and/or the sense of hearing. 2. Uttered by the mouth, in singing; not spoken, not written.

Bernoulli Effect: A principle that states if the energy in a confined fluid stream is constant, an increase in particle velocity must be accompanied by a decrease in pressure against the wall.³

Cricoarytenoid muscles: Paired muscles originating at the muscular process of the arytenoid cartilages. The posterior cricoarytenoids attach to the outer rim of the cricoid cartilages and act to close (adduct) the cords. The lateral cricoarytenoids attach along the outer sides of the *cricoid cartilages* and act to open (abduct) the cords.

Cricoid cartilage: The topmost ring of the trachea and base of the larynx. It resembles a ring because the posterior aspect slopes gradually up to a higher point than the anterior aspect.

Edema: An excessive accumulation of fluid in tissues, causing a "puffing up" or "bloating" effect. Although edema does not necessarily impede vocal fold vibration, it may add a crackly, noisy component to the voice.

Etiology: The medical/scientific cause of disease or malfunction.

Epiglottis: A flap of cartilage that seals the entry-way to the larynx during swallowing and opens the entry-way during breathing.⁴

Exhalation: The act of breathing out (or expiration) during which the movement of air moves out of the bronchial tubes, through the airways, to the external environment during breathing out. Exhaled air is rich in carbon dioxide, a waste product of cellular respiration during the production of adenosine triphosphate (ATP). Exhalation has a complementary relationship to inhalation; the cycling between these two efforts comprise respiration.⁵

Formant: A resonance of the vocal tract.⁶ The frequency of the vibrations of the vocal track resonators.

Fricatives: Speech sounds produced by turbulence in a constriction of the vocal tract, such as an "s" produced with the teeth.⁷

Fundamental Frequency (Fo): The lowest frequency in a periodic waveform; also called the first harmonic frequency.⁸

Gastroesophageal reflux: The spilling of digestive acids onto laryngeal tissues, causing irritation.⁹

Glottis: The space between the vocal cords.

Hard Palate: The front roof of the upper part of the mouth.

Hyoid bone: A horseshoe-shaped bone that "floats" above the larynx and serves as a connecting post to the tongue, velum, etc.¹⁰

Hyperfunction: The term used by Emil Froeschels M.D. (1940-1964) to indicate over-contrition of the muscles of the larynx and the resonators.

Hypofunction: The term used by Emil Froeschels to indicate the condition in which the muscles of the larynx and resonators have inadequate muscle tonus because of previous excessive use.

Inhale: The act of breathing in.

Interarytenoid muscle: An intrinsic laryngeal muscle that connects the two arytenoid cartilages.¹¹

Laryngitis: Inflammation of laryngeal tissues.¹²

Laryngologist: A licensed member of the medical profession who specializes in the disorders and treatment of the larynx by medication and/or surgery. An Otolaryngologist is one whose specialty also includes the organs of hearing, also known as an Ear, Nose and Throat Doctor (ENT).

Larynx: The larynx, also known as the voice box, is a two-inch-long, tube-shaped organ in the neck.¹³ The larynx is the portion of the breathing, or respiratory tract containing the vocal cords which produce vocal sound. It is located between the pharynx and the trachea.

Lateral cricoarytenoid muscle: An intrinsic laryngeal muscle that brings together the vocal processes by rotation and forward rocking of the arytenoids on the cricoarytenoid joint (paired).¹⁴

Myasthenia: Muscular weakness.

Pharynx: The hollow tube about five inches long that starts behind the nose and ends at the top of the trachea (windpipe) and esophagus (the tube that goes to the stomach).¹⁵

Polyp: An endemic growth, brought about by irritation of the epithelium. Specific types of polyps are: sessile, pedunculated, and polypocorditis.¹⁶

Respiration: The process of inhaling and exhaling breath to sustain life.

Soft Palate: The soft tissue at the back of the roof of the mouth.

Speech pathologist: (Also known as Speech Language Pathologist) A professional who holds at least a Master's Degree in Speech Pathology and Audiology and is certified by the American Speech-Language-Hearing Association. An SLP works with clients directly in the formation of vowels and consonants.

Solmizate: Singing which uses syllables like `do', `re' and `mi' to represent the tones of the scale.

Timbre: Quality or color of sound.

Thyroarytenoid muscles: A pair of intrinsic laryngeal muscles extending from the muscular processes of the arytenoid cartilages to the inside of the anterior aspect of the thyroid cartilages. The inner edges form the vocalis muscle and form the main body of the vocal cords.

Thyroarytenoid cartilage: The top ring of the trachea and the largest of the cartilages making up the larynx; it encloses the front and sides of the larynx with two shield-like wings.

Trachea: The cartilaginous and membranous tube descending from the larynx and branching into the right and left main bronchi.¹⁷

Velocity: The rate of change of displacement with respect to time, measured in meters per second, with the appropriate direction.¹⁸

Ventricular phonation: An abnormal muscle pattern dysphonia associated with hyperactivity in the false fold region.¹⁹

Vocal: (*adj*) Of or relating to the voice: vocal pitch.

Vocal Cords: The outer edge of the thyroarytenoid muscles; the thyroarytenoid ligaments. A pair of cone-shaped elastic mucous membrane projecting from the laryngeal wall that form a narrow slit. Each contains a thickened free edge (vocal ligament) extending from the thyroid cartilage to the arytenoid cartilage, and a vocal muscle that shortens or relaxes the vocal cord to control sound production.

Vocal Folds: Known as vocal cords or bands; the thyroarytenoid ligaments.

Voice Training: A common terminology for the rehabilitation of vocal disorders.

COMMON VOCAL TERMINOLOGY

Alignment: The placement of the bones so that the muscles do less work.²⁰ Also refers to the correct position or positioning of different components with respect to each other or something else, so that they perform properly.²¹

Back phrasing: A stylistic technique where the singer is purposefully either ahead or behind the beat. Jazz singers typically use this technique, as do some pop singers.

Bel Canto: 1. Beautiful singing (It. Origin) 2. Singing style: full tones and agility/velocity features. 3. Exemplified method and style of singing during the time in Italy prior to the mid-nineteenth century. 4. Composers associated with this style of singing in the *Bel Canto* period are Rossini, Bellini, and Donizetti. 5. Vocal instructors attached the term *Bel Canto* to their own personal methods.

Blend: In solo singing, the smooth transition between the head and chest voice.

Breathing and breath support: The conditioning a singer uses to control the inhalation and exhalation of breath to achieve the maximum results from the vocal apparatus.

Break: The sudden change in tone between the head and chest voice, caused by vocal tension. (*See Transition*)

Breathy voice: The result of a widened glottis with excessive airflow that produces air turbulence.²²

Chest Voice: The lower ranges of the female voice in speaking or singing [syn: chest register] (Pectoris).

Dehydration: A condition in which the body is deprived of fluids, possibly affecting the viscous and elastic properties of the vocal folds.²³

Exercise: Music – 1. A short technical study, often consisting of one repeated measure, for training the fingers or vocal organs to overcome some difficulty; also a short study in composition, consisting of an outline, e.g. a figured bass or a cantus firmus to be filled out harmonically or contrapuntally by the student.²⁴ 2. Practice session where repetitive skills are performed to develop and/or maintain fitness using drills, recitations, vocal warm-ups and training preparation.²⁵

Falsetto: The upper range of the male voice.

Formant: A resonance of the vocal tract.²⁶ The frequency of the vibrations in the vocal tract resonators.

Fundamental Frequency: The sound produced by the vibrator before resonance is added or increased; the lowest tone of a resonated sound.

Head Voice: The upper range of the female voice (capitis).

Hoarseness: Describes the sound of vocal symptoms of disturbed phonation, which is usually related to increased mass and incomplete closure of the vocal folds.

Jitter: Irregular variations in fundamental frequency.

Lombard effect: The adjustment of vocal loudness according to the level of auditory stimulation, particularly in noisy environments.²⁷

Melismas: An ornamental phrase of several notes sung to one syllable or text as in plainsong or blues singing.²⁸

Nodule: A growth on the surface of the vocal fold, believed to be caused by repeated and prolonged collision between the tissues of opposing vocal folds.²⁹

Onset: The relationship between the exhalation of breath and the moment sound is produced.

Oral: 1. Uttered by the mouth; spoken: *oral testimony*. 2. of, using, or transmitted by speech: *oral methods of language teaching; oral traditions*. 3. Uttered by the mouth, or in words; spoken, not written; verbal; as, oral traditions; oral testimony.

Phonation: The production of sounds by vocal cords.

Professional Voice User: Anyone whose profession depends upon the quality and endurance of his or her voice; includes singers, actors, lecturers, clergy, teachers, salespeople, receptionists, and others.

Register: 1. A series of consecutive tones of like quality which are produced using the same muscular coordination; from low to high they include fry, low or chest, upper or falsetto, and whistle or flute; 2. "Registers include: (a) pulse register, the lowest range of phonation along the frequency continuum, (b) modal register, the range of fundamentals frequencies normally used in speaking and singing, and (c) loft register, the higher range of fundamental frequencies, including the falsetto."³⁰³¹

Register Break: An abrupt shift or transition of muscular coordination in the larynx resulting in a sudden change in vocal tone quality.

Resonance: An amplification of a sound, e.g. that of an instrument or the human voice, caused, by sympathetic vibration in a chamber such as an auditorium or a singer's chest, neck and head.³²

Resonators: There are seven areas that may be listed as possible vocal resonators. In sequence from the lowest within the body to the highest, these areas are the chest, the tracheal tree, the larynx itself, the pharynx, the oral cavity, the nasal cavity, and the sinuses.³³

Sing: a. To utter a series of words or sounds in musical tones, b. To vocalize songs or selections, and c. To perform songs or selections as a trained or professional singer.

Singing: 1. The art or activity of making musical sounds with one's voice. 2. A well-defined technique that depends on the use of the lungs, which act as an air supply, or bellows; on the larynx, which acts as a reed or vibrator; on the chest and head cavities, which have the function of an amplifier, as the tube in a wind instrument; and on the tongue, which together with the palate, teeth, and lips articulate and impose consonants and vowels on the amplified sound. Though these four mechanisms function independently, they are nevertheless coordinated in the establishment of a vocal technique and are made to interact upon one another.[....] Singing also requires that the emission of breath be more firmly controlled.³⁴

Singing Schools: Schools that were established by singers and composers for the purpose of training musicians, the first *bel canto* Italian schools of singing were in Venice, Bologna, Rome and Naples, Italy.³⁵

Technique: The motor skill necessary to sing or play an instrument.

Timbre: The quality or color of sound.

Transition: The actual movement of the voice from head to chest without the audible vocal register change.

Trill: A deliberate attempt to alternate rapidly between a base note and an adjacent higher note; a musical ornament, mordent.³⁶

Vocalise 1: (vokaleez) 1. A musical composition consisting of the singing of melody with vowel sounds or nonsense syllables rather than text, as for special effect in classical compositions, in polyphonic jazz singing by special groups, or in virtuoso vocal exercises. 2. Any such singing exercise or vocalized melody.³⁷

Vocalise 2: (vokalaiz) 1. To sing each note of a scale or in a melody with the same vowel [syn: vocalize]; 2. To pronounce as a vowel; ‘between two consonants, this liquid is vowelized’ [syn: vocalize].³⁸

Vocalises: An activity of vocal warm-up that engages learning the following skills, breath control, diction, resonance, and alignment.

Vocalisation (Fr.): The art of singing prolonged and sustained tones on vowels only; *vocaliser*, to sing according to the rules of vocal art, using vocal exercises or études, generally sung to the vowels, but also, in advanced études, to words.³⁹

Vocalization: Term for singing teachers for the singing of vocalises (Lehmann, Vaccai, etc), often used in a more general sense for the practice of singing to vowel sounds or singing with closed lips (*bocca chiusa*). This vocalization may also be for the use of works such as the Rachmaninoff – ‘Vocalise’.⁴⁰

Vocalize: (vocaleez) 1. To produce with the voice. 2. To give voice to; articulate. 3. To mark vowel points, for example a vowelless Hebrew text. 4. Linguistics, (a) to change (a consonant) into a vowel duration articulation, (b) to voice. 5. To use the voice, 6. Music – To Sing.⁴¹

Vocal placement: The current view is known as *singing in the mask*. The tone should be produced by steadily singing in a directional or focused position without slipping in and out.

Vocal registration: 1. Refers to the system of vocal registers within the human voice. A register in the human voice is a particular series of tones, produced in the same vibratory pattern of the vocal folds, and possessing the same quality. Registers originate in laryngeal function. They occur because the vocal folds are capable of producing several different vibratory patterns. Each of these vibratory patterns appears within a particular range of pitches and produces certain characteristic sounds.⁴² 2. The term register can be used to refer to any of the following:⁴³

- a. a particular part of the vocal range such as the upper, middle, or lower registers,
- b. a resonance area such as chest voice or head voice, c. a phonatory process, d. a certain vocal timbre, e. a region of the voice which is defined or delimited by vocal breaks, f. a subset of a language used for a particular purpose or in a particular social setting.

Vocal Technique: The practice of using the voice in a particular way when singing or speaking. Vocal technique is a rehearsed way of adjusting the voice both musically and non-musically to create different sounds or voice qualities. The techniques required to control the voice are physical, and can concern a person's posture while singing or speaking or the way in which they actually produce the sound.⁴⁴

Vocal tract resonance: The constructive interference or reinforcement of waves experiencing multiple reflections in the vocal tract.⁴⁵

Vocal Warm-ups: 1. A group of singing exercises which are preparatory for singing, acting, preaching, and other vocal uses. 2. Warm-up exercises are synonymous to vocalises.

Vocology: A term coined by voice scientist Ingo R. Titze.⁴⁶ This has been defined as the science and practice of voice habilitation⁴⁷⁴⁸⁴⁹ It parallels audiology, the study of hearing and the treatment of hearing disorders. Vocology combines the disciplines of speech and language pathology and laryngology, as well as singing training and voice training for actors and public speakers.

Voice: The sound produced by the vibration of the vocal cords and supplemented by resonance of the vocal tract.

Voice/vocal coach: A professional who works with the singer/actor on text alone or in the case of a singer works on the text as it relates to the musical setting. The coach works primarily on pronunciation of the words and interpretation.

Voice scientist: A professional who uses scientific methods of research, controlled experiments and measurement to study the capabilities of the vocal tract acoustically, physiologically and aerodynamically. The voice scientist is usually trained as a speech pathologist, psychologist, anatomist, engineer, or voice teacher.

Voice teacher: A professional whose interest and background are music-centered; the voice teacher trains the singer in vocal technique, languages, and interpretation.

Voice therapist: A professional trained to diagnose and treat disorders of the voice by retraining. They must be certified by the American Speech-Language-Hearing Association.

Warm-up: (*Vocal*) 1. A series of preliminary exercises that prepare the voice for singing, acting, or other use. (*Phrasal Verb*); a. To prepare for an athletic event by exercising, stretching, or practicing for a short time beforehand. b. To make or become ready for an event or operation. c. To make more enthusiastic, excited, or animated. d. To approach a state of confrontation or violence.⁵⁰ (*Verb*): 1. To make or become warm or warmer, 2. To prepare for a race, 'work out,' sporting contest, or exercise routine by doing gentle exercises immediately beforehand. (*Noun*): A preparatory exercise routine.⁵¹

ITALIAN GLOSSARY

A Cappella: Singing without any form of instrumental accompaniment.

Appoggiatura: One or more grace notes that take up the value of the note following.

Appoggio: The support of the breath.

Aria: In opera, a song, especially a solo, which appears in several forms: strophic, ground bass, rondo, and ABA (da capo). The da capo aria became the first type because it offered an opportunity for embellishment in the repeat. The accompaniment often depicted emotions and moods.

Aspirare: To inhale.

Bocca chiusa: With closed mouth.

Colla voce: With the voice; as an instruction in a choral music/opera score or orchestral part, it demonstrates to the conductor or orchestral musician how to follow the rhythm and tempo of a solo singer, usually for a short passage.

Coup de glotte: 'Shock of the glottis' is a term used to describe a method of singing. This method of emitting or opening a note by an abrupt physical mechanism of the glottis (the space between the vocal folds).

Crescendo: To gradually get louder.

Decrescendo: To gradually get softer.

Falsetto: In male singers, a high register that is actually sung in the female range, similar to the head voice. However, unlike the head voice, falsetto cannot blend with the chest voice. This type of singing characterizes the stereotypical "Irish tenor" or countertenor sound, with light, often breathy notes. All men also have a head voice.

Forte: Loud.

Legato: 1. Smooth; in a connected manner. 2. Singing as though all the notes were tied together; the notes flow together smoothly.

Marcato: A marked note with accent, performed strongly.

Martellato: Hammered out.

Messa di voce (swell and diminuendo) A vocal technique that involves a crescendo and decrescendo on one single pitch, the sound of which begins very softly and gradually gets louder and then returns to the same level of volume.

Mezza voce: Half voice.

Mezzo Forte: Medium loud.

Mezzo Piano: Medium soft.

Passaggio: Passages on a pitch scale where the voice tends to change register involuntarily.

Piano: Soft.

Pianissimo: Very soft.

Piccettato: Patter

Portamento: Generally, sliding in pitch from one note to another, usually pausing before arriving on the final pitch, then sliding quickly to that pitch. If no pause is executed, then it is a basic glissando.⁵²

Roulades (Fr): A rolling; i.e. a florid vocal phrase.

Solfeggio: A vocal exercise, either on one vowel or syllables of solmisation, or to words.⁵³

Sostenuto: To support or withstand.

Staccato: In a detached manner, non-legato.

Tessitura: Texture; the average pitch level of a song or part of a song in relation to the overall range of the instrument.⁵⁴

Trillo: Originally a trill, but in recent pedagogy, a rapid repetition of the same note, which usually includes repeated voice onset and offset.⁵⁵

Vibrato: An ornament in singing; typically, a 4-6 Hz undulation of pitch and intensity.⁵⁶

Voce di testa (head): Head voice.

Voce di petto (chest): Chest voice.

¹ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

² National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

³ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

⁴ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

⁵ MeSH, United States National Library of Medicine controlled vocabulary. <http://www.ncbi.nlm.nih.gov/sites/entrez?db=mesh>

⁶ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

⁷ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

⁸ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

⁹ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

¹⁰ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

¹¹ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

¹² National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

¹³ National Center for Voice and Speech <http://www.medterms.com/script/main/art.asp?articlekey=6224>

¹⁴ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

¹⁵ National Center for Voice and Speech Ibid.

¹⁶ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

¹⁷ MeSH, United States National Library of Medicine esh

¹⁸ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

¹⁹ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

²⁰ http://my.clevelandclinic.org/healthy_living/Back_health/hic_Posture_for_a_Healthy_Back.aspx

²¹ Encarta Dictionary

²² National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

²³ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

²⁴ Baker Dictionary p 68

²⁵ The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000 by Houghton Mifflin Company. Updated in 2003. Published by Houghton Mifflin Company.

²⁶ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

²⁷ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

²⁸ <http://dictionary.reference.com/search?q=melisma&db=luna>

²⁹ <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

³⁰ (Hollien 1974)

³¹ Note: In respect to the vocal tones, the thick register properly extends below from the F on the lower space of the treble staff. The thin register extends an octave above this. The small register is above the thin. The voice in the thick register is called the chest voice; in the thin, the head voice. Falsetto is a kind off voice, of a thin, shrull quality, made by using the mechanism of the upper thin register for tones below the proper limit on the scale. --E. Behnke. <<http://dictionary.reference.com/browse/registers>>

³² Encarta dictionary

³³ Margaret Greene, and Lesley Mathieson. *The Voice and its Disorders*. N: John Wiley & Sons. 2001.

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- ³⁴ Encyclopædia Britannica. 2008. Encyclopædia Britannica Online. 25 Apr. 2008
<<http://search.eb.com.ezproxy.lib.utexas.edu/eb/article-9067927>>.
- ³⁵ Millernational schools
- ³⁶ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>
- ³⁷ *Random House Unabridged Dictionary*, Random House Inc., 2006
- ³⁸ *Random House Unabridged Dictionary*, Random House Inc., 2006
- ³⁹ Baker, 222-223.
- ⁴⁰ Owen Jander Grove
- ⁴¹ American Heritage Dictionary
- ⁴² Large, John (February/March 1972). "Towards an Integrated Physiologic-Acoustic Theory of Vocal Registers". *The NATS Bulletin* 28: 30–35
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- ⁴⁴ <<http://encycolopedia.thefreedictionary.com/vocal+technique>>
- ⁴⁵ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>
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- ⁴⁸ van Mersbergen M, Ostrem J, Titze IR (Jun 2001). "Preparation of the speech-language pathologist specializing in voice: an educational survey". *J Voice* 15 (2): 237–50.
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- ⁵⁰ The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000 by Houghton Mifflin Company. Updated in 2003. Published by [Houghton Mifflin Company](http://www.houghtonmifflin.com). All rights reserved.
- ⁵¹ Collins Essential English dictionary 2nd ed 2006 Harper Collins Publishers, 2004, 2006.
- ⁵² *musicdictionary*; *Merriam-Webster Online Dictionary*; *American Heritage Dictionary*, 4th edition; Gardner Read, *Music Notation*, 2nd edition, p. 282.
- ⁵³ Baker p 182
- ⁵⁴ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>
- ⁵⁵ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>
- ⁵⁶ National Center for Voice and Speech <http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/glossary.html>

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Registration

Documentation of Elite Singing Voice: <http://www.vocevista.com/contents.html>

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Resonation

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VITA

Janeal Marie Sugars attended Memorial High School in Houston, Texas. In 1972, she entered North Texas State University in Denton, Texas. She received her Bachelor of Music from the University of Houston in 1977. During the summer of 1977 she attended the American Institute of Musical Studies in Graz, Austria. Miss Sugars returned to the United States in fall 1977 to attend The University of Texas at Austin, where she received her Master's in Music in the fall of 1978. The following year she was employed with Houston Music Institute as a vocal instructor. In 1979, she entered The Juilliard School of Music and was in attendance for two years. Miss Sugars continued her training by attending the Music Academy of the West in 1983. Since then she has taught and performed extensively in the United States and abroad. In 2005, she entered The University of Texas at Austin as a doctoral student in Music with an emphasis in Vocal Performance and Vocal Pedagogy. Her research has been aimed at improving vocal instruction for all ages of students and pedagogically exploring the methodology of vocal warming up. Her Lecture/Recital was a commissioned work of all original material for solo voice, piano, and children's chorus, a performance that was open to the community at large.

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