

TEACHING COUNTERTENORS:
INTEGRATING COUNTERTENOR PEDAGOGY INTO THE COLLEGIATE STUDIO

BY

PETER G. THORESEN

Submitted to the faculty of the
Jacobs School of Music in partial fulfillment
of the requirements for the degree,
Doctor of Music,
Indiana University
May, 2012

Accepted by the faculty of the Jacobs School of Music,
Indiana University, in partial fulfillment of the requirements
for the degree Doctor of Music.

Patricia Havranek, Research Director/ Chairperson

Brent Gault

Brian Horne

Patricia Wise

ACKNOWLEDGMENTS

I am deeply grateful to my friends and family for their counsel and continued questions about countertenors. Specifically, I wish to thank Joseph Mace for his patience and generosity of spirit and time throughout the course of this examination. I am indebted to the members of my research committee, and wish to thank my research director, chairperson, and voice teacher, Professor Patricia Havranek for her seemingly endless supply of encouragement, guidance, and knowledge of vocal pedagogy. I also wish to thank Dr. Estelle Jorgensen for teaching me how to properly organize my thoughts, synthesize those of others, and convey them to readers.

I dedicate this doctoral document to the memory of my former teacher, Inez Altman Crofts, who introduced me to the word countertenor. I also dedicate this examination to the memory of Professor Paul Kiesgen, whose love and knowledge of voice teaching continue to shape me as a teacher, scholar, and colleague.

CONTENTS

ACKNOWLEDGMENTS	iii
Chapter 1. Introduction: A Call for Integration	1
Chapter 2. Respiration	16
Chapter 3. Phonation	33
Chapter 4. Resonance	53
Chapter 5. Repertoire	71
Chapter 6. Conclusion: Welcoming New Voices	80
BIBLIOGRAPHY	83

Chapter 1

Introduction: A Call for Integration

A pedagogically based examination of the modern countertenor voice is necessary and overdue. Since beginning my own vocal studies as a countertenor, I have heard university and conservatory voice teachers assert that countertenors are a “different animal” and “in need of specialized training.” Such statements and fears cause problems. These positions result in a misconception that the countertenor voice type is somehow alien from the other voice types, with regard to anatomy and the common tenets of healthful vocal pedagogy. The perpetuation of such beliefs carries the dual potential to impede understanding at the student level, and cause miseducation at the pedagogical level. In my early experiences as a countertenor, I was told by several teachers that they would not accept me into their studios because they did not know how to teach countertenors. I was subsequently denied admission to more than one university music school because of this. Two of these institutions went as far as to note that they would reverse their admissions decisions if I agreed to instead begin studies as a baritone or tenor. Although the result was, in part, a damaged ego, my determination to both learn and be taught primarily as a countertenor grew. I continued to audition.

I was ultimately admitted to a university voice program and allowed to study as a countertenor. However, I gave too much credence to what I had been told by the other schools and subsequently approached my undergraduate vocal training with philosophical misconceptions about countertenors and vocal production. I had begun to truly think that my laryngeal anatomy was different from that of other singers. Moreover, I labored for some time under the delusion that some key elements of vocal pedagogy did not apply to

my voice. In short, I began to view my voice as too much of a novelty, and developed related concerns that took significant time to understand and eliminate. This was the result of the open minded and pedagogically knowledgeable voice teachers with whom I have had the great fortune to study. Where many teachers and admissions panels had been quick to dismiss, devalue, and deny, my teachers were curious, thoughtful, and strategic. Their interest in my voice was not primarily rooted in veils of novelty. Theirs was the interest that skillful voice teachers pay to students of all voice types. Specifically, this is characterized as an interest in range and color, register events, breath management and posture, and ease of production. Simply stated, they treated me like my other studio mates. If they approached a lesson with me with fear (and I highly doubt this), it was hidden from me.

Many of my colleagues at the graduate level have shared with me their fears regarding teaching countertenors. While hearing these anxieties has at times been confounding, it has also proved to be enlightening and motivating. Without concerns such as these, there would be no books on teaching tenors, nor would there be workshops dedicated to strategies on teaching sopranos. This is what has motivated me to strive to become adept at teaching all vocal categories, regardless of range, *fach*, or classification. Because education, preparation, and knowledge help eliminate fear, better knowledge of countertenor pedagogy is necessary. The time for widespread integration of countertenor pedagogy at the collegiate studio level is now.

Over the last half century, modern countertenors have become increasingly present on the world's opera stages and concert platforms. This is due in large part to the increase in countertenors singing early music in the last few decades, as well as roles

written specifically for countertenors in the recent past. Since the 1990s, the presence of countertenors in Baroque opera productions has grown so commonplace that the voice type can no longer be considered as novel as it once was. Countertenors have taken ownership of many operatic roles initially intended for *castrati*, claimed previously by baritones and mezzo sopranos. It is significant to note that this circumstance has had extraordinary, gender crossing effects on the discography of works of Baroque composers, including Handel. Specifically, recordings of his opera, *Giulio Cesare*, boast titular stars including Norman Treigle (bass-baritone) and Dietrich Fischer-Dieskau (baritone), Janet Baker and Jennifer Larmore (mezzo sopranos), and Andreas Scholl (countertenor).

Operatic roles that are less gender flexible include those written specifically for modern countertenors, and further demonstrate the necessity of countertenors on the modern stage, as previously noted. These include, but are not limited to roles in operas of Benjamin Britten (1913-1976), including Oberon in *A Midsummer Night's Dream* (1960) and the Voice of Apollo in *Death in Venice* (1973). The role of the Refugee in the more recently composed opera *Flight* (1998), by Jonathan Dove (b. 1959) reflects further need for countertenors on the modern operatic stage, in a more recent generation of composers. Dove also calls for countertenors in his operas *In Search of Angels* (1997), *Tobias and the Angel* (1999), and *Cain and Abel* (1981).¹ It is important to note that, in addition to the exposure these roles provide, the ever increasing wealth of audio and video recordings of countertenors has served to further validate the voice type to potential students. And while legitimizing the countertenor voice type in this manner is not at the

¹ Steven L. Rickards, *Twentieth-Century Countertenor Repertoire: A Guide* (Lanham: Scarecrow Press, 2008), 79-81.

heart of this document, its process has strong implications for music education and teachers of singing. Therefore it is crucial to assert that the staying power of modern countertenors is further evidenced by their increasing presence in university music departments and conservatories. This increase in presence signals a much needed decrease in the novelty associated with the voice type in order to approach it with unbiased and uncompromised pedagogy, and to better integrate it into the canon of pedagogical texts.

The process of disassociating novelty from the countertenor voice continues to progress at the critical level. Ready evidence of this is found in the media's treatment of David Daniels, a leading American countertenor. In a 1999 article devoted to discussing career countertenors, considerable space is devoted to basic (and anecdotally entertaining) description of the voice, aimed largely at educating the reader on basic components of the countertenor voice, such as range and basic repertoire associations.² In fact, in that same issue aimed at basic countertenor awareness, careful readers are lauded for recognizing the new distinction on the Metropolitan Opera roster, specifying countertenors and male altos.³ Just five years later in 2004, the same magazine returned its focus to David Daniels, this time paying far more attention to Daniels's artistry and stage experiences, rather than to perceived basic and potentially novel aspects of his voice.⁴ This treatment of the singer and his voice is more critically concurrent with the magazine's and greater public's examination of singers of more commonly occurring voice types. Similarly, in an even more recent article (2010) on countertenor singing, countertenor Philippe Jaroussky relays the importance of understanding that countertenor

² Ira Siff, "Face to Face: Russell Oberlin and David Daniels," *Opera News*, April 1999, 48.

³ Rudolph S. Rauch, "Viewpoint: Handel, with Trimmings," *Opera News*, April 1999, 4.

⁴ Brian Kellow, "Higher and Higher," *Opera News*, December 2004, 20-24.

voices are comparatively different from one another,⁵ supporting the assertion that there is no singular countertenor voice. Like all other vocal classifications, this voice type has qualitative differences within. At the scholarly level, disassociation from novelty among vocal pedagogues is occurring slowly, yet certainly. In his iconic 1986 text, *The Structure of Singing: System and Art in Vocal Technique*, Richard Miller, the late author and leader in the field, contends that “teaching the counter-tenor voice should be no more difficult than teaching any other vocal category.”⁶ Although this sentiment is helpful to my purposes here, it is important to note that, in this text, the topic of countertenors is discussed only briefly, and the voice type is not as well integrated into the rest of the text as the more common voice types. Miller’s treatment of the topic in his article on what he terms *countertenoring* (2000) is similar in tone and content, yet is more thorough and reflective of the increasing number of countertenors seeking formalized vocal training. Here, Miller dedicates more space to discussion of countertenors and vocal function. In this same article, however, Miller makes a generalization that serves as motivation for writing this current document on teaching countertenors. Miller asserts that countertenors possess “exceptional velocity ability” and “subtle dynamic control” in addition to a common “three-octave performable range—none of which are normally matched by other male voices.” Not only is this statement far too general, but Miller cloaks it in a semantic minefield, ultimately stating that countertenor singing is somehow less complete than traditional tenor, baritone or bass singing. Although it becomes eventually clear that Miller is referring to the concept of *voce completa* (a term referring

⁵ Olivia Giovetti, "Counter Top: Philippe Jaroussky," *Classical Singer*, October 2010, 42.

⁶ Richard Miller, *The Structure of Singing: System and Art in Vocal Technique* (New York: Schirmer Books, 1986), 124.

to the complete closure of the vocal folds, not experienced in *falsetto* singing), his characterization may be easily misinterpreted by teachers and singers.⁷

Shrouding the countertenor voice in novelty or equivocal language serves primarily to disguise the very simple fact that in the absence of novelty, teachers of countertenors can more readily instruct their countertenor students in key areas of vocal production. As previously alluded, my chief aim is not to debate the relevance of countertenor singing, nor is it to justify its classification as a standard voice type. Rather, my primary aim is to demonstrate the similarities between all of the voice types in order to prove that countertenor pedagogy can and should be integrated into the greater collection of healthful vocal pedagogy literature and teaching techniques.

Vocal pedagogy for countertenors is little different from that which is applied to the more commonly occurring or traditional voice parts. Comparisons of the countertenor voice with the more traditional voice types will significantly outweigh the differences. For the purposes of this document, it is assumed that the countertenor voice type and its implicit *fach(s)* are legitimate elements of vocal production and performance, and are thusly worthy of critical pedagogical examination. Although a great wealth of vocal pedagogy texts are widely available for the standard voice types (soprano, mezzo soprano, tenor, baritone, bass, etc.), a hole in the literature remains where observations and instructions on healthful countertenor singing should be. Only one full-length manual examining countertenor technique and pedagogy has been published to date. The countertenor, scholar, and pedagogue Peter Giles has written a manual on countertenor singing entitled *A Basic Counter-tenor Method for Teacher and Student*, published in 1987 and again in 2005 with minor revisions. Giles implies that the ideal context for

⁷ Richard Miller, "Countertenoring," *Journal of Singing* 57, no. 2 (2000): 20.

countertenor singing occurs within the walls of a church under the exclusive tutelage of a choir master. Giles's manual is more focused on music history than driven by pedagogy. It includes long interjections of qualitative and historic description that distract from the discussions of pedagogy. The exercises prescribed are problematic because Giles's methods are rooted in the theory of *Sinus Tone Production* (S.T.P.), popularized by Ernest G. White. White proposes that cranial sinuses rather than the vocal folds are the seat of vocal production.⁸ This theory is problematic because it ignores the very real function of the vocal folds, and also because it relies too much on physical sensation. Adoption of this theory and its implicit pedagogical applications is therefore miseducative. In addition, adaptation of Giles's method poses a major liability for a teacher of singing hoping to be taken seriously by members of the academy.

A more useful resource is Lynelle Frankforter Wiens's Indiana University doctoral document entitled "A Practical and Historical Guide to the Understanding of the Counter Tenor Voice" (1987). Of key importance is a chapter consisting of five interviews with career countertenors. Although each interview is valuable, the singers are not representative of the leading practitioners of the present day, and the context of the interview conversations does not reflect the great increase in countertenors studying at the collegiate level. Pedagogical literature including better integration of the countertenor voice is needed. I agree with Richard Miller's position that good vocal pedagogy finds application in all voice types, including countertenors.⁹ His published encouragement of teachers to approach countertenors with the same pedagogical techniques as they would other voice types should serve to motivate others to better

⁸ Ernest G. White, *Sinus Tone Production* (London: J.M. Dent & Sons, Ltd., 1938; reprint, 1951), xi.

⁹ Miller, "Countertenoring," 21.

include countertenors in scholarly discussions and publications on vocal pedagogy. To establish context for this larger discussion of countertenor pedagogy, and because serious vocal training commonly begins at the collegiate level, I will discuss teaching countertenors at the university level and will focus on key elements of healthful singing, including respiration, phonation, and resonance.

By addressing respiration in greater detail, I will be able to give necessary attention to countertenor-specific issues, including increased potential for *subglottal pressure* and the crucial importance of applying the technique of *appoggio* in countertenor singing. This discussion of countertenors and respiration will also allow me to address issues of production, including vocal fatigue and its relationship to the countertenor voice. Here I will also address the vocal production risks involved in persistent *falsetto* singing. It is imperative that all countertenors and their teachers be aware of any risks posed by the incomplete approximation of the vocal folds implicated here.¹⁰ An examination of phonation will allow me to discuss this risk in further detail. Specifically, I will elaborate on research asserting that the vocal folds do not fully approximate during *falsetto* singing, and will discuss this phenomenon in relation to respiration for singers. By discussing resonance, I will address perhaps the most frequent topic of discussion in conversations about countertenors: the vocal quality and color associated with their sound(s). More specifically, I will examine properties of resonance and how, like singers of other voice types, countertenors make resonance choices to adjust quality and color. Here it is imperative for anyone concerned with seriously evaluating the countertenor voice (in the teaching studio or critical review) to understand

¹⁰ Ibid., 20.

that there is not simply one countertenor voice or color, just as there is not one type of soprano or color used to describe a baritone voice.

A secondary aim of this study is to emphasize the importance of planning for the countertenor voice in collegiate course offerings such as song literature surveys and opera workshops. In order to more fully integrate countertenor pedagogy at the collegiate level, instructors of vocal literature survey offerings, such as song literature classes, should plan to address literature written for countertenors in the same way the other voice types are discussed. Similarly, instructors should be ready to make recommendations to future teachers of singing on matters of repertoire selection for young countertenors. Resources such as Steven Rickards's text, *Twentieth Century Countertenor Repertoire: A Guide* (2008), are helpful in making repertoire suggestions in a classroom or studio setting. Rickards's guide is also useful in planning for countertenor participation in opera workshop classes because it includes a wealth of annotated information on excerptable modern operatic literature. Such recommendations should empower and assist opera workshop instructors to assign countertenor literature that is not exclusively from the Baroque *opera seria* literature. Additional comments on appropriateness of repertoire will be discussed in greater detail in chapter 5 of this document.

Understanding core components of vocal production and pedagogy is crucial to becoming a diagnostician capable of identifying vocal and physical issues and providing clear and meaningful instruction. This approach to pedagogy eliminates a teacher's sole reliance on the concept of self-sensation as a means of voice teaching. Some teachers rely too heavily on their own physical and mental sensations while singing and prescribe and project them onto their students. In most cases, this is a disservice to voice students

because it forces them to try to understand and embody thoughts and physical sensations of which they may be incapable. Of course there are notable exceptions and some sensational modeling can be helpful, especially in the case of respiration and the basic physicality involved (such as describing the feeling of air coming in contact with the hard and soft palates at the time of inhalation). Viewed more broadly, an instructor's sensations may be more usefully viewed in the context of personal experience, and described with special regard to his or her journey as a singer. In many cases, it is exceedingly worthwhile to pay attention to firsthand experience of others.

There is much to be learned from practitioners. A singer of any vocal category may be enlightened by the breathing technique involved in woodwind or brass instruction. That same singer may also be inspired by a violinist and use principles of bowing to shape his or her phrases. Using this logic and narrowing the scope of discussion to vocal pedagogy and performance, it becomes obvious to assert that practitioners of one voice type may learn from practitioners of others. Just as a countertenor may learn from a soprano, a baritone may learn from a countertenor. Further understanding of the countertenor voice will better integrate countertenors into the collegiate studio and will engender more effective shared learning among singers and voice teachers. As a practicing countertenor, I have heard a substantial amount of myths, concerns, and questions regarding countertenor singing. Although I will avoid the temptation to project my experience as a countertenor onto other countertenor voices, I will draw from my experience and the questions I have fielded from hesitant teacher friends and colleagues to shape the following discussions on respiration, phonation, and resonance. Some of these questions include, "Should countertenors sing with *vibrato*?"

“Is a countertenor’s larynx different from a baritone’s or tenor’s larynx?” “Should all countertenors sound the same?” and “Can I assign literature to a countertenor that isn’t considered early music?”

Methodology and Key Terms

In this study, I will examine respiration, phonation, and resonance, in efforts to demonstrate the similarities between all of the voice types, and ultimately prove that countertenor pedagogy can and should be integrated into healthful vocal pedagogy. I will begin by defining *falsetto* singing in order to define countertenor singing, which I refer to as countertenoring. Discussion of the term *falsetto* will be brief, yet it is crucial because use of the term has changed.¹¹ For the majority of my examination, I will draw on the pedagogical writings of widely published vocal pedagogues including, but not limited to, Ralph Appelman, Oren Brown, Berton Coffin, Barbara Doscher, Paul Kiesgen, Scott McCoy, Richard Miller, Arnold Rose, and William Vennard. I will examine some of the more important common elements among the traditional voice types related to respiration (chapter 2), phonation (chapter 3), and resonance (chapter 4). Discussion of these commonalities is necessary to establish some key tenets of healthful vocal production, as (primarily) agreed upon by the above-named experts. I will address the topic of countertenor vocal production and pedagogy while examining each of the named elements (respiration, phonation, and resonance). This methodology, comprised of comparing and contrasting the countertenor voice type with the other voice types, will allow me to better demonstrate that pedagogy for countertenors is largely similar to that which is applied to the other voice types.

Falsetto: In order to define this term, I will refer largely to the characterizations and conclusions on this issue made by Scott McCoy who does not adopt Manuel Garcia's use of the term *falsetto* to indicate all of the higher tones in the voice for both males and

¹¹ Scott McCoy, "Falsetto and the Male High Voice," *Journal of Singing* 59, no. 5 (2003): 406.

females.¹² But rather, McCoy separates the term into two categories: *normal falsetto* and *reinforced falsetto*. In this context, *normal falsetto* designates the type of common singing demonstrated when a man imitates the female voice, sometimes comically assuming a portion of the traditional female ranges and implicated registers. Reinforced *falsetto* is different acoustically and physiologically from *normal falsetto* as demonstrated by electroglottographic experimentation which demonstrates that “the reinforced variant more closely resembles the full voice through higher closed quotients and increased intensity in high frequency sound components.”¹³ McCoy further asserts that in reinforced *falsetto* singing, the vocal folds more closely resemble the oscillatory pattern found in full voice singing,¹⁴ and supports Richard Miller’s position that “increased breath reinforcement of the *falsetto* can bring about a quite full sound.”¹⁵

Countertenor: A countertenor is a male singer participating in countertenor singing, which is characterized as a male singing in a reinforced *falsetto*. This is achieved through employment of increased breath pressure, and results in a full, non-breathy tone, sung with *vibrato*. In the following discussions, the act of singing as a countertenor will be referred to as countertenoring (a term likely coined by Richard Miller, initially appearing as counter-tenor in *The Structure of Singing: System and Art in Vocal Technique* (1986) and then without the hyphen in his article “Countertenoring” (2000)). Until it is proven otherwise, it is safe to assume that countertenors are anatomically similar to their counterparts in the more common vocal classifications. Although that sentence may seem comical to some, it is necessary to state it plainly. I was once introduced as a

¹² Ibid., 406.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Miller, "Countertenoring," 20.

castrato to a congregation by its pastor, during an annual college choir tour. I politely corrected him and gave him the benefit of the doubt, assuming that because the words countertenor and castrato begin with the same letter (and because they have similar range implications), he switched the words and misspoke. That momentary concession notwithstanding, I have since found this item an important, albeit simple distinction to make. Perhaps any residual confusion about anatomical curiosities is the result of stories of the *castrati*, popularized in books and major motion pictures. In his book on the great castrati, Patrick Barbier describes the resulting physical attributes of men who were castrated during their youth because of their vocal promise:

The female hormones were overactivated by the absence of testosterone, which might lead, for example, to a greater or lesser development of the breasts. In the same way the castrato acquired a muscular mass closer to that of a woman, as well as fatty deposits on the hips, thighs or neck, producing a tendency to obesity which was often ridiculed by contemporary observers...

The fact that the men's voices had not broken meant that the cartilage links did not knit together after puberty, as in other men...

The great originality of the castrato was due to the form and position of the larynx...The castrato did not experience this descent of the larynx, with the result that his vocal cords remained closer to the cavities of resonance; this reinforced clarity and brilliance and affected the selection of harmonics.¹⁶

The physical characteristics elaborated on above were the result of castration.

Countertenors are not castratos, and are thusly not imbued with the physical and sonic attributes and implications described above. Countertenors are not bodily different from other male singers. It is important to note, however, that hormonal implications should not be ruled out of the matter entirely. Although such discussion is somewhat outside of the scope of this examination, future research on the countertenor voice and hormonal adjustment may prove enlightening and may extend the parameters of inclusivity. More

¹⁶ Patrick Barbier, *The World of the Castrati: The History of an Extraordinary Operatic Phenomenon* (London: Souvenir Press Ltd., 1996; reprint, 2001), 14-16.

specifically, hormone replacement therapy might alter and ultimately lower a countertenor's voice, and jeopardize his countertenor status, and ultimately, his livelihood. This hypothetical circumstance is based on the possibility of an individual who is a transgendered male who identifies as countertenor, but was previously classified as a (female associated) mezzo soprano. For example, the singer described here was born anatomically as a female, but ultimately identifies as male. This person, who was once called a mezzo soprano (whose range is comparable to that of a countertenor), is now to be classified as countertenor by virtue of his self-identification as a man. Such a circumstance poses potential problems for the singer in question, with regard to gender reassignment surgery, and the vocal implications of hormone replacement therapy.

Chapter 2

Respiration

The topic of respiration is central to any discussion of the rudiments of vocal pedagogy. Respiration is the process of taking air into the lungs and expelling it in a continuous physiological process, also known as breathing. Just as breathing is necessary to life function, it is indisputably necessary to the function of singing. In the act of singing, breathing is at the heart of healthful vocal production and it has been appropriately characterized as the first step in good singing.¹ While it is important to articulate this hallmark of singing, it is necessary to more specifically understand how the act of breathing is adjusted in the act singing, and more effectively discussed as breath management. Or, as author James C. McKinney states, “the essential difference between breathing to live and breathing to sing lies in the amount of conscious control exerted.”²

Understanding the core concepts and key pedagogical terms implicated in breath management provides a more solid foundation on which to address respiration as it relates to countertenor pedagogy. To this end, I will discuss broad goals for singers and their teachers relating to respiration and healthful vocal production. This basis will provide a more solid foundation from which to discuss related goals for countertenors and their teachers. In the broader discussion, I will define breath management through a discussion of the merits of diaphragmatic-abdominal breathing and how it is implicated in the technique of *appoggio*, and will then apply these widely accepted tenets of vocal pedagogy to countertenors in the collegiate voice studio. Here I will describe

¹ Paul Kiesgen, "Breathing," *Journal of Singing* 62, no. 2 (2005): 170.

² James C. McKinney, *The Diagnosis & Correction of Vocal Faults: A Manual for Teachers of Singing & for Choir Directors* (Long Grove: Waveland Press, Inc., 2005), 46.

countertenor-specific issues relating to respiration in greater detail, including persistent *false* production, subglottal pressure, and vocal fatigue. I will conclude this chapter by addressing the topic of posture as it relates to respiration and vocal production.

Broad Goals for Singers and their Teachers Relating to Respiration

Lawrence Indik describes the importance of breathing for singing and relates it to vocal performance and pedagogy, noting the following:

The use of breath for singing is at once simple and richly complex...Classically trained singers value great breath control along with mastery of such skills as high note production and *messa di voce* as the pinnacle of technical facility. The ability to sing extended musical phrases is a hallmark of the virtuoso vocal technician...

Without breath there can be no sung tone. Accordingly, breath control and support has continually been a focus of voice pedagogy and science.³

Vocal pedagogue Paul Kiesgen advises voice teachers on the dual purposes for understanding the processes implicated in breath management. In this regard, he advises that study of breath management is critical to establishing and maintaining the correct amount of breath pressure necessary to making optimal tone on all pitches, at all volume levels. Additionally, he advises that the throat is affected by a singer's control of the muscles of breath, and thusly influences tone production.⁴ Controlling the muscles of breath can be executed with a number of breathing strategies. Even parties with no interest in vocal production and pedagogy can substantiate the previous statement. Anyone who has ever been asked by a doctor to take a series of deep breaths or who has gasped in shock or surprise can identify that different types of breathing exist. Inside the walls of the collegiate voice studio, common types of breathing for singing have been identified as clavicular, belly, and diaphragmatic-abdominal breathing.

³ Lawrence Indik, "The End of Breath for Singing: Exhalation and the Control of Breath at the End of the Phrase," *Journal of Singing* 66, no. 2 (2009): 131.

⁴ Kiesgen: 169.

Clavicular breathing is a visually identifiable breath strategy, easily revealed by consistent up and down movement of the collarbone and shoulders. Although it has been asserted that muscles of the shoulder are implicated in the process of inspiration, or inhaling, it has also been well advised that clavicular breathing should be used as a last resort breath strategy for singers.⁵ More specifically, Richard Miller characterizes this type of breathing for singing as “crowding” the lungs:

The singer who takes an “easy” breath, who thereby merely “replenishes” the breath that has been used, will have a longer breath supply than does the singer who “crowds” the lungs with breath...Breathing clavicularly gives the impression that the lungs are filled with breath, when actually the sensation the singer is experiencing is muscle tension, not lung expansion...in order to *avoid* high-chest (clavicular) breathing, the chest and sternum must be relatively high so that the muscles of the torso may move outward...A complete, not a “crowded,” inspiration is appropriate.⁶

In addition to the obvious visual cues, teachers of any voice type may easily recognize clavicular breathing in students by aural cues as well. This type of breathing tends to be noisy, and has been compared to that which is present in hysterical crying.⁷ In addition to the visually and aurally unpleasant aspects of this type of breathing, clavicular breathing is simply an unsustainable breathing practice for singers. The repeated up and down motion of the chest leads readily to muscular tension in the throat.⁸ Such tension has immediate implications for tone quality, and will be discussed in further detail in the chapter on resonance.

It is important to note that this type of breathing is seldom seen in more experienced singers, yet understanding the visual and aural symptoms of clavicular

⁵ William Vennard, *Singing: The Mechanism and the Technic*, Revised ed. (New York: Carl Fischer, 1967), 27.

⁶ Miller, *The Structure of Singing: System and Art in Vocal Technique*, 28-29.

⁷ Richard Miller, *National Schools of Singing: English, French, German, and Italian Techniques of Singing Revisited*, 2nd ed. (Lanham: Scarecrow Press, Inc., 1997), 19.

⁸ Vennard, 27.

breathing is important to the diagnostic process. It is not uncommon in students of all voice types to enter their first lessons at the collegiate level with some degree of habitualized clavicular breathing. It can certainly be viewed as a manifestation of *hyperfunction*. In his text on diagnosing and correcting vocal faults, McKinney describes vocal faults due to hyperfunction as those resulting from too much activity or tension.⁹ Teachers of young singers are well advised to note that singers coming directly out of high school may confuse enthusiasm with physical symptoms implicit in respiratory hyperfunction. Evidence of throat, neck, and jaw tension in singers is televised regularly on reality-based vocal competitions, and it is not unreasonable to presume that some younger singers may thusly associate successful singing experiences with passages of melismatic vocalism in which the singer's jaw moves with each successive note.

Helping a student to understand the characteristics and pitfalls inherent in clavicular breathing can usually be accomplished by work in front of a mirror or with a video camera. It is likely that he or she previously had no idea that his or her shoulders and chest were moving so obviously and frequently. Additionally, experimenting with the concept of breathing silently (perhaps through use of an imaginary straw) can also lead a student to the discovery that clavicular breathing is inefficient and obstructs creation of a beautiful tone and thoughtfully shaped phrase. Once it is understood that clavicular breathing is to be avoided, it is likely that a student may want to explore a breathing technique that is far less shoulder and chest oriented. One such breathing method is belly-breathing.

The practice of belly-breathing is closely related to the tenets of the German school of singing, as examined by Richard Miller. Miller concludes, "*Atmestütze* (breath

⁹ McKinney, 17.

support)...is to be achieved by retarding the inward movement of the epigastrium (abdominal wall) and the upward motion of the diaphragm by exerting outward pressure upon the abdominal muscles, an action termed *Bauchaussestütze* (distended belly support).”¹⁰ Miller continues that the kind of abdominal pressure implicated here serves to inhibit sternal elevation.¹¹ In a later text, Miller further explains that the process of breathing really cannot be controlled by the belly and that a large portion of the German school of singing who identify as belly-breathers and employ *Bauchaussestütze* are actually employing an outward-belly position. He concludes that the elements of the *Bauchaussestütze* technique “do not equate” with the technique of *appoggio* (as characterized by the historic international school).¹² The technique of *appoggio* (which will be discussed later in greater detail), cannot be properly executed when sternum and, thusly, the pectoral muscles are inhibited as mentioned above. Discussion of *appoggio* is well prepared by addressing yet another breathing technique. This form of breathing for singing is commonly regarded as diaphragmatic-abdominal breathing, and is largely endorsed and elaborated on by leading pedagogues and authors.

Diaphragmatic-Abdominal Breathing and the Technique of *Appoggio*

Near the middle of the 20th century, author William Vennard recognized the great usefulness of applying science to art in the larger context of general knowledge. He warns “that our only safeguard against the charlatan is general knowledge of the most accurate information available.”¹³ His aim for accuracy is well evidenced in his description of the diaphragm (a muscle that is referred to frequently, but incorrectly in

¹⁰ Miller, *National Schools of Singing: English, French, German, and Italian Techniques of Singing Revisited*, 21.

¹¹ Ibid.

¹² Richard Miller, *Solutions for Singers: Tools for Performers and Teachers* (New York: Oxford University Press, 2004), 1-2.

¹³ Vennard, iii.

many voice studios and choir rooms). Vennard favors diaphragmatic-abdominal breathing and in no uncertain terms states that the diaphragm is the most important muscle involved in inspiration, and through detailed description emphasizes the importance of the abdominal muscles involved in expiration.¹⁴ Although the author characterizes the shoulder muscles as practically all inspiratory, he maintains that clavicular breathing (described earlier in this chapter) is a last resort method of respiration for singers, advising that it is better done between songs and not during one.¹⁵ D. Ralph Appelman expresses his preference for diaphragmatic-abdominal breathing for singing through explanation of the term, *the point of suspension*. The point of suspension refers to “the body sensation created by a balanced pressure of the thoracic muscles of inspiration opposed by the abdominal muscles of expiration.”¹⁶ Appelman’s description of the creation of this bodily sensation is significant and aids tremendously in the discussion of diaphragmatic-abdominal breathing as a dynamic process. His characterization of this process involving balanced pressure and muscular opposition is what is also described as *synergism*, as described by author Barbara Doscher. Doscher notes her preference for diaphragmatic-abdominal breathing in her description of this muscular activity occurring during respiration. She states that the external intercostals are active primarily during inhalation and the internal intercostals are active primarily during exhalation. She states that the diaphragm and abdominal muscles are natural antagonists,¹⁷ and by this virtue she is able to speak of the synergism which deals ideally with the cooperative muscular efforts involved in diaphragmatic-abdominal breathing.

¹⁴ Ibid., 24-25.

¹⁵ Ibid., 27.

¹⁶ D. Ralph Appelman, *The Science of Vocal Pedagogy*, First Midland Book ed. (Bloomington: Indiana University Press, 1967), 11.

¹⁷ Barbara M. Doscher, *The Functional Unity of the Singing Voice*, 2nd ed. (Lanham: The Scarecrow Press, Inc., 1994), 11-15.

She also characterizes this synergism as “anchorage” and “cooperative action.”¹⁸ It is this cooperative action or, alternately stated, flexible antagonism that results in steady and controlled air flow.¹⁹ Here it is interesting to note that this concept has been described in Italian as *lutta vocale* or “vocal struggle.” Although use of the word struggle is arguably deft in a description of two sets of muscles working in opposition to one another, the term may suggest too much antagonism and not enough muscular synergy.²⁰ This steady and controlled flow is that which McKinney asserts in his statement on the essential difference between breathing to live and breathing to sing mentioned earlier. After arriving at a clear understanding of the concept of diaphragmatic-abdominal breathing, as endorsed by Vennard, Doscher, Miller, and McKinney, it becomes significantly easier to understand the significance of the technique of *appoggio*.

It is through his description of the technique of *appoggio* that Richard Miller is able to further illustrate his preference for diaphragmatic-abdominal breathing. The Italian word *appoggio* roughly translates into English as “to lean” and has come to be characterized, basically, as breath support. Miller advises that this is perhaps too narrow a characterization and ultimately explains that, “*Appoggio* is a system for combining and balancing muscles and organs of the trunk and neck, controlling their relationships to the supraglottal resonators, so that no exaggerated function of any one of them upsets the whole.”²¹ This characterization refers directly to the cooperative muscular antagonism that Doscher refers to as synergism. Miller’s mention of “exaggerated function” refers to what happens when the muscular antagonism is not cooperative and in a state of dynamic

¹⁸ Ibid., xvii.

¹⁹ Ibid., 19.

²⁰ Kiesgen: 170.

²¹ Miller, *The Structure of Singing: System and Art in Vocal Technique*, 23.

balance. The absence of cooperative muscular antagonism has direct implications for laryngeal placement and function. To avoid this, Miller advocates what is commonly referred to by voice teachers as silent breathing. He advises, “silent inspiration is the hallmark of *appoggio*.”²² By virtue of this silent breath, laryngeal placement isn’t too high and the efficacy of diaphragmatic-abdominal breathing is greatly increased.

In this discussion, it is important not to ignore the necessary postural considerations implicated in the technique of *appoggio*, and how they have affect diaphragmatic movement. For a more complete visual understanding, Miller offers the following:

In *appoggio* technique, the sternum must initially find a moderately high position; this position is then retained throughout the inspiration-expiration cycle. Shoulders are relaxed, but the sternum never slumps. Because the ribs are attached to the sternum, sternal posture in part determines diaphragmatic position. If the sternum lowers, the ribs cannot maintain an expanded position, and the diaphragm must ascend more rapidly. Both the epigastric and umbilical regions should be stabilized so that a feeling of internal-external muscular balance is present. This sensation directly influences the diaphragm.²³

In this description, Miller advocates the optimal thoracic posture for respiration, which many voice teachers refer to as an “open” or “expanded” chest. By maintaining this optimal thoracic posture, it becomes significantly easier to maintain the stability in the upper (epigastric) and middle (umbilical) regions of the abdomen and execute the technique of *appoggio*. In this context, it becomes far less physically possible for a singer to execute a breathing technique such as the belly-breathing method described earlier. Here it is important to clarify what is actually happening in and around what many teachers and students refer to as their belly area.

²² Ibid., 29.

²³ Ibid., 24.

In his discussion of *appoggio*, Paul Kiesgen reiterates the translation of the word to mean “to lean down upon something.” Kiesgen advises that when applied to singing, the term refers to the displacement of the abdominal viscera, caused by the diaphragm’s descent. He further remarks that the term refers to a state of balance in the entire breathing system and advises that “the breath is leaning gently upon the vocal bands which in turn lean upon the breath.”²⁴ Kiesgen uses this discussion of *appoggio* to remark on a frequent directive issued by many voice teachers. He notes that the balance achieved through correct execution of *appoggio* is what is frequently referred to as “singing on the breath,” and then advises that voice teachers should request more *appoggio* from their students, not more support.²⁵ Once armed with a clear understanding of the concept of diaphragmatic breathing and its relationship to executing the technique of *appoggio*, a voice teacher is more readily able to understand the concepts of breath pressure.

The word “pressure” is frequently used to describe feelings of stress and tension. These, of course, are synonyms frequently associated with the more tedious operations of daily life. Frequently, humans attempt to alleviate stress and tension through methods of trial and error. For example, a perpetually tardy individual might try leaving the house five minutes earlier every day for a week. This person’s newly acquired punctuality is likely to help eliminate the stress of feeling rushed or judged due to lateness. For singers, the process of trial and error is well applied to breath management. More specifically, breath management becomes more efficient when singers experiment with breath pressure through trial and error. Ideal breath pressure for singing occurs when a singer

²⁴ Kiesgen: 169.

²⁵ Ibid., 169-170.

uses his or her muscles (those implicated in respiration) to control breath and achieve an optimal rate of breath flow.²⁶ Author Arnold Rose notes the direct relationship between tension in the abdominal muscles and tension in the vocal folds.²⁷ This leads directly to Rose's comment that trial and error, as well as tonal analysis, is how each singer should gauge what is *necessary breath*.²⁸ It has been argued that most voice students employ too much breath pressure. Here, the concept of trial and error is helpful to both voice teachers and students in the studio and practice room. If a singer's vocal production sounds pressed, sharp, under energized, or flat, it is likely that he or she is not employing optimal breath flow. In this case, a teacher is well advised to guide the student to find his or her ideal breath pressure. For some students, this discovery may come quickly and, for others, an extended period of trial and error may be necessary, depending on the comprehension, or firmly rooted habits of the student.

The topics of diaphragmatic-abdominal breathing, suspension, and synergistic and cooperative muscular antagonism have been addressed here in some detail. This review of core components of respiration for healthful vocal production is necessary in understanding the following discussions on proper execution of the technique of *appoggio* and breath pressure, which are essential in defining breath management for singing. With the benefit of these discussions, and related substantiation by widely regarded leaders in the field, it will be significantly easier to plainly relate and apply these terms and concepts to the countertenor voice type.

²⁶ Ibid., 170.

²⁷ Arnold Rose, *The Singer and the Voice: Vocal Physiology and Technique for Singers* (New York: St. Martin's Press, 1971), 135.

²⁸ Ibid., 238.

With a firm grasp on the physical similarities of countertenors and singers of other voice types, there is little risk of contradiction in positing that countertenors are not immune from the perils of unhealthy and inefficient habits, such as clavicular breathing. When teaching countertenors, a voice teacher may just as easily recognize in a countertenor the same visual cues indicating clavicular breathing present in other singers. These include the same instances of consistent up and down movement of the collarbone and shoulders, as mentioned earlier in this discussion. Additionally, teachers charged with teaching countertenors may similarly recognize aural indications of clavicular breathing, including the noisy breaths commonly associated with hysterical crying, mentioned earlier in this chapter. This was referred to as a method of last resort for breathing for singing, and young (and some older) countertenors are not immune to this unsustainable form of breathing.

Similarly, muscular tension in the throat, which results from the repeated up and down motion of the chest in clavicular breathing, is just as much of a risk for a countertenor as it is for other vocalists. Therefore teachers of countertenors are well advised to recognize the symptoms of hyperfunction described earlier in this chapter. The presence of too much muscular activity or tension is certainly a warning sign for voice teachers. Those who may think that additional or extraneous muscularity is required (especially that which is visually evidenced in the throat area) in the process of countertenoring are ignoring the opportunity to diagnose and correct a common vocal and physical misstep.

It is also important to note that countertenors benefit just as much (or as little) as other non-countertenor singers who employ the German school technique of

Bauchaussestütze, or belly-breathing, which employs the outward-belly position described earlier. Because the optimal physical context associated with the technique of *appoggio* is neither established through clavicular breathing, nor through belly-breathing, it is also without risk to state that countertenors benefit from execution of the technique of *appoggio*. Countertenors are, and should be grateful beneficiaries of the technique of *appoggio*. As noted earlier, execution of this technique is the result of the synergistic and cooperative muscular antagonism necessary in diaphragmatic-abdominal breathing for singing, as well as efficient breath management. In this context, breath flow is efficient largely because this cooperative antagonism prevents air from flowing too rapidly from the lungs, up the trachea, and between the vibrating vocal folds. This is what teachers and authors mean when they describe the process of singing as suspended or slowed-down exhalation.

This particular aspect of the discussion gives cause to address the topic of *subglottal* or *subglottic* pressure. The *glottis* is characterized as the space between the vocal folds, and subglottal pressure thusly refers to pressure (in this case, air pressure) below the glottal opening. Richard Miller relates this topic to the function of singing, stating the following:

Technical skill in singing is largely dependent on the singer's ability to achieve consistently that fine coordination of airflow and phonation—the vocal contest—which is determined by cooperation among the muscles of the larynx and the chest wall, and diaphragmatic contraction, a dynamic balancing between subglottic pressure and vocal-fold resistance.²⁹

The topic of breath flow and vocal fold resistance will be addressed in greater detail in the following chapter addressing phonation, but it is important to address airflow, here, as it relates to the concept of balancing subglottal pressure. Subglottal pressure is necessary

²⁹ Miller, *The Structure of Singing: System and Art in Vocal Technique*, 23.

to vocal cord occlusion and approximation, but, as Miller indicates above, it must be balanced with regard to vocal fold resistance. In the absence of such balance, too much air pressure can develop below the glottis, or subglottally. The presence of too much subglottal pressure has implications not only for the onset of phonation, but also for subsequent respiration cycles. While the risk implicated here is applicable to all singers, countertenors and their teachers must be aware of countertenor-specific issues implicated in the circumstance of too much subglottal pressure. Here, I refer to Richard Miller's position that, for countertenors, "increased breath reinforcement of the *falsetto* can bring about a quite full sound."³⁰ Miller's statement is at the heart of this countertenor-specific issue. Because countertenors employ a persistent use of *falsetto* singing, they must persistently employ increased breath pressure, as defined earlier. In this regard, the increased breath reinforcement necessary to countertenor singing imposes an additional burden on the countertenor.

Countertenor-Specific Issues Relating to Respiration

Here, the proverbial stakes rise with regard to the balancing act implicated in breath management. During the act of singing, a countertenor must achieve the dynamic balance between subglottic pressure and vocal fold resistance that Richard Miller prescribes for all singers. By combining that directive with Miller's position on a countertenor's increased breath reinforcement in *falsetto* singing, we are able to identify the issue. Logically, this increased breath reinforcement potentially increases the number of challenges implicated in balancing subglottal pressure with vocal fold resistance. Matters of the vocal folds, as they relate to countertenors and the more commonly

³⁰ Miller, "Countertenoring," 20.

occurring voice types, will be addressed in greater detail in the following chapter on phonation.

For countertenors' teachers, this issue is neither cause for alarm nor alternative vocal pedagogy. Rather, it provides increased reason for teachers to understand the importance of the dynamic, cooperative muscular antagonism involved in executing the technique of *appoggio*. If a teacher understands that a countertenor's challenge to balance subglottal pressure is increased, then that same teacher will serve that countertenor well by explaining this at the first sign of imbalance. Avoiding or misunderstanding this circumstance will surely lead to frustration for both the countertenor and his teacher. A teacher need not approach the topic as though the circumstance were bizarre or novel. Rather, the teacher has the opportunity to address the technique of *appoggio* in a meaningful way, inside the collegiate studio.

An instance of subglottal imbalance might occur in the presence of others in the master class setting. This also should be viewed as an opportunity for a teacher to address the concept of balancing subglottal pressure. In this instance, a teacher is well advised to address the topic broadly, and address the concept as it relates to all singers. Depending on the (teacher's) perceived comfort level with the countertenor in question, the teacher may narrow the scope of discussion to better explain the countertenor-specific issue of balancing subglottal pressure, while employing reinforced breath pressure. A working knowledge of this circumstance is beneficial to student and teacher for the obvious reason of ease of vocal production. Additionally, this information may assist countertenors and their teachers as they discuss matters of vocal fatigue.

Vocal fatigue has been well defined by Ingo Titze as “the diminished vocal ability (or perception of such by the vocal performer) when effort remains constant.” Titze relates this occurrence to the context of the vocal studio, advising that “the teacher assesses the vocal ability and the student assesses the effort. Repetition of an exercise, a phrase, or a song with improved technique at first will improve the vocal ability and also reduce vocal effort.”³¹ In teaching countertenors, it is important to realize that countertenors, like singers of other voice types, may become fatigued, and require vocal rest. Titze advises that it is difficult to know just how much recovery time is necessary for singers,³² but the decision to include countertenors in this group is an obvious one. In recalling that countertenors are anatomically similar to other singers, it is a safe assumption that they also may be subjected to the circumstances which result in vocal fatigue. These may include extended choir rehearsals, vocal misuse, and vocal overuse.

Teachers of countertenors may be tempted to view their countertenor students differently, with regard to vocal technique. With regard to the novelty factor, some teachers may be inclined to view their countertenor students as vocally delicate. Others may interpret the opposite, based on Richard Miller’s position on countertenors. Miller maintains that *falsetto* singing does not result in complete occlusion or closure of the vocal cords, and thusly “does not require the same degree of breath energy it takes to produce the more complete laryngeal closure associated with male classical singing.”³³ Some teachers may interpret Miller’s statement to mean that countertenors may become vocally fatigued less frequently than other singers. These teachers are well advised to

³¹ Ingo R. Titze, "Unsolved Mysteries About Vocal Fatigue and Recovery," *Journal of Singing* 65, no. 4 (2009): 449.

³² *Ibid.*, 449.

³³ Miller, "Countertenoring," 20.

take into consideration the potential for increased challenges implicated in balancing subglottal pressure. If countertenors are, in fact, more susceptible to extended periods of vocal fatigue, it would likely be because of the additional diaphragmatic-abdominal muscularity required in balancing subglottal pressure with vocal fold resistance. Perhaps the most useful reminder here is that a fatigued countertenor should be advised to rest his tired voice, just as a vocally fatigued soprano or contralto would be. If this fatigued countertenor feels comfortable vocalizing in his non-countertenor voice, it may be wise for an instructor to advise this student to practice his literature down an octave. This poses no physical risk, and is still considered beneficial both musically and physically.

Posture as it Relates to Respiration and Vocal Production

Vocal fatigue is frequently a manifestation of more general physical fatigue. A teacher has the ability to alleviate the anxieties of young singers by reminding them that they are literally their instruments' carrying cases. Stresses on the carrying case usually result in stresses on the instrument. If a student shows up to a lesson deprived of sleep, this circumstance will very likely have a negative effect on the singer's respiration and vocal production. Physical fatigue can result in less than ideal posture, which may result in physical tensions. Optimal physical posture is necessary in combatting physical tension, and if a singer's posture is poor, the potential for compromised vocal production increases and an increase in physical tension will likely result. For instance, slouching to one side because of fatigue causes a singer's weight to be unevenly distributed. One leg and knee will have to support additional weight, and the shoulder on the same (slouching) side is no longer level with the other shoulder. Because of this, optimal rib cage position and expansion cannot occur. This certainly has negative implications for proper

execution of the technique of *appoggio*. This posture will ultimately result in tension felt in the knee, abdomen, back, and shoulders, and the potential for optimum healthful respiration will be unattainable. Here it seems obvious, but for the purposes of this document it is still important to note that, like all other singers, countertenors must remain vigilant about their posture.

A primary aim of this chapter has been to establish a firm foundation for a discussion on respiration and how it relates to countertenor pedagogy. To establish this basis, it has been necessary to discuss core concepts of and key pedagogical terms implicated in breath management. Through discussion of broad goals for voice teachers and their students relating to respiration and healthful vocal production, it became possible to address related goals for countertenor students and their teachers. Specifically, this chapter served to define breath management through discussion of diaphragmatic-abdominal breathing and the technique of *appoggio*. By addressing these topics in detail, key tenets of healthful respiration for singing are more readily applicable to countertenors studying in the collegiate studio. Additionally, this chapter explored countertenor-specific issues relating to respiration, including persistent *falsetto* and how it relates to a countertenor's persistent employment of persistent, increased breath pressure. Other countertenor-specific issues addressed in this chapter included topics of subglottal pressure and vocal fatigue. The latter of which facilitated a discussion aimed at the importance of optimal posture in the respiratory process, and how key elements of posture for singers of other voice types are certainly applicable to countertenors.

Chapter 3

Phonation

When a countertenor (or a singer of any other voice type) arrives for his first lesson, his teacher is immediately faced with diagnostic concerns and options relating to phonation. Phonation is simply defined as the process of voicing and using the vocal folds to produce sound.¹ This includes any sort of vocal sound produced through use of the vocal folds, including grunting, speaking, yelling, voiced sighing, and singing. Each of these activities is motivated differently, and each is ultimately different in overall sound and intent. The idea of intention is important to this discussion because it has significant physical implications for the act of phonatory preparation. It is difficult to imagine a person in active preparation for a sigh or a grunt. These phonatory utterances are almost always the result of something unexpected or surprising. In serious vocal production for singing, however, intention and preparation are paramount in achieving a healthfully produced and beautiful sounding tone. This principle is no less important to countertenors and their teachers than it is to singers and instructors of other voice types.

In this chapter, I will define and elaborate on phonation and laryngeal function for singing in order to address key phonatory principles, as they relate to countertenors and other singers. I will then relate these principles to the previous discussion on respiration in efforts to further demonstrate the basic phonatory similarities between countertenors and other voice types. To accomplish this, I will readdress the technique of *appoggio*, in order to more effectively explain how dynamic, antagonistic coordination of the diaphragm and abdominal muscles significantly effects phonation and laryngeal

¹ Miller, *The Structure of Singing: System and Art in Vocal Technique*, 307.

placement. Specifically, I will elaborate on the relationship between abdominal tension and vocal fold tension.

To further address the production of tone and how it sounds, I will discuss commonly accepted theories and concepts relating to phonation, including the *myoelastic* and *aerodynamic theories* and the *Bernoulli Effect*, as well as the concept of *pitch quality attribute*. This will allow for clearer relation of the countertenor voice to the more commonly occurring voice types. Additionally, I will address three types of phonation and onset, as delineated by Richard Miller. This broader understanding of phonatory principles will allow me to more effectively discuss countertenor-specific issues relating to phonation. To this end, I will address in detail how the phonatory process in countertenor singing differs slightly, yet certainly from that in other voice types, with regard to vocal fold approximation. Additionally, I will readdress the topic of subglottal pressure to more clearly identify a countertenor-specific issue in the context of laryngeal placement. I will also address a potential phonatory risk for countertenors that experience excessive mucosal buildup. I will conclude this chapter by addressing these countertenor-specific issues with recommendations for teachers.

Phonation and Laryngeal Function for Singing

Paul Kiesgen defines phonation as “the creation of a vocal sound in the throat” and relates this to vocal instruction by noting that this process is one of the most mysterious aspects of voice teaching.² Referring to phonation as mysterious is at once anxiety inducing and a relief. By referring to something as mysterious, we acknowledge that some elements may be unknown. For singers and their teachers, immediate relief is available in the knowledge that in the context of phonation, we are not dealing with

² Paul Kiesgen, "Phonation," *Journal of Singing* 62, no. 3 (2006): 285.

unknown elements. Rather, phonation involves largely unseen (without use of special equipment) anatomical elements, including the larynx and all of its muscles and cartilages, but much is known about their anatomical composition, structure, and functionality in the process of phonating for singing. Many young singers may feel that the sounds they produce are the mysterious result of some combination of air, desire, inspiration, and nerves. While this is not incorrect in some ways, it is certainly not a firm enough foundation upon which to begin serious training as a singer and, ultimately, a teacher of singing.

Understanding phonation and laryngeal function and their relationship to the other key components of healthful singing is important in establishing confidence, for both teacher and student. A simple but helpful analogy may be drawn from a visit to a physician's office. If a person's wrist hurts but he or she elects not to or cannot go to a doctor, then the medical issue is shrouded in mystery. If that same individual is able to visit the doctor, he or she may then learn if there is a small fracture or malady, and may then take action. In the latter case, the mystery is resolved and steps may be taken to confidently resolve the issue. Similarly, if a student understands the basic elements of laryngeal function, he or she will be better equipped to handle the daily challenges involved in being a singer. For instance, a singer who begins to experience high laryngeal placement during an extended practice may feel confident in the decision to cease practice for the day, assuming that he or she understands that this may be due to fatigue. A singer who is not equipped with this knowledge may attempt to try harder, thinking that he or she will work through the circumstance of a high larynx. This knowledge and circumstance may appear to be simple, but it is nonetheless important,

and students who are in the proverbial dark about what they are doing while singing face a serious handicap, especially if they are asked to teach a voice lesson.

Kiesgen further explains this characterization of phonatory mystery by advising that singers are only able to control the muscles (those implicated in phonation) in the throat by indirect means. In this regard, it is understandable that some students and teachers may feel less than comfortable addressing matters of the throat, but Kiesgen is quick to advise that teachers and their students are wise to be aware of the laryngeal mechanism, as well as the results of indirect and direct adjustment.³ To properly discuss this type of control and adjustment in the countertenor voice (or any other voice type) it is critical to discuss exactly what is happening during phonation for singing.

In a discussion on the nature of vocal sound, James McKinney describes phonation as one of four physical processes (the other three are respiration, resonance, and articulation), stating that phonation is sound initiated in the larynx. McKinney deftly defines phonation as “the process of producing vocal sound by the vibration of the vocal cords. It takes place in the larynx (voice box) when the vocal cords are brought together (approximated) and breath pressure is applied to them in such a way that vibration ensues.”⁴ McKinney’s succinct definition of phonation easily leads any interested party to further discuss the relationship between phonation and respiration. For any singer wishing to understand how sung tones are healthfully produced, it is crucial to understand how the two processes are linked, as well as the related choices involved in vocal production for singing.

³ Ibid., 285.

⁴ McKinney, 27.

When a singer makes the decision to sing, he or she commits to a series of choices. After a period of extended study, it is hoped that these choices are healthy and sustainable, and habitualized. When many of these choices do become habit, it may become difficult to view them as such, and rather to perceive them as automatic function. Yet for purposes of this discussion, it is important to remember that choices actually are made. If they truly were the result of automatic function, then singers would not be able to attempt to make the vocal adjustments necessary in lessons, rehearsals, and coaching sessions. These choices are numerous and include, but are not limited to decisions relating to posture and vocal coloring (that latter of which will be discussed in greater detail in the following chapter on resonance). It is also hoped that choices will be made on the basis of healthy and sustainable principles. For the purposes of this discussion, focus will be given to choices necessary in basic phonatory function for singing which result in healthful tone production and the ability to sing an extended phrase with *vibrato*.

Phonatory Similarities between Countertenors and other Voice Types

For this examination, it is assumed that healthful singing includes the consistent presence of *vibrato*. In a document centered on countertenor pedagogy, this term has the potential to result in extended elaboration on treatises and historically informed performance practice. And while I do not discount the usefulness of such discussions in the greater context of academia, they are largely outside of the scope and primary interests of this examination. Comfortable in the knowledge that some countertenors and musicologists may disagree with me, I am confident in my assertion that countertenors who wish to sing healthfully and sustainably should phonate with consistent *vibrato*. As a countertenor, I have found this to be true in both practice and theory (the latter of which

is due largely to the presence of scholarship in the field). Richard Miller defines and describes *vibrato* as “a phenomenon of the schooled singing voice; a pitch variant produced as a result of neurological impulses that occur when proper coordination exists between the breath mechanism and the phonatory mechanism; a natural result of the dynamic balancing of airflow and vocal-fold approximation.”⁵

In order to sing with *vibrato*, and according to Miller’s definition, a singer must make choices that require employment of diaphragmatic-abdominal breathing and proper execution of the technique of *appoggio*. Both of these tenets of healthful respiration for singing were endorsed and addressed in detail in the previous chapter. Their involvement in the phenomenon of *vibrato*, which is widely accepted as a hallmark of healthy vocal production, further substantiates the position that persistent *vibrato* should be considered as a principle in healthy phonation for singing. This applies to all singers, including countertenors. Interested parties will likely be quick to agree, but they also may be quick to add a qualifier or an adjective, describing the phenomenon as “even *vibrato*” or “well regulated *vibrato*.” To achieve well regulated and even *vibrato*, singers need to make sustainable choices. A countertenor and his colleagues of other voice types need look only as far as Richard Miller’s definition of *vibrato* to work toward sustainable choices. Here, it is necessary to return to the topic of the technique of *appoggio* in the interest of addressing laryngeal placement and dynamic, antagonistic coordination of the diaphragm and abdominal muscles. To address these topics efficiently, and in efforts to find quick and ready application to the countertenor voice type, introduction of the term *flow phonation* is necessary.

⁵ Miller, *The Structure of Singing: System and Art in Vocal Technique*, 312.

Healthful phonation for singing is frequently paired with the description of the term flow phonation. Richard Miller characterizes flow phonation as a process in which “breath is never held back at the laryngeal level, yet the vocal folds offer sufficient resistance to the exiting breath.”⁶ Kiesgen, who credits creation of the term to Johan Sundberg, endorses flow phonation to the point of lauding it as the ideal type of initiation of vocal sound, describing it as virtually simultaneous movement of both breath and vocal bands.” Here, he describes this process as simultaneously gentle and firm.⁷ This description characterizes the optimum efficiency in which sung sound is produced in flow phonation, and the merits of flow phonation are difficult to ignore. Therefore it is absolutely necessary to readdress the topic of respiration, paying special attention to its part in the phonatory process.

A teacher’s directive to a student to, “Sing on the breath!” provides quick and ready application to this discussion of the related components of phonation and respiration. Quite obviously, the instruction “to sing” is easily associated with phonation, and the following prepositional phrase providing further instruction on how to do it (“on the breath”) makes obvious reference to respiration. Kiesgen warns of a semantic minefield, positing that this directive is not specific enough and, using author Berton Coffin’s suggested directive, Kiesgen recommends amending the directive to “singing on the flow of the breath.” He further relates phonation to respiration, describing that “the flowing breath will cause the vocal bands to adduct and abduct as needed without any direct control by the singer.”⁸

⁶ Miller, *Solutions for Singers: Tools for Performers and Teachers*, 60.

⁷ Kiesgen, "Phonation," 286.

⁸ *Ibid.*, 287.

Diaphragmatic-Abdominal Coordination, Phonation, and Laryngeal Placement

To better relate this concept to the previous discussion on proper execution of the technique of *appoggio*, it is helpful to remind that the muscles used to control air flow and breath pressure need to be in balance with those used in controlling phonation.⁹ In the previous chapter, significant attention was given to the topic of *appoggio* in order to more readily discuss this particular concept of balance. Specifically, Kiesgen explains this balance, advising that “the breath is leaning gently upon the vocal bands which in turn lean upon the breath.”¹⁰ Through better understanding of this concept, it is now somewhat easier to comprehend Arnold Rose’s theory positing the direct relationship between tension in the abdominal muscles to tension in the vocal folds,¹¹ and a singer’s imperative to gauge what is necessary breath through a process of trial and error.¹² The principles undergirding a singer’s phonatory choices and those which aid teachers in guiding their students should help immensely in this process of trial and error.

To more easily understand what is involved in this process, it is helpful to remind that Rose’s assertions regarding phonatory function and breathing logically begin with the variable size of the glottis. He advises that on a sung ascending scale the size of the glottis gradually decreases. Rose continues with a logical argument, stating that because the size of the glottis grows smaller during pitch ascension, the amount of required breath gradually decreases. Upon accepting this position, it is logical to follow Rose’s assumption that a greater amount of air flow is necessary to vibrate the vocal cords when singing lower notes because the opening of the glottis is greater. Conversely, higher

⁹ Ibid., 287.

¹⁰ Kiesgen, "Breathing," 169.

¹¹ Rose, 135.

¹² Ibid., 238.

notes require less breath flow as the opening of the glottis is smaller. Here Rose addresses diaphragmatic and abdominal cooperation, advising that while a singer decreases his or her breath volume during pitch ascension, an increase of tension on the diaphragm needs to occur. Subsequently, abdominal tension will increase simultaneously.¹³ Incorrect coordination of these tensions may include a circumstance in which the diaphragm is too relaxed in relation to abdominal tension, which could result in a forced sung tone due to vibrating too much mass of the vocal cords.¹⁴ Rose notes that the opposite will be true if too much diaphragmatic tension occurs. Here the author stresses the great importance of controlling the “ratio of tension between the two [diaphragmatic and abdominal tensions]...for every type of tone on every pitch.”¹⁵

From these conclusions, we can confidently state that increased pressure is necessary for singing lower notes when the vocal folds are thicker, and, conversely, less pressure is necessary for higher notes sung when the vocal folds are longer and thinner. Here it merits restating that correct balance of pressure above and below the glottis is also of great importance in coordinating tensions during phonatory function. Proper understanding of these concepts is helpful to countertenors and teachers of any voice type because every singer is confronted with the elemental aspect of establishing necessary breath. When the trial and error process is fruitful for student and teacher, the resulting sound is what we commonly associate with the hallmarks of good singing, evidenced in the *bel canto* style of singing. An important visual symbol associated with healthful vocal production and sustainable singing is the presence of balanced laryngeal placement. Unless they have access to laryngoscopic instruments and an appropriate technician,

¹³ Ibid., 146.

¹⁴ Ibid., 143.

¹⁵ Ibid., 144.

voice teachers typically cannot see their students' inner laryngeal workings. Teachers can, however, far more easily observe movement in and placement of a student's larynx. A ready example is found in observation of the movement of a student's Adam's apple. The Adam's apple is technically known as the thyroid cartilage which serves to protect the vocal folds, and is generally more visually prominent in singers who possess a lower range.¹⁶ In the case of a student with a visually prominent Adam's apple, a teacher may observe if his larynx has moved to a high (and thusly uncomfortable) position, or if his larynx is depressed into a low and unbalanced position. Proper execution of the technique of *appoggio*, and proper balancing of abdominal and vocal fold tensions both result in a comfortable laryngeal placement. This element of healthful vocal production applies to countertenors as much as it does to singers of other voice types. In efforts to further explain healthy phonatory function, it is necessary to continue to demystify this process. In this regard, it is also important to briefly address theoretical concepts including the myoelastic and aerodynamic theories, as well as the Bernoulli Effect, which is implicated in the aerodynamic theory.

Commonly Accepted Theories and Concepts Relating to Phonation

Prior to discussion of these theories, however, it is important to briefly return to matters of anatomical concern. Regarding teaching countertenors, it is helpful to again remind that countertenors are not anatomically alien from singers of other voice types, and all general anatomical processes and implications related to other singers should most certainly be applied to countertenors. A detailed description of the muscles of the larynx is beyond the scope of this discussion, and such descriptions are easily referenced in the works of several of the authors mentioned in this examination, including, but not limited

¹⁶ McKinney, 66.

to Richard Miller, Paul Kiesgen, William Vennard, and James McKinney. For purposes of the following discussion, it is important to recall that the larynx is located at the top of the trachea (or what is commonly referred to as the windpipe), and is made up of single and paired cartilages. For this discussion, it is also important to understand that the arytenoid cartilages are attached to the vocal cords and are completely related to their position.

A widely accepted understanding of vocal production for singing is found in the myoelastic theory, or muscle elasticity theory. James McKinney advises that the theory posits the following:

...when the vocal cords are closed and breath pressure is applied to them, the cords remain closed until the pressure beneath them—the subglottic pressure—is sufficient to push them apart, allowing air to escape and reducing the pressure enough for the muscle tension to pull the folds back together again. Pressure builds up once again until the cords are pushed apart, and the whole cycle keeps repeating itself. The rate at which the cords open and close—the number of cycles per second—determines the pitch of phonation.¹⁷

Even more simply stated, when air comes from the lungs, if there is enough (subglottal) pressure beneath them, the vocal folds will be forced apart to release the air expelled from the lungs. In healthful singing, enough pressure will occur for muscle tension to pull the cords back together again. Here, the rate of opening and closing will determine the pitch. This theoretical description is at the heart of any discussion doubting or defending the phonatory process in countertenoring. This theory relies so heavily on the acceptance of basic principles of anatomy and respiration that any form of denial of this theory signifies a denial (of some kind) of the basic principles of breathing and laryngeal composition and function.

¹⁷ Ibid., 76.

A related theory that is also likely responsible for the vibration of the vocal folds is the aerodynamic theory. McKinney characterizes the likely complementary theory as the following:

...breath is flowing through the glottis while the arytenoid cartilages are being pulled together by the action of the interarytenoid muscles. Due to the Bernoulli Effect, the breath flowing past the vocal folds causes them to be sucked into vibration before the arytenoids are fully together. When the arytenoids have been pulled together, this same air flow sucks the glottis closed, thus cutting off the air flow until breath pressure pushes the folds apart and the flow starts up again, causing the cycle to repeat.¹⁸

McKinney clarifies that the primary differences in these theories is related to how the vocal cords are brought back into contact with one another in the process. Here he states that in the former theory (myoelastic), this is caused by elasticity accomplished through muscular engagement, and in the latter theory (aerodynamic), the vocal cords are brought back into contact with one another as a result of the Bernoulli Effect. Acceptance of this theory facilitates better understanding of the Bernoulli Effect, which aids tremendously in understanding the vibratory process that characterizes the phonatory process. Paul

Kiesgen states that the Bernoulli Effect occurs during healthful singing when

...air rushes between the closing vocal bands and pulls them together as the pressure is reduced. This effect helps to close the vocal bands with less effort in the throat of the singer. In this way the vocal bands remain more flexible and responsive to the wishes of the singer. Singers who attempt to firmly close the glottis before any breath begins to flow will experience tension in the throat that will prevent a free and abundant tone.¹⁹

Perhaps the most important take away from any discussion aimed at elaborating on these theories, and the resulting Bernoulli Effect, is the assertion that it is significantly involved in the closure or approximation of the vocal folds. The effect's implications are that a singer will ultimately have greater phonatory flexibility over his or her voice, and

¹⁸ Ibid.

¹⁹ Kiesgen, "Phonation," 286.

thusly be the beneficiary of greater responsiveness in the context of healthful vocal production. Additionally, tone production will be more beautiful and produced with far less risk of vocal fatigue.²⁰ Expounding on these goals for singing by means of theoretical explanation and analysis may be met with boredom within the walls of the collegiate studio, but understanding these theories will prove especially useful in the studio for both teacher and the more advanced student. Perhaps the most practical application for singers of all voice types is that if a student displays tension, or his or her voice is not responsive, then chances are great that muscular engagement is not optimal and the vibratory cycle implicated in the Bernoulli Effect is not present. In short, better breath management is required, which will result in better coordinated balance with the muscles of the larynx.

In a document focusing on teaching countertenors, their vocal production and the ways by which they achieve it is central in understanding how to teach them. Through review of this detailed description of the phonatory process, it is difficult to deny that countertenors are similar to their colleagues who happen to sing in other voice types. Countertenors are anatomically similar to singers of other voice types and can benefit through comprehension of tenets of the phonatory process. Now that it is understood that a countertenor's vocal production is primarily similar to that of other singers, it is significantly easier to discuss the quality and intensity of pitch.

To address pitch itself, it is helpful to understand the concept of pitch quality attribute. In this regard, Rose speaks directly to pitch, quality or timbre, and intensity.²¹ He posits that “quality of a tone is dependent on three factors, the pitch of the note, the

²⁰ Ibid., 286-287.

²¹ Rose, 45-51.

energy distribution of the fundamental and upper partials produced by the vibrator, and the way in which these vibrations are affected by resonance.”²² Here it is helpful to note that the larynx is commonly referred to as the vibrator. Rose’s discussion on the topic of pitch quality attribute results in a crucial piece of knowledge for singers and their teachers: singers cannot make the same exact tone from low voice to high voice. Even in the most even singing possible, lower pitches should have what some describe as a mellow quality, and higher notes should accordingly be of a brighter or lighter quality. Techniques for application of this information include employing the technique of *appoggio*, which will aid in avoiding an imbalance of pressure above and below the glottis, and will thusly prevent the larynx from rising to an uncomfortable and less effective position. Here it is once again helpful to reiterate that healthful diaphragmatic-abdominal breathing results in automatic coordination of necessary related tension between the abdominal muscles and vocal folds. What results is a more ideal and healthful foundation for phonatory function. To put these principles into practice in the collegiate studio, it is useful to discuss matters of practical application. Specifically, it is helpful to identify and discuss types of phonation in a manner that is accessible to students of most ages and levels of skill, as well as their teachers.

Types of Phonation

The terms commonly used to describe the three kinds of phonation for singing vary from one author to the next on the basis of style, experience, and semantic choice. For this discussion I will primarily adopt Richard Miller’s terms: soft, hard, and balanced. Here it may be useful for students to equate the words “soft” with “breathy” and “hard” with “pressed.” Miller uses these terms in his discussion on what he terms coordinated

²² Ibid., 47.

vocal onset and release. The initiation of onset directly relates to phonatory function because phonation is obviously the immediate aural result of onset (be it a soft, hard, or balanced onset).²³ I will begin with the extreme types of phonation and conclude with the type most logically associated with what Miller characterizes as *dynamic muscular equilibrium*.²⁴ Soft phonation is known for its noticeably breathy sound, resulting from pre-phonatory breath flow without firm glottal closure.²⁵ Barbara Doscher describes this type of soft phonation as an aspirate attack, noting its inefficiency in breathing, resonance, and overall voice production.²⁶ Here the singer's breath flow is not strong enough to vibrate the vocal folds with optimal efficacy.

Hard phonation is frequently referred to as pressed singing. Primarily the result of a grunted onset, this pressed phonation results from a *glottal attack* or *glottal plosive*, before which the glottis has been firmly closed prior to phonation. Vennard refers to such a grunt as the slipping of the valve.²⁷ Author Meribeth Bunch explains that built up subglottal pressure ultimately bursts through the vocal folds, causing an audible click at the onset of sound.²⁸ The result is pressed singing caused by high laryngeal placement.

Balanced phonation avoids the extreme types of phonation outlined above. The phonatory result of a balanced onset is singing employing *balanced laryngeal action*, which allows for pre-phonatory tuning, which can also occur well after onset.²⁹ Here the singer is most capable of making adjustments during a sung phrase because laryngeal placement is neither too low nor too high, as it is in soft and hard phonation, respectively.

²³ Miller, *The Structure of Singing: System and Art in Vocal Technique*, 1.

²⁴ Ibid.

²⁵ Ibid., 3.

²⁶ Doscher, 61.

²⁷ Vennard, 161.

²⁸ Meribeth Bunch, *Dynamics of the Singing Voice*, 3rd ed. (New York: Springer-Verlag, 1995), 70.

²⁹ Miller, *The Structure of Singing: System and Art in Vocal Technique*, 4.

Additionally, under these conditions the Bernoulli Effect is able to most optimally occur.

In the context of balanced phonation, a singer and his or her teacher should be able to recognize what James McKinney refers to as characteristics of good vocal sound.

Although this is not an exhaustive list, McKinney has offered these descriptive words and phrases to describe good vocal sound: freely produced; pleasant to listen to; loud enough to be heard easily; rich, ringing, and resonant; energy flows smoothly from note to note; consistently produced; vibrant, dynamic, and alive; flexibly expressive.³⁰ While some may disagree with exact wording, these words find easy association with *bel canto* singing, which is generally evidenced by the results of successful execution of the technique of *appoggio*.

Addressing the characteristics of good vocal sound is a helpful way to further integrate the topic of countertenor pedagogy into the collegiate studio. Even if a teacher is totally flummoxed by the idea of teaching a countertenor, he or she should take great relief in the belief that good singing is good singing, and a good pleasant vocal sound is certainly a good pleasant vocal sound. If a countertenor enters a collegiate voice studio and demonstrates balanced phonation as a result of efficient breath management, then his voice more than likely will, as McKinney describes, sound pleasant, resonant, vibrant and easily produced. Chances are great that, in a collegiate studio, a new student will likely have some vocal issues and will expect his or her teacher to address them accordingly. To that end, if a singer, countertenor or other, phonates in a manner that is strained, too loud, breathy, inconsistently produced, or shaky or wobbly,³¹ then this singer is not demonstrating healthy phonation. Because onset of tone is an obvious point from which

³⁰ McKinney, 77.

³¹ Ibid.

to begin making a vocal diagnosis, a teacher is wise to view troubling phonatory issues in relation to the three types of phonatory onset listed and described earlier.

Countertenor-Specific Issues Relating to Phonation

Countertenors are not exempt from this type of pedagogical diagnosis and analysis. The phonatory process for countertenors is primarily similar to that of other voice types but one slight, yet crucial difference exists. This difference has to do with the topic of glottal closure. In general, countertenors achieve their vocal production in what Richard Miller describes as “a normally less firm glottal closure than occurs with his other voice.”³² Here, the other voice refers to a countertenor’s non-countertenor voice, which is frequently that of baritone, or sometimes a tenor, in the case of the countertenor, David Daniels.³³ Countertenors and their instructors have, most certainly, found a way to work around this.

Those who more readily associate countertenoring with a breathy sound are likely making associations based on recordings or experiences with countertenors from the first half of the 20th century. Up until the past several decades, countertenors sang with a less firm closure of the glottis, and the result was a breathier tone with an understandably weaker presence or consistency of *vibrato*. Recordings of countertenors of more recent decades easily demonstrate a firmer closure of the glottis in the voice type in general, as evidenced by increasing *legato*, *vibrato*, agility, and *appoggio*-related vocal implications. Scott McCoy advises that his electroglottographic research yields findings confirming that reinforced *false* (that associated with countertenoring) “more closely resembles the

³² Miller, *Solutions for Singers: Tools for Performers and Teachers*, 155.

³³ Kellow, 23.

full voice through higher closed quotients...”³⁴ This firmer glottal closure is not without issue or risk of fatigue, however.

Although additional research is necessary to prove this assertion, it is highly likely that the increased breath pressure necessary to sing in a cultivated *falsetto*, coupled with the need to compensate with a less than firm glottal closure may lead a countertenor more quickly into a bout of vocal fatigue. Furthermore, if the technique of *appoggio* is successfully employed, this increase in breath pressure will more than likely lead to an excess of subglottal pressure, resulting in a raised larynx, and uncomfortable phonation (for both singer and listener). For teachers of countertenors, the implications are as follows. Countertenors achieve the characteristics of good vocal sound associated with phonation by employing increased breath pressure in coordination with proper execution of the technique of *appoggio*. This results in a firmer closure of the glottis and balanced laryngeal placement, which is neither too high, nor too low. These coordinated activities allow countertenors to produce and sustain *vibrato*, and sing sustained, *legato* passages. This process facilitates a healthy sound, readily associated with that which is achieved by singers of other voice types. The countertenor, however, achieves his healthy sound through successful negotiation of the glottal closure issues noted above. Teachers of countertenors are well advised to acknowledge this slight but important aspect of glottal closure and its implications and potential for vocal fatigue and increased subglottal pressure, which may lead to high laryngeal placement. A teacher should advise a fatigued countertenor (or any other fatigued student) to take a break. In the case of a countertenor, it is advisable to recommend vocalization (in a lesson or in the practice

³⁴ McCoy: 406.

room) down an octave, in the countertenor's other voice. This may alleviate the problem of subglottal pressure, and thusly facilitate a more neutral laryngeal position.

An additional potential concern surrounding countertenors and the phonatory process is the concept of mucosal interference. Countertenors are not the only singers that have to deal with the hassle of phlegm and throat clearing, most frequently caused by the common cold, allergies, and other causes of throat and nasal congestion. However, because countertenors do not achieve full and complete glottal closure during phonation, it is possible that an excess of mucus (or phlegm) located near the vocal folds may inhibit glottal closure even further and thusly alter tone production. Although additional study of this matter is certainly necessary to discuss this position with greater authority, it has been my experience that mucosal buildup significantly and obviously (to my listeners) inhibits proper phonation when I sing in my countertenor voice. When I alternate to my baritone voice, phonation is far less inhibited and there is no apparent impediment to glottal closure. I have asked male friends to experiment similarly. Even those friends who do not possess a cultivated *falsetto* are able to notice an impediment to their usual *falsetto* when attempting to sing through mucus. To this end, I recommend that a teacher of a countertenor who appears to be struggling to phonate through mucus should be especially discerning when the phonatory process appears to be compromised. If this same countertenor usually demonstrates a balanced onset, then it is likely that mucus may result in the false impression that the student is struggling to grasp the concept of balanced onset or attack. Again, it is important to note that further research (involving vocal fold scoping) is necessary to explore this further.

In this chapter, it has been necessary to address phonatory principles for countertenors and other singers by defining and elaborating on phonation and laryngeal function. By relating these principles to relevant components of healthful respiration for singing, it became possible to further relate a countertenor's phonatory process to that of singers of other voice types, and to give significant attention to the relationship between abdominal tension and how it relates to tension in the vocal folds. This chapter also examined the production of vocal sound by addressing key theories, and describing the relevance of Bernoulli Effect in healthy singing. This more readily allowed for discussion of the concept of pitch quality attribute, which led to clearer relation of the countertenor voice to other voice types. Here the scope of discussion was focused to the context of the collegiate voice studio and diagnostic process through explanation of three types of phonation, as well as characteristics associated with good and poor phonation. This better allowed for discussion of countertenor-specific issues relating to the phonatory process, including matters of vocal fold approximation or glottal closure, subglottal pressure, vocal fatigue, and risks relating to laryngeal positioning.

Chapter 4

Resonance

The concept of resonance, or resonation, plays a critical role in how singers are perceived aurally. It is through resonance that a singer may be instantly recognizable on a recording or on the radio, without any visual cues. Resonance and its implications for healthful vocal production are of crucial importance on the concert stage and within the walls of the collegiate studio. Not only does resonance aid a singer in making an aural impression on an audience, but it also aids tremendously in voice lessons. Specifically, matters of resonance allow teachers to diagnosis vocal issues and ultimately prescribe exercises in hope of remedies resulting in more optimal resonance. When a student first discovers his or her resonance, it is an “ah ha!” moment, indeed. Successfully discovering how to navigate and manage the myriad of resonance choices that each singer has may easily be considered an “ah ha!” process. Paul Kiesgen characterizes this aspect of resonance as follows:

Resonance is a vitally important component of voice technique...With the benefit of resonance furnished by the vocal tract, the sound can be transformed into a thing of beauty and it can carry in a large room even over other sounds. The best thing about resonance is that it is essentially free; that is, it takes little or no muscular effort to produce good resonance, yet resonance can make the voice substantially richer and stronger.¹

Chapters 2 and 3 were devoted to the processes of respiration and phonation, and the more habitualized healthy respiration and phonation for singing becomes, the easier it seems, to both singer and audience. The same may be said for resonance. The process of discovering and navigating one’s resonance abilities is an empowering concept for singers and their teachers. This is true, indeed, for the countertenor. For singers, finding

¹ Paul Kiesgen, "Resonance," *Journal of Singing* 62, no. 4 (2006): 419.

and understanding one's resonance opens all kinds of proverbial doors. Within the context of laryngeal makeup and phonatory abilities, resonance habits aid in understanding one's *fach*, or niche within the canon of operatic and concert literature. As Kiesgen advises, resonance allows singers to be heard over symphony orchestras and large ensembles. More specifically, depending on a singer's abilities and potential, matters of resonance allow singers to be heard over a traditional Handelian orchestra or a Wagnerian orchestra.

In this chapter, I will continue to examine the powerful implications of resonance in singing, applying it to countertenors and all other singers. Because resonance and its implications for a countertenor's sound, color, and vocal identity are so great, I will begin by addressing the discovery process as it relates to countertenors, and will elaborate on definitions of resonance and key terms in order to establish a foundation for the following discussions. I will discuss the general process of range and *fach* identification. By comparing this process in countertenor pedagogy to that which is applied to other voice types, I will be able to demonstrate that there is not one, singular countertenor range. Similarly, I will address the concept of vocal coloring to demonstrate that there is not one, singular countertenor vocal color. To accomplish this, I will discuss conditions for optimal resonance in all voice types through discussion of resonance choices, ideal pharyngeal space, and matters related to the tongue and lips. Additionally, I will address various types of tension that interfere with optimal resonance. I will then address the importance of vowel migration as it relates to all singers, and will integrate the countertenor voice type into this topic by recommending some common vowel modifications for countertenors.

The Discovery Process as it Relates to Countertenors

For teachers, the establishment or understanding of a student's resonance (or potential for it) assists greatly in matters of vocal pedagogy. These matters include, but are not limited to range and registration, better diagnosis of tension, repertoire considerations, and flexibility or inflexibility of *fach*. For countertenors and their teachers, resonance plays a very similar role in production and pedagogy to that in the other voice types. However, it is likely that many countertenors discover their resonance, or a strong potential for it, prior to formal study at the collegiate level. I am not implying that singers of other voice types cannot do the same, yet discovery of one's countertenor voice happens frequently through serendipitous experimentation or related past performance experience. For instance, I discovered my (potential for) resonance due to performing experience. I was a moderately successful boy soprano, and worked steadily in the Chicago area. I had a voice teacher who advised me to continue singing in my soprano range until it was no longer possible. She advised that I would ultimately have no choice in the matter, and that my voice would deepen and that would be the end of my activities as a treble. My range did decrease at the top, but not by much, and my speaking voice lowered, but not dramatically. Shortly after, my teacher called and suggested that I might be a countertenor. I looked up the word in the dictionary and, with my teacher's urging, I proceeded to call myself a countertenor.

In hindsight, I realize what likely happened with regard to my (un)changing voice. During puberty, my voice did not change dramatically as it does for some males, and while it was changing, I continued to vocalize in the treble range. I was likely cultivating my *falsetto* voice without knowing it. For me, the change from singing in head voice as a

boy treble to singing with a reinforced *falsetto* was not very noticeable to me at the time. For other countertenors, initial discovery of their resonance, or their basic countertenor sound at the time, is by accident or through comical means. For instance, some men find that they can do a great impression of a soprano or mezzo soprano and, usually at the urging of a friend or teacher, they proceed to study as countertenors.

With the growing number of countertenors studying at the collegiate level, and their resulting effect on vocal pedagogy in general, it may be safe to assume that new generations of countertenors may come to formal study (as countertenors) through more common means. For example, more male students may be allowed to sing in alto (and possibly soprano) sections in high school choirs, and experience a smoother transition from high school to college. I was not given such an opportunity and was, in fact, discouraged by my high school choir director from experimenting with countertenor vocal production. This led to embarrassment, and I ultimately quit choir. Here it is important to note my experience is not representative of all high school age males who hope to train as countertenors. I have included my resonance discovery story simply to illustrate my own experience, in hopes of providing contrast with the stories of future countertenor students. In order to further understand the power of resonance for singing, and to better address it within the collegiate studio, it is important to properly define it and related key terminology.

Definitions of Resonance and Key Terms

Many students and some teachers find it difficult to properly define resonance. To describe it as volume is inadequate, and to refer to resonance as amplification is not incorrect, but this description is not complete. To better understand and better teach

resonance and resonance strategies, it is first important to acknowledge resonance as a process. James McKinney offers the following definition and description:

Resonation is the process by which the basic product of phonation is enhanced in timbre and/or intensity by the air-filled cavities through which it passes on its way to the outside air. Various definitions related to the resonation process include such terms as amplification, enrichment, enlargement, improvement, intensification, and prolongation... The main point to be drawn from these terms by a singer or speaker is that the end result of resonation is, or should be, to make a better sound.²

McKinney's definition and description are concise and lead readily into a discussion of related key terms. He maintains that timbre is well understood through widely used, synonymous words including tone quality and color, and is what allows listeners to differentiate between two voices singing the same pitch with the same amount of intensity.³ Using Vennard's description of the resonators,⁴ McKinney is able to identify what he refers to as "seven areas that may be listed as possible vocal resonators." However, as he notes, not all of these areas are able to meaningfully contribute to resonation.⁵ Therefore, it is necessary to refer to the air-filled cavities mentioned in the passage above.

In order to make the better sound he refers to, it is helpful to refer to Kiesgen's descriptions of related terms. He describes the *vocal tract* as a channel for passing sound, after it is produced in the larynx. This term refers to the larynx, pharynx, mouth, and nose (occasionally). The larynx (which was discussed in some detail in the previous chapter) contains the vocal folds. It is small, yet can be a vocal resonance source. The pharynx is space located above the larynx and behind the mouth. The *buccal cavity* is a

² McKinney, 120.

³ Ibid., 24.

⁴ Vennard, 85-96.

⁵ McKinney, 123.

related term used to alternately refer to the mouth (oral cavity).⁶ Regarding acoustical properties, it is tempting to discuss the following terms in great scientific detail. While the details of these specifications are important, their relevance is not up for debate in this examination. There are numerous other resources dedicated to the detailed scientific description of what we hear. For purposes of this discussion, I will briefly summarize Kiesgen's characterizations of the following related terms. *Overtones* refer to a pitch family, which consist of a fundamental frequency and a series of related overtones. The term *fundamental* refers to the lowest and strongest pitch in a pitch family, and *harmonics* are mathematically related (to the fundamental) overtones. *Partials* refer to the fundamental and harmonics, and *formants* are "bands of frequencies that are favored by the resonator..."⁷

Richard Miller describes the vocal tract as a nonfixated supraglottal resonator system, noting that it influences timbres in singing, based on the articulatory choices of the singer (or speaker).⁸ Because this system is not fixed, timbre is determined through a "filtering process of the supraglottic resonators of the vocal mechanism" which is influenced by "constant alteration of relationships among vocal-tract spaces."⁹ Miller's characterization allows for better discussion of the process of resonance adjustment, which Kiesgen describes as a means by which to both change a singer's sound and adjust the way the vocal folds work. Kiesgen notes that teachers sometimes work with students in adjusting resonance in order to indirectly influence the action of the vocal folds. He further contends that matters of resonance adjustment allow a listener to tell the

⁶ Kiesgen, "Resonance," 419.

⁷ Ibid., 419.

⁸ Miller, *Solutions for Singers: Tools for Performers and Teachers*, 63.

⁹ Ibid., 66.

difference between a beginning singer and an experienced one.¹⁰ Regarding the former, it is important to address how teachers go about discussing and helping a student classify his or her range and voice type.

Range and *Fach* Identification

A discussion of range, registration, and *fach*, is not exclusively related to the topic of resonance, nor is it the sole property of a discussion on phonation. Because registration and registration events are so closely related to resonance adjustment, inclusion of range and *fach* here is a natural decision. When a singer experiences a register event, or a change in sound quality (usually with laryngeal implications), he or she must make modifications (to both the vowel and applicable resonators). Simply stated, a singer's range and sound is determined by the length of the vocal cords and size and shape of his or her resonators. Within that range, there are registers. In his characterization of registers, McKinney notes the following: "...each register has three constituent elements: a certain vibratory pattern of the vocal folds, a certain series of pitches, and a certain type of sound. These three elements form the basis for a workable definition of the word *register*..."¹¹

Each voice type has multiple registers and they are separated by qualitative changes in sound, known as register events. These occur in sections of the range which are commonly referred to as the first and second passages, or *primo passaggio* and *secondo passaggio*. Within the various voice types, register events occur on predictable notes or note areas, and these events help teachers and singers to recognize hallmarks of a particular voice type. Through recognition of these predictable areas, or event

¹⁰ Kiesgen, "Resonance," 420.

¹¹ McKinney, 93.

commonalities, teachers are able to explain to a student why his or her voice type is what it is. For instance, a young mezzo soprano who can sing a high c or above may be confused to learn that she is a mezzo soprano. Here, her teacher should be able to explain to her that the locations of her register events more closely match those in the mezzo soprano range. Further still, her teacher is well advised to note that even though the student may have a high c, she is not meant to sing in a soprano *tessitura* with great frequency. Additionally, qualitative elements of her sound, by virtue of the characteristics of her resonators (in relation to the vocal folds), will likely result in a type of timbre associated with the mezzo soprano *fach* (or *fach* family).

Similarly, a countertenor's teacher is well advised to evaluate and examine the student's register events. In the same way that there can be mezzo sopranos with higher extensions, there can be countertenors with higher extensions in the range, although this does not necessarily make him a *sopranist*, or male soprano. For some teachers of countertenors, the temptation is to view them all as having the same voice or placement within the *fach*, or vocal category.¹² This is simply not true. In the same way that one soprano's range may differ from another's (albeit it slightly, sometimes), a countertenor's range will not be exactly the same as another countertenor's.

In my experience as a young countertenor, I was frequently frustrated by the challenges I faced in my quest to sing arias traditionally associated with the mezzo soprano *fach*. Specifically, I desired to learn and master Cherubino's arias in Mozart's *Le Nozze di Figaro*. After a significant amount of vocal struggle I came to learn that my register events are more closely matched to those of contraltos. I realized that although I have the high notes required to sing the role, my voice is not meant to sing in its *tessitura*.

¹² Miller, *The Structure of Singing: System and Art in Vocal Technique*, 311.

There are distinctions within the countertenor voice, just as there are in all of the other voice types. In this regard, countertenors' teachers should remember this circumstance when selecting repertoire, working to navigate register events, and strategizing with them. Here it is important to again reiterate the importance of general vocal quality and color when working to identify concerns of range and *fach*.

Vocal Coloring, Conditions for Optimal Resonance, and Resonance Choices

By addressing matters of vocal coloring through description of vocal categories, it is efficient (to the purposes of this discussion) to examine color by discussing resonance choices. Resonance choices may be slight, but they have the potential to significantly enhance the aural impression a singer gives. These seemingly minor, yet important choices can be made by adjusting the lips, tongue, and throat. The last of which is frequently referred to in related discussions of what is commonly referred to as the open throat. In most discussions of an open throat for singing, the tongue is implicated almost immediately. An open throat is characterized by a raised soft palate, spatial freedom in the back of the throat, and the absence of tension or constriction throughout the vocal tract. This optimal pharyngeal space is indicative of an appropriately low lying larynx and non-intrusive tongue activity.

William Vennard echoes many other voice teachers who maintain that the pharynx must be open and free from constrictive tension during singing. He notes that an appropriately large enough pharynx will strengthen the partials, resulting in a mellow and full sound.¹³ To achieve an open throat, Vennard advocates relaxing the muscles that form the walls of the pharynx, which are the *upper/superior, middle, and lower/inferior*

¹³ Vennard, 92.

constrictors.¹⁴ To optimize pharyngeal space, he prescribes practicing tongue movements in front of a mirror to bring the tongue under conscious control.¹⁵ To sing a truly open-throated [ɑ] vowel, Vennard instructs that the soft palate should be stretched rather high, which will result in a nearly heart shaped pharynx. A resulting implication is that neither the tongue nor the jaw should be raised.¹⁶

Advocacy for an open throat in singing can be found in the writings of Oren Brown and Barbara Doscher, among many, many others. To achieve an open throat, Oren Brown recommends a widening of the throat (compared to the beginning of a yawn) as to lower the larynx. It is worth noting that, in his discussion of the open throat and resonance, Richard Miller addresses the concept of widening through yawning in less than positive terms, and ultimately prescribes the process which occurs as a result of the traditional technique of having a student breathe as though smelling a fragrant rose. Here he is able to give practical application of his position stating that an open throat consists of a high soft palate (with an elevated uvula, a fleshy piece hanging from the soft palate¹⁷) and a low lying tongue. In this manner, a singer is able to achieve the resonance enhancing “buccopharyngeal position of *gola aperta*,” or open throat.¹⁸

Brown also asserts that relaxation at the base of the tongue ultimately results in a low resting place for the larynx and a freer space at the back of the throat.¹⁹ Brown asserts that raising the soft palate not only keeps the larynx low, but it also creates pharyngeal space (which is, of course, important in achieving an open throat). Barbara

¹⁴ Ibid., 110.

¹⁵ Ibid., 111.

¹⁶ Ibid., 113.

¹⁷ Kiesgen, "Resonance," 419.

¹⁸ Miller, *The Structure of Singing: System and Art in Vocal Technique*, 60.

¹⁹ Oren L. Brown, *Discover Your Voice: How to Develop Healthy Voice Habits* (San Diego: Singular Publishing Group, Inc., 1996), 80.

Doscher speaks to this issue more in terms of what a singer should not do. She describes the open throat with regard to the pharynx, advising that it be free of constrictive tension, otherwise the pharyngeal walls are too “bunched up” and a damping sound may occur.²⁰ To accomplish this, Doscher speaks to the importance of the tongue, but does not advocate flattening it which ultimately depresses the back of the tongue and the sound wave is affected by this constriction.²¹ To achieve open throat, Arnold Rose instructs pulling the base of the tongue forward and away from the posterior wall of the pharynx while simultaneously relaxing the antagonistic neck and tongue muscles. He offers diagrams of the throat in various states of openness and closure, in attempts to demonstrate how the position of the tongue alters resonance in optimal and interfering positions.²² Rose further advises that the neck, jaw, and lips should be free of tension.²³

Regarding the lips, singers and their teachers are well advised to not underestimate the importance of the slight movements and positioning of the lips in the process of resonance adjustment and resonance balancing. The lips are important, and the ways in which a singer engages them can result in a shortening or lengthening of the vocal tract. Additionally, adjustment of the lips, including movements intended to make them overly round, which can result quite quickly in qualitative changes. For example, when I was a very young countertenor, I was told that countertenors possess a very rich and round sound. In order to apply this attribute to my own young and inexperienced voice, I rounded my lips to the point of unsustainable tension during singing. This thusly altered my pharyngeal space dramatically, and a tone, which I thought at the time to

²⁰ Doscher, 112.

²¹ Ibid., 115.

²² Rose, 126.

²³ Ibid., 127.

sound quite rich, was the result. In hindsight, I realize now that the lip tension necessary to this endeavor was probably one of the very first signs of tension and compromised resonance that I unknowingly offered to my collegiate studio teacher during our first lesson together. For the purposes of this discussion, it is critical to note that when a countertenor adjusts his resonance, he is making choices. Like his colleagues in other voice types, these choices will differ from one countertenor to the next. To that end, the vocal coloring one countertenor achieves in his quest to achieve an open throat (while avoiding constricting tension) is a result of his resonance choices. These choices are individually made, and are never absolutely identical to those of another countertenor.

Types of Tension that Interfere with Optimal Resonance

The topic of tension is frequently discussed in relation to resonance. Tension in its various forms carries the potential to limit a singer in his or her pursuit of achieving optimal resonance. Teachers of countertenors should remain equally as vigilant with their countertenor students as they are with their other with students of other voice types, in diagnostic matters involving tension. Meribeth Bunch describes six areas of tension which teachers of singing may recognize in their students. These areas include overly active facial muscles (the lips are significantly implicated here); the position and lower movement of the jaw; rigidity of the tongue; tension in the neck; tension in the chest; and emotional tension. Tension in these areas may result in compromised production of *vibrato*, limited ability to achieve open throat, indiscreet negation of register events, laryngeal displacement (which in turn alters the shape of the vocal tract), and poor

posture. Thoracic expansion may also be compromised here and, thusly, proper of execution of the technique of *appoggio* is difficult to accomplish.²⁴

Awareness of tension, or the potential for it, should be a matter of diagnostic concern for teachers at all times. It is important to note that in the cases of some students, the degree of concern may be greater. Other students may rarely exhibit consistent signs of the tension in the areas mentioned above. Awareness of tension should also be a matter of concern for students as they practice. Because they frequently cannot see the signs of tension that their teachers might observe in them, students are well advised to practice in front of a mirror. Countertenors are, of course, included in this recommendation. Avoidance of tension facilitates a more comfortable aural experience for the listener, and a more comfortable performance experience for the singer. In this context, a singer is better able to focus on the text and thusly on the story or narrative he or she is interpreting. Greater attention to text ultimately results in a more optimal setting for effective resonance choices and adjustments on the part of the singer.

Vowel Migration as it Relates to All Singers

With regard to text and resonance, it is helpful to examine some related, yet contrasting views regarding diction and resonance. Here I will draw from the related views of Appelman and Rose, noting first that both authors are in agreement that pronunciation in singing is not the same as it is in speech. On the matter of singing and resonance, Appelman's theory on resonance and phonemic accuracy is different than Rose's with regard to process. Appelman contends that diction and pronunciation should

²⁴ Bunch, 103-105.

be considered before timbre.²⁵ Rose asserts the opposite. What follows are brief descriptions of their respective approaches, ultimately illustrating how they differ.

Appelman's assertion that pronunciation should come before timbre is best described in relation to his theory on vowel migration. In this phonetic approach, each time a singer changes the vowel, he or she is moving to another vowel center. This movement from one vowel to the next is known as vowel migration.²⁶ In this regard, it is necessary for the singer to remain within the domain of the vowel. After this aspect of pronunciation is considered, the adjustments implicated in achieving optimal resonance need to be considered in order to aid in singing a vowel that actually sounds (to the listeners) as though it is in the correct vowel family.

Rose asserts that optimal space for resonance should be established prior to pronunciation.²⁷ Adoption of this theory requires the singer not to compromise this optimal resonance space in the pharynx during pronunciation. This singer needs to be careful not to limit him or herself by this approach. It is always important to have options. Appelman's approach seems to more readily provide a singer with the freedom and flexibility to make minor adjustments while singing. Rose's approach does seem beneficial with regard to the formation of positive spatial habits. It is important to be well positioned (in the context of resonance) at the time of onset. I recommend Rose's approach, however, in moderation.

Another approach for teachers of countertenors, as well as all other voice types, is found in application of Berton Coffin's vowel chart. This resource is "a plotting of the

²⁵ Appelman, 232.

²⁶ Ibid., 231.

²⁷ Rose, 184.

vowels of loudest resonance.”²⁸ The principle undergirding this chart posits that vowels prefer certain pitches. The chart is color coded in efforts to signify if vowels (which are also organized here by gradations of vowel sounds) are dangerous, disruptive, safe, or unsafe for the voice. Although most teachers and students do not make choices in resonance adjustment and balancing in direct relation to a chart, Coffin’s chart is nonetheless an important resource and symbol of positive principles in resonance adjustment. Coffin’s theories are based on the understanding that resonance is the key to good singing, and that resonance management either helps or inhibits a singer.

The vowel related views of Appelman, Rose, and Coffin mentioned above provide an excellent foundation upon which to address vowel modification, as it relates to the countertenor voice. In order for a countertenor to unify his registers, sing evenly, and execute optimum resonance choices, he must be trained in proper vowel modification. Vowel modification, implicated in the process of vowel migration, is well described through definition of the term *aggiustamento*. By definition, *aggiustamento* is “vowel modification in singing; a technique for achieving an even scale throughout the registers of the singing voice.”²⁹ *Aggiustamento* is executed successfully when the components of resonance adjustment described in this chapter are optimal. Like singers of all other voice types, countertenors are more readily able to modify their vowels efficiently and effectively when they are not constricted by excess tensions, and are able to achieve an open throat, and possess flexibility and control over of the lips and tongue. While I will not go into detail over the various vowel modifications of all of the other voice types, I

²⁸ Berton Coffin, *The Sounds of Singing*, 2nd ed. (Metuchen, NJ: Scarecrow Press, 1987), 85.

²⁹ Miller, *The Structure of Singing: System and Art in Vocal Technique*, 311.

will compare the family of countertenor voice types to the family of mezzo soprano voice types.

Recommended Vowel Modifications for Countertenors

The most typical vowel modifications necessary in the countertenor voice type are those in the second passage, or *secondo passaggio*. For a countertenor with a range analogous to a contralto's, this is located on or around C⁵. For a countertenor with a range more closely resembling a mezzo soprano's, this is located somewhat higher, on or near E⁵.³⁰ Here, continuing on an ascending scale with an unchanged vowel will result in a displaced larynx and compromised resonance.

For teachers of countertenors (and even sopranists), it is advisable to examine analogously appropriate vowel modifications, including those in the contralto, mezzo soprano, and soprano voice types. The following modifications are largely analogous to those utilized by mezzo sopranos working to unify the registers below and above the *secondo passaggio*. While gradations of the vowel modification may differ slightly from one singer to the next (in any particular vocal classification), for the countertenor, a modification toward the schwa [ə] is advisable. For instance, on an ascending [ε] vowel, the comfortable modification toward the schwa will result in both a balanced larynx and a more even transition from one register into the next. In my experience as a countertenor, I have also found the following modifications to be helpful. In the case of the vowel sound [æ], a modification toward the schwa [ə] is also useful. Regarding other vowel sounds, it is again important to remind that the vowel modification process happens gradually, as in the case of the [i] vowel. When a countertenor initiates this vowel in the *seconda passaggio*, a comfortable initial modification is a sound similar to that heard in

³⁰ Ibid., 135.

the German u umlaut, [y]. As the countertenor continues to ascend, a modification to the schwa is advisable here. Similarly, on an ascending [o] vowel, an initial modification to the [œ] sound in the *seconda passaggio* will gradually modify toward the schwa as the countertenor ascends on this vowel. The same may be said for countertenor initiating an [u] vowel in the *seconda passaggio*. Here, an initial a modification toward [ʊ] will also aid in keeping the larynx balanced, and will then gradually modify toward the schwa. In this context it is important to note that although vowel modifications find commonalities among vocal classifications, each singer is different, and the ideal modifications of one countertenor may not exactly match those of his countertenor peers.

In the context of this discussion, it is important to note a resonance risk for countertenors that used to, or continue to vocalize in their other (baritone or tenor) voices. Although it seems an obvious conclusion, it is nonetheless critical to remind these countertenors that the vowel modifications they made (or make) in their lower voices cannot be directly projected onto their countertenor register event areas. Another recommendation for this group of countertenors (or countertenors wishing to further explore their lower voices) is to regularly vocalize in both voices. This will likely result in his gain of greater facility in the range area containing the register event which occurs immediately before he switches from his chest voice to his reinforced *falsetto* (usually somewhere between c⁴ and e⁴). Nuance and facility in this area of resonance adjustment is a hallmark of excellence in lower range singing in the countertenor voice.

This chapter examined some of the powerful implications of resonance in singing, and applied them to countertenors and singers of other voice types. To better discuss resonance and its implications for the countertenor voice, it was necessary to address the

resonance discovery process, as well as elaborate on definitions of resonance and key terms. This established a firmer foundation upon which to address the general processes implicated in range and *fach* identification, and allowed for comparison of this process in countertenor pedagogy to that which is applied to the other commonly occurring voice types. In this chapter, it was essential to address resonance through description of the concept of vocal coloring in order to demonstrate that there is not one, singular countertenor vocal color. To accomplish this, it was necessary to discuss conditions for optimal resonance in all voice types by addressing resonance choices, ideal pharyngeal space, and matters related to the tongue and lips. Discussion of the importance of vowel migration as it relates to all singers more readily allowed for integration of the countertenor voice type into this topic, and for the concluding recommendations on common vowel modifications for countertenors.

Chapter 5

Repertoire

Throughout the course of this document, it has become increasingly clear that a countertenor's pedagogical needs are largely similar to those of other singers. The aim of this document has been primarily to illuminate the many similarities between all of the voice types in efforts to better integrate countertenor pedagogy into the collegiate studio. The discussions have addressed critical areas of healthful production and performance, including respiration, phonation, and resonance. No less critical is the element of repertoire selection and its practical application in the studio.

In the process of repertoire selection, teachers and their students need to be attentive to general concerns, including a student's range, *fach*, and the tessitura of the selected repertoire. Additionally, teachers need also to suggest and assign repertoire in direct relation to a student's technical abilities, potential, and interests. A countertenor's teacher is just as beholden to these concerns, and is well advised to assign repertoire in a manner that is largely similar to addressing repertoire with other students. And although the available performance and teaching literature for countertenors is substantial, some teachers remain perplexed by their countertenor students' repertoire concerns and do not readily identify available repertoire solutions.

In this chapter, I will address the topic of assigning appropriate repertoire as it relates to countertenors in the collegiate studio. I will begin with general comments on repertoire selection as it relates to singers of the more commonly occurring voice types. This will more readily allow for discussion of assigning literature to countertenor students, and ultimately demonstrate commonalities in the repertoire selection process. I

will then discuss selections for countertenors, including those from opera, song, oratorio, and cantata literature. I will conclude with discussion on general concerns regarding pitch and historically informed performance practice in order to illustrate a largely countertenor-specific repertoire concern. The following information is not intended to provide interested parties with exhaustive and specific repertoire selections for countertenors, but rather to aid in understanding how repertoire concerns for countertenors are largely similar to those for singers of other voice types.

Repertoire Selection for Singers of the More Commonly Occurring Voice Types

When choosing literature for students of the more commonly occurring voice types, teachers must take the following matters into consideration. These include, but are not solely limited to appropriateness of range and *tessitura* of the selection (and, where applicable, the appropriateness of the selection with regard to the singer's *fach*). Additionally, repertoire selection must be carried out with special consideration for a student's current skill level, viewed in relation to a student's anticipated progress. Here, a teacher is wise to not recommend literature that is too difficult for a student, yet is challenging enough to result in favorable outcomes under positive circumstances. Under ideal circumstances, teachers should strategically select repertoire to facilitate these resulting outcomes. Specific outcomes are well organized with regard to the components of healthful singing examined previously in this document, including respiration, phonation, and resonance.

Assigning Literature to Countertenor Students

It is important to remind that the process of repertoire selection is well paired with an ongoing dialogue between teacher and student. In this context, a student is more

likely to readily engage in serious study and practice. An ongoing dialogue will afford a student the opportunity to discuss vocal literature intelligently and thoughtfully. Further still, this dialogue will allow the student to better understand and inquire about his or her teacher's pedagogical goals for the student. This process should be no different for countertenors and their teachers as they select studio literature from the vast and diverse canon of vocal literature.

Countertenors and Opera Literature

The canon of operatic literature is vast, and teachers of countertenors need not feel limited to arias for study from the opera *seria* genre. Much has been written for countertenors in more recent decades, and composers continue to write for the voice type with increasing frequency. Regarding the opera *seria* literature for countertenors, teachers and students are well advised to recall that Georg Friedrich Handel was one of many composers writing for this genre. In fact, opera *seria* literature is diverse within its own category. Gioachino Rossini and Wolfgang Amadeus Mozart contributed significantly to this part of the literature. By this virtue, teachers of countertenors should feel empowered in the knowledge that opera *seria* repertoire is inclusive of diverse orchestral textures, melodic contour and construction, and stylistic diversity. Even the most superficial forms of research can reveal which opera *seria* roles were written for *castrati*, and thusly find quick and ready application to the countertenor voice type.

Once these roles are identified, teachers may then use the same skills in *fach* and voice type delineation for countertenors as they would for their other students. For example, countertenor-appropriate opera *seria* literature may then be subdivided into arias and vocal selections better suited for lower countertenors, countertenors with high

range extensions, and occasionally sopranists. This process is largely similar to selecting arias for different types of sopranos, mezzo sopranos, tenors, baritones, and basses. It is important to advise here that a great deal of early operatic literature exists for countertenors, including, but not limited to works of Henry Purcell, Claudio Monteverdi, and Alessandro Scarlatti, to name a few. Operatic selections by these composers may certainly facilitate success in the voice studio and recital stage. However, on today's operatic stages the works of Handel, Mozart, and Rossini are more frequently programmed, and thusly find more ready application to the competition and audition literature guidelines prescribed by young artist/apprentice and festival programming opportunities.

The topic of modern operatic literature for countertenors usually finds first association with the output of Benjamin Britten. However, teachers need not research which Britten roles were written for castrati because, of course, the practice had been ended before his composing began, and roles are actually specified for countertenors. This is also the case in operas of Jonathan Dove, Philip Glass, and Bernard Rands, to name only a few. Teachers of countertenors and singers of all other voice types can easily observe the stylistic and structural differences between the vocal writing of these modern composers and the earlier composers listed above. To this end, assigning literature with regard to anticipated pedagogical outcome is at the heart of the matter. If a teacher wishes for a student to learn the conventions of the operatic *da capo* aria style, then he or she should assign literature from the opera *seria* genre. Here it is helpful to note that the amount of operatic literature for countertenors in French and German is not significant, especially in comparison to that which is available in Italian and English.

Countertenors and Song Literature

Voice teachers should enjoy increased flexibility in selecting song literature for their countertenor students. The vast amount of songs available in transposition has been largely beneficial to the singers of the more commonly occurring voice types, and countertenors should count themselves similarly as beneficiaries. Mezzo sopranos and baritones have long enjoyed transposed editions of songs originally scored for tenors and sopranos, and countertenors should join mezzo sopranos and baritones as happy recipients of these lowered editions.

With regard to appropriateness of text and subject matter, countertenors should not feel limited by matters of perceived vocal androgyny. I do not posit this in efforts to encourage countertenors to steal specific songs from sopranos and mezzo sopranos. Rather, I maintain that countertenors and their teachers need not feel limited to select only songs with gender neutral texts. For example, I was once advised by an internationally renowned vocal coach to sing only song literature set to texts on angels, fairies, and genderless narrators. And although this coach is entitled to his opinion, this advice was ultimately very limiting for me, and my ability (at that time) to join in the excitement of the greater collection of song literature was unnecessarily inhibited.

A great potential for textual and musical expression is available for students in the canon of song literature, and there is much to be learned through practice and preparation of songs that a student may or may never sing on the concert stage. In addition to the benefits for vocal technique, work on any number of varying art songs (in style and textual content) can only aid a young countertenor (or any other young singer) in his journey to become an artist capable of diverse dramatic interpretation. Certainly singers

and their teachers may, and sometimes need to narrow the scope of studio repertoire, but related decisions should be strategic or philosophical. For instance, a teacher may caution a young singer against the literature of a particular composer because it is not appropriate for the singer at that time. Additionally, some literature may never be appropriate for certain singers. Under other circumstances, some singers may decide to focus exclusively on early vocal literature because of their chosen educational institution or degree program.

Countertenors and Oratorio Literature

Oratorio literature is also rich with repertoire selections for countertenors. It is typical for younger singers to gravitate toward familiar literature that they have heard on recordings or in concert settings. For example, many young undergraduate singers may express a strong desire to learn arias from Handel's *Messiah*, appropriate to their respective voice types. This is understandable, and assigning literature in relation to a student's desires can be very beneficial. However, if a student is still consistently working through serious breath, phonatory, or resonance issues, his or her teacher is wise to delay assigning the more frequently programmed concert literature. It is not uncommon for students to continue to associate poor habits with certain teaching literature as they progress. For instance, there are a number of vocal works that I worked on as a young undergraduate that I still associate with sensations of tension. Here it is important to note, however, that many students are able to return to literature after a period of growth and study and, through application of learned principles, achieve success upon their return to the literature.

An alternative to this risk of residual tension, within the context of oratorio literature, is to assign musically similar arias and vocal selections to students from less frequently performed works. For example, a student may reap all of the benefits of studying Handelian vocal writing through study of arias from one of Handel's less frequently programmed works. A teacher may assign a countertenor any number of arias from Handel's oratorio *Belshazzar* while simultaneously working to guide him in making healthy vocal choices. When this countertenor begins to demonstrate consistently healthy vocal production, his teacher may then decide to assign arias from Handel's *Messiah*. This same principle may be applied to the literature discussed in the previous discussion on opera *seria*. Similarly, singers of all voice types may benefit from early work on Mozart's many concert arias before work on selections from his more frequently programmed works. This principle finds application with numerous composers, including, but certainly not limited to Johann Sebastian Bach, whose oratorio output is substantial. Countertenors and their teachers are wise to not forget or inadvertently ignore the more recently composed oratorio and concert works, written with countertenors in mind for performance. Also, it is helpful to note that countertenors are increasingly employed to dispatch the roasting swan aria in Carl Orff's *Carmina Burana*. Additionally, multiple countertenors are called for in John Adam's more recent work, *El Niño*.

Countertenors and Cantata Literature

Similar to the myriad repertoire selections available to countertenors in the opera *seria* and oratorio genres is the extensive catalogue of available cantata literature. And while an exhaustive list of cantata composers is somewhat beyond the scope of this more

philosophically rooted discussion of repertoire, it is important to point to the vast cantata repertoire of Alessandro Scarlatti, J.S. Bach, and Handel, which include many repertoire selections appropriate for countertenors. This immense collection of vocal literature includes substantial opportunities for studio repertoire for singers of all voice types.

Work on this repertoire may provide increased opportunities for countertenors to work in a chamber music setting. Frequently scored for minimal performance forces, cantatas are readily programmable in recital settings and are also excellent teaching tools for efforts aimed at understanding collaborative musicianship. In the greater discussion of integrating countertenor pedagogy into the collegiate studio, it is helpful to remind, here, that benefits listed for countertenors in the context of repertoire selection are easily transferable to students of all other voice types.

General Concerns Regarding Pitch and Historically Informed Performance Practice

Regarding strategic repertoire selection for countertenors, it is critical to address the issue of traditional, western concert pitch and what is commonly referred to as Baroque pitch. A lengthy and potentially provocative discussion on historically informed Baroque pitch is outside of the bounds of this discussion. However, for purposes here it is important to explain that a selection performed at Baroque pitch level is a half-step lower than a selection pitched at traditional, western concert pitch. Countertenors frequently perform literature composed during the Baroque style period in auditions and competitions. Because of this, they are more likely than many to experience anxiety in audition and competition venues. For instance, a countertenor that may be used to rehearsing his repertoire at Baroque pitch, and may be asked to perform that same

literature at an audition, at traditional concert pitch. To ask a singer of another voice type to perform Puccini or Wagner selections up a half-step seems comical and unrealistic.

I include mention of this circumstance because it is important for teachers of young countertenors to be prepared to offer advice in matters of performance pitch. Such advice may include practice strategies, repertoire re-assignment, and increased awareness of a student's resonance options. The potential for anxiety is high here, and thoughtful teachers will do well to anticipate problematic vocal and performance issues such as this one. It is worthy of note that this issue finds application for singers of other voice types who find themselves in these types of performance situations.

This discussion addressed broader principles undergirding the process of repertoire selection for countertenors at the collegiate level. To accomplish this, it was important to address general matters of repertoire selection for all singers in efforts to better integrate the countertenor voice type into the discussion. The topic of assigning repertoire to countertenors was facilitated by addressing the greater canons opera, song, oratorio, and cantata literature. This ultimately allowed for recommendations for alternative repertoire selection relating to a student's skill level and repertoire desires. Some countertenor-specific issues were also addressed here, including those regarding repertoire selection and performance pitch, in efforts to address the increased potential for anxiety in some performance contexts.

Chapter 6

Conclusion: Welcoming New Voices

This is an exciting time for countertenors. As they continue to be accepted into the collegiate studio as students, studio mates, and future colleagues, they more formally and officially add to the story of vocal pedagogy. It is my hope that scholars and authors will continue to integrate the countertenor voice type into future texts on vocal production, health, repertoire, and all manner of useful writings on vocal pedagogy. The continued integration of the voice type will lend another voice to the scholarly story chronicling how singers do what they do, and how teachers guide and contribute to this process. By integrating countertenor pedagogy into the collegiate studio, we are able to remove the veils of novelty that have shrouded the voice type for some time. Through this process of unveiling, teachers and vocal studio mates become less likely to novelize their countertenor colleagues and more readily able to engage in useful discussions of pedagogical matters relating to the voice. In order to arrive at this point, it has been necessary to address key components of vocal pedagogy.

Through description of healthful respiration for singing, I was better able to illustrate that a young countertenor's potential to achieve efficient breath management should be viewed no differently than a baritone's or that of a coloratura soprano. By addressing some of the countertenor-specific aspects of respiration for singing, I was able to isolate and provide recommendations on issues that previously may have resulted in a teacher's dismissal of a countertenor's voice as "a different kind of animal" or "in need of special training." Through increased scrutiny of the process of *falsetto* singing in countertenoring, I was able to illustrate different, yet not unrelated aspects of the concept

of *falsetto* voice. This ultimately aids in integrating the countertenor voice type into standard pedagogy because it necessitates required examination of (or reference to) other voice types.

By examining the phonatory process involved in countertenoring, I was able to demonstrate anatomical similarities and theoretical principles that make it nearly impossible to conclude that phonatory function in countertenoring is fundamentally different than that experienced by other singers. Through description of *vibrato* (and its presence in healthful vocal production), as well as the concept of pitch quality attribute, I was able to more readily compare a countertenor's phonatory goals to those of singers of the more commonly occurring voice types. Discussion of common indications of good and poor phonation assisted in further identifying healthful phonatory goals for countertenors, as well as all other singers.

The discussion of resonance in this examination provided an opportunity to clarify that there is no one countertenor range, nor is there only one vocal quality exhibited by all countertenors. In this discussion, I was able to address and clarify key terms related to the process of proper resonance in singing which are frequently shrouded in confusion. By discussing resonance adjustment choices and the process of vowel modification, I was able to provide countertenor-specific recommendations that draw from recommendations and concepts applied to all of the other voice types.

A broader discussion on the principles undergirding repertoire assignment allowed me to further demonstrate how the needs of countertenor students are largely similar to those of non-countertenor students. Through a strategic and dialogical approach to repertoire selection, a teacher may better address a student's needs, while

engaging the student in informed conversation. By addressing the needs of countertenors with regard to the commonly regarded genres of vocal literature, I was able to further demonstrate additional commonalities between countertenors and students of other voice types.

Throughout the course of this examination, I have drawn from the writings, observations, and concepts of widely accepted scholars in the field of vocal pedagogy. For their assistance in the process, I am deeply grateful. Application of their collective beliefs on the tenets of healthful vocal production to the countertenor voice type facilitates easy integration of countertenor pedagogy into the collegiate studio, and opens the door for further study. Future areas of scholarship might include the creation of diverse performance literature anthologies for countertenors, as well as further studies in resonance adjustment. This is an exciting time for countertenors, as it is for all other singers. Similarly, this is an exciting time for teachers of all voice types. By working to integrate a voice type into commonly held pedagogical principles, we add not only a new voice to the story of vocal pedagogy, but also we gain new observations, new experiences from which to draw, and increased suggestions on how to better teach our students.

Bibliography

- Appelman, D. Ralph. *The Science of Vocal Pedagogy*. First Midland Book ed. Bloomington: Indiana University Press, 1967.
- Barbier, Patrick. *The World of the Castrati: The History of an Extraordinary Operatic Phenomenon*. London: Souvenir Press Ltd., 1996. Reprint, 2001.
- Brown, Oren L. *Discover Your Voice: How to Develop Healthy Voice Habits*. San Diego: Singular Publishing Group, Inc., 1996.
- Bunch, Meribeth. *Dynamics of the Singing Voice*. 3rd ed. New York: Springer-Verlag, 1995.
- Coffin, Berton. *The Sounds of Singing*. 2nd ed. Metuchen, NJ: Scarecrow Press, 1987.
- Doscher, Barbara M. *The Functional Unity of the Singing Voice*. 2nd ed. Lanham: The Scarecrow Press, Inc., 1994.
- Giovetti, Olivia. "Counter Top: Philippe Jaroussky." *Classical Singer*, October 2010, 40-42.
- Indik, Lawrence. "The End of Breath for Singing: Exhalation and the Control of Breath at the End of the Phrase." *Journal of Singing* 66, no. 2 (2009): 131-140.
- Kellow, Brian. "Higher and Higher." *Opera News*, December 2004, 20-24.
- Kiesgen, Paul. "Breathing." *Journal of Singing* 62, no. 2 (2005): 169-171.
- _____. "Phonation." *Journal of Singing* 62, no. 3 (2006).
- _____. "Resonance." *Journal of Singing* 62, no. 4 (2006): 419-421.
- McCoy, Scott. "Falsetto and the Male High Voice." *Journal of Singing* 59, no. 5 (2003): 405-408.
- McKinney, James C. *The Diagnosis & Correction of Vocal Faults: A Manual for Teachers of Singing & for Choir Directors*. Long Grove: Waveland Press, Inc., 2005.
- Miller, Richard. *The Structure of Singing: System and Art in Vocal Technique*. New York: Schirmer Books, 1986.
- _____. *National Schools of Singing: English, French, German, and Italian Techniques of Singing Revisited*. 2nd ed. Lanham: Scarecrow Press, Inc., 1997.

- _____. "Countertenoring." *Journal of Singing* 57, no. 2 (2000): 19-21.
- _____. *Solutions for Singers: Tools for Performers and Teachers*. New York: Oxford University Press, 2004.
- Rauch, Rudolph S. "Viewpoint: Handel, with Trimmings." *Opera News*, April 1999.
- Rickards, Steven L. *Twentieth-Century Countertenor Repertoire: A Guide*. Lanham: Scarecrow Press, 2008.
- Rose, Arnold. *The Singer and the Voice: Vocal Physiology and Technique for Singers*. New York: St. Martin's Press, 1971.
- Siff, Ira. "Face to Face: Russell Oberlin and David Daniels." *Opera News*, April 1999.
- Titze, Ingo R. "Unsolved Mysteries About Vocal Fatigue and Recovery." *Journal of Singing* 65, no. 4 (2009): 449-450.
- Vennard, William. *Singing: The Mechanism and the Technic*. Revised ed. New York: Carl Fischer, 1967.
- White, Ernest G. *Sinus Tone Production*. London: J.M. Dent & Sons, Ltd., 1938. Reprint, 1951.