

Identifying pedagogical and performance benefits of playing the euphonium and singing.

by

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Abstract

This Master's report focuses on a comparison of the physical and pedagogical benefits and challenges of comparing vocal pedagogy with euphonium pedagogy. The report will describe how this approach can be useful to an instrumental teacher and how they can implement the benefits in their own teaching.

There are many ways that we can learn from a comparison of vocal and brass pedagogy. This report was written to answer the question, "Why is it important to use vocal pedagogy to strengthen our playing capabilities on wind instruments, specifically euphonium."

Using information already presented from some of the great pedagogical minds in both singing and wind playing, this report will begin by accounting for available resources to learn about these two pedagogical methods congruently. This chapter will include a review of important published books and articles relating to vocal and brass pedagogies.

Next, this report will present applications and challenges I have personally learned and encountered from taking performance lessons in both singing and euphonium.

Finally, the report will address how, as a teacher, one can implement vocal pedagogy elements into brass pedagogy and how in doing so, help students produce better tone, articulation, sound, and musicality.

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Preface

“What does singing and playing a euphonium have in common?” This question was brought to my attention during an aural skills lesson I was teaching to an undergraduate student. The student was frustrated because they had never been asked to match pitch, much less sing intervals. The student asked me, “What is the point of this anyways? I am not a singer!” My answer then was simply, “So you can hear what the song sounds like before you play it.” This is important but I realize there are many more motives than this. This experience helped me to decide to focus on writing about the comparison of physical and pedagogical benefits and challenges between vocal and euphonium pedagogy and how this approach can be useful to an instrumental teacher.

Using information already presented from some of the great pedagogical minds in both wind playing and singing, I first accounted for the way it is suggested to use the two pedagogical approaches and how they can work together. This includes a review of available published books and articles relating to vocal and brass pedagogies.

To understand further the intricacies between the two pedagogies, I took a semester of applied lessons on euphonium while also take vocal lessons with Dr. Bryan Pinkall. Dr. Bryan Pinkall is an Associate Professor of Voice at Kansas State University, teaching private voice lessons and Italian Diction. He was suggested on the behalf of Dr. Maxwell because of Dr. Pinkall’s experience as a brass player in high school. My goal in taking vocal lessons was to refine the actual performance level of singing and in turn, become a more proficient euphonium player.

Finally, I presented the applications and challenges I have learned and encountered from research of materials taking lessons in voice and euphonium, as well as any prior knowledge and

preconceived notions that I carried with me from past experience. I address how one can implement vocal pedagogical elements into brass pedagogy and how in doing so the students may produce better tone, articulation, sound, and musicality.

Chapter I - A Review of Published Materials Relating to Voice and Brass Pedagogy

The following sources listed in this chapter have been chosen out of a gambit of available sources because of the remarkable scholarship the authors have presented, and the expertise they have shown as performers in their field.

Audiation and the mental concept of sound.

When performing a piece of music, a euphonium player has a song in their mind that they are trying to emulate on the horn. This audiation is the perfect version of the song they are trying to outwardly replicate. The concept of transference from the mental to the physical has multiple layers; tone, pitch control, emotion, and musicality. A leading scholar in this area is Marc Gelfo.

Marc Gelfo is the founder and CEO of Modacity Music Practice app. Modacity Music Practice app helps organize, focus, and track your practice progress. Marc Gelfo is also an international performing musician, and has been practicing music for 30+ years. After applying cognitive science and computer science to French horn, Gelfo became an internationally touring symphony musician. His experience includes teaching and performing with thousands of musicians around the world, including the San Francisco Symphony, the Florida Grand Opera, Hong Kong Philharmonic, and Macau Orchestra. Gelfo received his Bachelors from Northwestern University in Cognitive Science (linguistics), Computer Science, and Mandarin Chinese. He went on to study at Indiana University Bloomington where his concentrations were horn performance and audio engineering.

In the article, *Did you know? Singing can help you play your instrument better*, Gelfo starts with the statement, “Play what you sing, sing what you play.”¹ and goes on to state “If you can’t sing it, you can’t play it”², which he credits to his education at the Indiana University Jacobs School of Music. Gelfo points out that most instrumental musicians are afraid to sing and how those same musicians forget that the voice was their first instrument and a little voice training can be beneficial. “Developing your basic vocal skills and using your voice to train your ears can and will help you tremendously as a musician.”³ He uses this article to point out three major considerations; the concept one has in their head and how to improve it, the emotion that is being shown, and it places the responsibility of pitch fully on the musician. This article helps to explain the different impacts of mental conception of sound, emotion of the piece, and the performers full responsibility for pitch.

Another expert in the field of audiation and mental concept of sound is Christopher Sutton. Christopher Sutton is the founder and director of *Musical U.*, which emphasizes how a performer should enjoy the process of creating instead of worrying so much about perfecting. Mr. Sutton graduated in the top ten of his class at the University of Cambridge earning a bachelor’s degree in Computer Science, as well as Masters in Science from Queen Mary University of London, graduating with distinction in Digital Music Processing. *Musical U* is a website dedicated to helping passionate musicians unlock their inner “instinct” for music. The website is approachable for both beginning students and professionals. It instills the importance of enjoyment more than perfect execution. An article on this website, *Why every musician must*

¹ (Gelfo 2018)

² Ibid

³ Ibid

be a singer, too, is an article from the Musical U website which focuses on using your first instrument and the instrument that goes everywhere with you, your voice. It also addresses singing and ear training, which is the hallmark of the author Christopher Sutton's writing.

He is also the creator of best-selling iOS app *Relative Pitch*, the leading ear training website *EasyEarTraining.com*, and the viral sensation *ToneDeafTest.com*. Sutton is a passionate musician and is dedicated to the mission of helping more people to feel confident in music.⁴ In his article, Sutton identifies three contributing factors as the main reason's instrumentalist might not sing:

1. You have difficulty judging pitch, so can't reliably hear when a sung note is too high or low
2. You have poor vocal pitch control, so can't adjust your sung note quickly and easily to reach the target note
3. You have emotional or psychological hang-ups about singing, so you do not sing, or do so with a gentle soft voice (which is harder to control).⁵

Christopher Sutton states that his experience and work towards helping people identify their shortcomings with aural skills helps them define exactly what they are wanting to hear when an instrumentalist is working up a piece of music. He uses these skills to allow instrumentalists to hear what pitches any song should sound like by reading the pitches and understanding the spacing. Sutton says that this process creates the song inside your head, which is important so that performers play the song like it is meant to be instead of playing it out of reaction.

⁴ (Sutton 2014)

⁵ (Thomas 2009)

The importance of understanding the parallels between physiology and sound.

Playing a brass instrument, particularly a large one like euphonium, takes a large amount of air and physical control of the respiratory system. In order to produce a great sound, a player should understand how this system works and any particular physical challenges that could arise. An important pedagogue in this area is Arnold Jacobs.

Jacobs is considered one of the foremost brass pedagogues of his time. He is best remembered for his playing philosophy which he referred to as “Song and Wind”⁶ and was considered an expert on the physiology of breathing and how it related to brass playing. Jacobs was an American Tubist who was born June 11, 1915 and died October 7, 1998. He was most notably the principal tubist for the Chicago Symphony Orchestra from 1944 until his retirement in 1988, and had a long professional career starting in 1937.

Arnold Jacobs: Song and Wind was written by Brian Frederiksen, a student and friend of Arnold Jacobs. It was edited by John Taylor and published by Wind Song Press Limited, in 1996. The book spans Mr. Jacobs’ life as a student, a professional performer, and teacher.

The ‘song’ portion of the text considers how brass sound is produced, aural skills needed to perform best, and how to connect with the song in your head so that the audience can also hear your best version of the song. Frederiksen tells us that Jacobs believes once a musician can identify what the pitch is supposed to sound like, they have more of a chance to link the first pitch and that sound by singing. “They do not hear this note in their minds and consequently miss the note.”⁷

⁶ (Frederiksen 1996) p.139

⁷ Ibid, p. 140

Frederiksen continues to tell us that Arnold Jacobs learned to fight through breathing difficulties by pushing past childhood illness and adult-onset asthma, both of which had significantly impaired his lung capacity⁸. He loved learning about the biology of the human body. In this book named after his philosophy, there is an important section that describes his love of biology and how close it came to taking him down a completely different path.

Frederickson quotes Mr. Jacobs stating,

My wife is excellent in physiology. In her high school days, they had a physiology class at Calumet High School in Chicago, and she really excelled. She became very competent at the medical drawings--- anatomy drawings. While talking with her about breathing, I mentioned the diaphragm and pointed to my navel. She said, 'No, it's not there, it's up here' and described the effect of the dome of the diaphragm and how it descends and so forth. This was from my wife. She knew more about it than I did, and she was a dancer! I decided I was going to look into the subject.⁹

Frederiksen continues telling us that it was this moment that Jacobs connected the thought of how we do not know enough about our own physiology and how controlling and understand what is happening inside is needed to play any instrument, especially one as massive as a tuba or euphonium. This also gives us physical focal points to practice good breathing.

Another conversation Frederiksen tells us about is when Jacobs turned to his wife's friend, whose name was not stated, who was a nurse and asked her about diaphragms. That friend sent him a book of anatomy and physiology and he found it fascinating. Frederiksen informs us that Jacobs continued his studies through the recommendations of books by his family physician, Dr. Margaret Buck. Frederiksen quoted Jacobs saying the following about Dr. Buck:

She guided me through this period in terms of advising me on literature about anatomy, but do it on a sensible basis. She

⁸ (Frederiksen 1996)p. 82

⁹ Ibid, p. 98

suggested that [Jacobs] study the skeletal structure first, then learn about anatomy, but do it on a sensible basis.¹⁰

Frederiksen said that Jacobs quoted Dr. Buck stating, “Do not just start with the respiration.

Learn what human beings are, how we are structured”.¹¹

Frederiksen tells us that at that time, he kept his studies of biology and music separate, but soon they came together. This is still applicable to brass players today because it has led to deeper thinking about posture to play in for the structure of our bodies and the areas of the body involved with pushing the air into the instruments so that the most productive areas are used.

Frederiksen quotes from Jacobs the following:

I had no intention of using the biological studies that I was doing in the teaching pursuit at all. Once I began to learn how we function, then it was obvious. If I saw phenomena existing in an individual in the way he uses his musculature, and I know that he cannot move air at that point, I may work with him a little bit as a therapist just to establish the air flow, to get him back into the use of the bellows activity that we have in respiration.¹²

Frederiksen states the subject fascinated Jacobs. He read medical books and audited classes at a medical school. It is for his insatiable appetite for knowledge on this subject that Arnold Jacobs became the leading expert on wind playing, particularly low brass. The scientific basis on breathing and production of air are essential when trying to produce the best tone quality and musicality. This source was used because the information about physiological traits presented by Jacobs, such as posture and air production, coincide with both singing and playing euphonium.

¹⁰ (Frederiksen 1996), p. 98

¹¹ Ibid, p. 98

¹² Ibid, p. 98

An author that combines Jacobs' idea of physicality and Gelfo's idea of emoting is David Thomas. Thomas is a clarinetist who serves as a chamber musician, teacher, and has been the principal clarinet of the Columbus Symphony in Ohio since 1989. At the age of eighteen, he won first prize in competitions sponsored by the International Clarinet Society and the Music Teacher National Association.

Thomas uses his blog to share pedagogical information to help all wind instrumentalists. In his blog, Thomas addresses the questions concerning how singing a note before playing it on an instrument, and whether it can help you play it better. He states, "In the context of playing a musical instrument, voicing describes the ideal shape of the oral cavity to make the best tone."¹³ He defines the term *voice* for musicians who play a wind instrument as the physical shape of the inside of the mouth, or oral cavity, and placement of the tongue when playing a wind instrument. Thomas goes on to discuss,

Singing (even badly) engages deep, instinctual memory of meaningful expression. Emotions expressed in such ancient utterance, cry, call or speech are the very stuff from which musical expression evolved. Singing helps a wind player find an appropriately resonant oral cavity chamber for each note. Rather than talk open throat or high tongue, sing a note and play it.¹⁴

Thomas believes when one sings the music, they are not only building good aural recognition of the song, but they are also practicing using the volume of air that is needed to sustain the music. This insight also helps one to answer the question of why singing is symbiotic with playing an instrument and how singing can greatly increase the musicality and technical accuracy of a wind player.

¹³ (Thomas 2009)

¹⁴ Ibid

It is as important to understand the resonance a performer attempts to achieve when both singing or playing. This is the result of the combination of good air flow and proper diction. Wolfe, et al., brings a scientific approach to the physicality of playing and singing. Joe Wolfe, Maëva Garnier, and John Smith are all teachers at University of New South Wales (UNSW). Their group studies the acoustics of the voice and of musical instruments. They also look at more general issues such as instrumental technologies, speech perception and information content of music. This group has constructed and developed a technique for rapid, precise measurement of acoustic impedance spectra and transfer functions under a range of conditions. They use this technique to study musical instruments and the human vocal tract and its involvement in speech, singing and wind instrument performance, and various interactions between player and instrument during performance, including timbre and articulation.

The authors of this article, taken from the Human Frontier Science Program Journal, examine the structural similarities and functional differences in operation of the valve (valve folds, lips, or reed) “between an upstream and downstream duct: trachea and vocal tract for the voice, vocal tract and bore for the instrument.”¹⁵

The role of the tract resonances is usually different in brass and some woodwind instruments, where they modify and to some extent compete or collaborate with resonances of the instrument to control the vibration of the reed or the players’ lips.¹⁶

This is the scientific breakdown of air, vocal sound (or instrumental sound), resonance, and output sound. This parallels the importance of airflow and its shared stature between singing and playing brass instruments. The glottis size, that of it being almost closed, during singing and

¹⁵(Wolfe 2009)p.1.

¹⁶ Ibid, p. 10.

playing a brass instrument is an example of the airflow manipulation that more experienced singers and players use, among other vocal tract parameters, to adjust resonances.¹⁷

Using a resource to help with diction.

Another aspect of great playing on the euphonium is control of articulations. The parallel of playing euphonium with good articulations in singing would be diction. The challenge of keeping good diction in a vocal work is understanding how it pertains to the language of the piece. An expert of vocal diction in multiple languages such as Italian, German, and English is Cheri Montgomery.

Cheri Montgomery is currently a member of the voice faculty at the Blair School of Music at Vanderbilt University where she provides postgraduate instruction to voice teachers, diction instructors, and vocal coaches in her Lyric Diction Workshop held each summer in Nashville. Her workbooks have been adopted by major universities across the U.S. and in Canada. Cheri Montgomery is known both for her incredible voice and her diction courses. Montgomery has been cast in the operatic roles of Gilda (*Rigoletto*) and the Shepherd Boy (*Tosca*) with the Nashville Opera. Montgomery's publications include *Lyric Diction Workbook Series*, co-author of *Exploring Art Song Lyrics*, published by Oxford University Press, and a new series for abbreviated diction study, *Phonetic Readings for Lyric Diction*, *Phonetic Transcription for Lyric Diction*, and *The Singer's Daily Practice Journal*.

The *IPA Handbook for Singers* is a reference for the correct enunciation and instructions in a concise and readily-available handbook. It is taken from *English, Italian, German, French*, and *Advanced French Lyric Diction Workbooks*, written by the same author, Cheri Montgomery.

¹⁷ (Wolfe 2009)p. 10.

The book can be used like a dictionary. It breaks down each vowel and consonant sound, first using English to describe it.

The use of the *IPA Handbook for Singers* can be useful with identifying the shortcomings of pronunciation and an invaluable tool of prescription to correct proper diction. The book is set up in a way that makes referencing a given diction approachable. It describes the sound and its comparable sounds, gives an example of the articulation, presents warnings, and suggests exercises for multiple languages. Although the *IPA Handbook for Singers* was created for voice pedagogy, I have included it as a strong source due to its potential as a possible guide for brass articulation and pedagogy.

Chapter II - An Overview of Applications and Challenges Learned from Applied Voice and Euphonium Lessons

In the fall of 2019 I began taking voice lessons with Dr. Brian Pinkall, Assistant Professor of Voice at Kansas State University. The purpose of taking vocal lessons was to gain valuable vocal pedagogical information in order to compare it to euphonium pedagogy. The primary barrier for me was bringing my novice vocal pedagogy up to par with the professional euphonium pedagogy. Because of the time and effort focused on that challenge, I was assigned two pieces during the semester of lessons, “*Love Is Here To Stay*” by George and Ira Gershwin, and “*Già il sole dal Gange*” by Alessandro Scarlatti.

The first few vocal lessons.

The first lessons with Dr. Pinkall were directed towards basic vocal pedagogy. It was at this point I was introduced to the *International Phonetic Alphabet*¹⁸ (IPA). The IPA was used to clarify vocal diction. I used IPA to find the correct pronunciations for both my English and French diction. I found this process similar to euphonium pedagogy and how syllables are used to help clarify articulations, especially in Scarlatti’s Italian piece.

One term that is distinctive for vocal pedagogy, as compared to euphonium pedagogy, is brightness. In euphonium pedagogy, ‘bright’ is characterized as a brassy, bold sound, whereas in vocal pedagogy it is to characterize the resonance and projection one achieves when singing. When one sings with a bright tone, their sound is projecting well with plenty of overtones. To do this, the singer uses the nasal cavity to assist the resonance of the voice. This brightness allows

¹⁸ (Montgomery 2015)

one to sing at soft volumes but still be heard. If one does not achieve this ‘brightness’, the sound will become flatlined and uninteresting, lack overtones and clarity, and not project well. This runs parallel to the euphonium well, only instead of using the term bright, we often use terms like ‘full’, ‘resonance’, or ‘spinning the air’. It is the idea of getting the balance of a deep, ringing tone that energizes a room at any dynamic.

This concept of attaining a bright sound in singing was foreign to me. My limited past experience was focused on projection and tuning. I was never taught to think about using the nasal cavity to help produce a more resonant and bright tone.

Searching for a good sound

As vocal lessons progressed, my adjustments to vocal brightness continued. When one plays the euphonium, one is always trying to fill the horn with as much vibrating air as possible in order to create a full, warm sound. When one sings, the resonance area is much smaller, being your skull and nasal cavities. In order for me to achieve this, the practice of vocal sirens was used.

A vocal siren is when you use a tone such as the vowel sound of “ee”, and you start from the bottom of your vocal range going up the scale and then back to the low note again, slurring through all possible pitches in between (Figure 2.1). In this figure that I created, the equivalent on euphonium is shown how it could be done by practicing buzzing on the mouthpiece unattached from the instrument or by slurring up and down chromatic scales on the instrument but using slow valves in between and learning to control the buzz even between the valved pitches (Figure 2.1).

Sirens and Valve bends

Eddie Shaw

Adagio

Voice

"ee"[i]

Euphonium

(bend between notes with slow valves)

3

Voice

Euph.

Figure 2.1 - Sirens and valve bends

This can create more confidence in centering the pitch with good tone, both for a singer and an instrumentalist.

After singing this technique a few times, one may already start to feel a slight tickle inside the nasal area. I learned this means the resonance space is growing into the nasal cavity, which helps produce a bright, full sound with plenty of overtones.

Working through lazy diction.

Diction was another integral point of my lessons. I started out singing a song in English. Dr. Pinkall suggested we start with an American art song. The song we picked was, “Love Is Here To Stay”, by George and Ira Gershwin.

An example of my work to create better diction are shown throughout the music. For instance, in measure 8 of the work, my written note above the word “stay” is, “eh” (Figure 2.2).



Figure-2.2 - Love Is Here To Stay (Gershwin, George and Ira)¹⁹

I tended to be lazy with the ends of words and because of this, my diction lacked clarity. My Texas draw could be the cause but I was also closing the word “stay” with an “ay-ee” sound, which was muffling the bright tone I was striving to produce. The simple injector of the prolonged “eh” allowed the vowel tone to project much more clearly while also allowing the air to continue without pinching, or letting the end diction die. It made it audibly evident to me when I was closing the oral cavity, “ay-ee”, and when I was not.

Work continued by practicing the pronunciation of words and the shaping of the mouth and tongue in order to get the best sound for the audience to understand. Dr. Pinkall suggested I also speak in tones. This was practiced by simply speaking the lyrics in the written pitch instead of concentrating on singing the lyrics. This practice allowed more concentration put on pronunciation and furthered the clarity of my singing speech. It was in these instances that *The IPA Handbook for Singers* was useful. The practice of thoughtful examination of diction also became a great starting point when approaching a solo piece on Euphonium.

¹⁹ (Gershwin 1938, 1965),p. 1.

As a euphonium, or any brass player, we use a few syllables to describe what articulation is to be used. Examples would be “tah” for staccato, “lah” for legato or tenuto. Singers have a diction guide in the *International Phonetic Alphabet* (IPA), where there is a great deal of consensus as to what the sound produced should be (Figure 2.3).

CNS

VOICED PREPALATAL AFFRICATE [dʒ]

ENGLISH	ITALIAN	GERMAN	FRENCH
judge	gioia		
[dʒʌdʒ]	['dʒɔja]		

[b]

[ç]

[d]

[dʒ]

Description. The [dʒ] sound has the same point and manner of articulation as the [tʃ] sound. The [dʒ] is voiced while the [tʃ] is voiceless.

[f]

[g]

Articulation. Lift the soft palate. The sides of the tongue touch the edges of the upper molars while tongue tip contacts the area between the hard palate and alveolar ridge. Release a sufficient amount of vocalized tone to open a narrow passage then buzz the tongue tip against the palate to form [ʒ].

[h]

[k]

[l]

[m]

[n] **Warning.** Do not separate the [d] and [ʒ] sounds. Both are merged together to create one unit (Marshall, p. 117). Avoid a partially aspirated articulation of [dʒ]. Both consonants are to be fully voiced. Partial aspiration of the [dʒ] would result in a [tʃ] consonant.

[ŋ]

[p]

[r] **Exercise 1.** *gem, gentle, just* / Round lips for: *June, joy, juice*

[ɹ]

[ɹ] **Exercise 2.** Fully voice final [dʒ] without an added schwa: *age, village, judge, hedge, bridge, lodge, edge*

[s]

ITALIAN

[ʃ] **Italian exercise.** Fully voice [dʒ] in the following word (round early when [dʒ] is followed by a back vowel):

[t]

[tʃ] *già* [dʒa], *giorno* ['dʒorno], *oggi* ['ɔddʒi], *raggio* ['raddʒo]

Figure 2.3 - IPA Handbook for Singers. p. 10 (Montgomery, Cheri)²⁰

This became even more helpful in the next work I was assigned, which was an Italian piece called “Già il sole dal Gange” by Alessandro Scarlatti. When dealing with a foreign

²⁰(Montgomery 2015)

language that is unfamiliar, I was able to use *The IPA Handbook* to quickly find how to produce specific sounds for pronunciation in that language.

Using air properly in singing and playing euphonium.

Aside from having trouble with the diction in both pieces, I also found myself not singing with dynamic contrast and running out of air. Even though these were problems that manifested themselves through singing, I found it relevant and helpful when playing euphonium. The practice of concentration on controlling both of these issues when singing, carried over to playing euphonium and gave me a more conscious awareness to my airflow and diction. When I applied a more direct focus to both by vocally singing my euphonium solo, *Euphonium Sonata* by Eric Ewazen, I could identify and clarify phrasing, as well as areas which needed more air and clearer articulations. Then, when I went back to play through the piece on the euphonium, I could be more efficient with my air and concentrate on producing the same clarity and direction. This helped the music to become clearer and more interesting.

The final comparison I learned while taking vocal lessons is audience interaction. When one is singing a piece, that person is exposed to the audience. The piece is expected to be memorized, and there is eye contact and acting involved. As a euphonium performer, I can also use memorization but it is an accepted practice to use music on a stand. The stand, and the horn, can hide the facial expressions and eye contact. This barrier can hinder the connection between the performer and the audience, making it more difficult to communicate the music on all levels.

Through experimentation, I learned to make more eye contact with my audience, especially while there were a few measures of rest. Another performance connection technique I worked on was to bring over from singing is a bit of choreographed intensity, such as closing my eyes and physically moving myself and the horn while playing a climactically long tone in a

piece. This helped to emote my interpretation to the audience and subsequently invites them into sharing the moment. Lastly, another way that I learned create more of a connection is by giving more personal attention to the audience before and after a performed piece, such as eye contact, character description, and pedagogical uses of the music.

Chapter III - Three Basic Comparisons of Vocal and Brass Pedagogy

Vocal Diction vs. Brass Articulation

Diction is defined as “pronunciation and enunciation of words in singing.”²¹ Without diction, we cannot have articulation. In order for a brass player to have good articulation, one should practice how diction is used. Students often learn by hearing first and attempting later, so how does a beginner band director approach building on vocal principles to transfer them to buzzing? Articulation is defined as “the act of giving utterance or expression; the act or manner of articulating sounds.”²² When working on this, brass players should instill basic systems of dictation or syllables for articulation. When a person is learning how to say words, they go through the sounds of the letters first, separating vowels and consonants, and how to form the mouth to do this. When learning how to read, the first step is knowing the letters, then what sound they create, and then build on smaller words. Although many educators do incorporate some articulations when teaching brass players, there are dramatically more possibilities available. The majority of vocalizations used to describe appropriate brass articulations include: tAH, tOH, tOO; dAH, dOH, dOO; and thAH, thOH, thOO. As brass musicians, I feel we could have a source referencing a broader selection of articulations, much like the IPA handbook, and something that I would like to explore in future research.

A suggestion for practice of using vocal pedagogy is to attach text to the line of music when performing on a euphonium. The performer can think about the impact of both the meaning of the text and how the syllables affect the line’s phrasing and shape.

²¹ (Merriam-Webster, Merriam-Webster's Collegiate Dictionary 2019)

²² Ibid

Another solo I have performed on euphonium and have implementing this singing practice on was Camille Saint-Saëns, *The Swan*, originally written for cello and two pianos and arranged by Steven Mead for euphonium and piano. While there are many instances that vocal pronunciations can be used to decide how to approach musical moments or articulations in this piece, I will only focus on the first moment I found to be profound. The following text by Joel Sattler originally was used in the music *The Swan*.

*Solo as white as the snow
the swan
floats
all alone across the empty pond*

*all of her cygnets have come
and gone
and
now only she is left to linger on*

*there was a day when they all
would play
now all her children have flown
away*

*into the dawn
singing their songs*

*echoes have all
all faded
way*

*solo as white as the snow
she sails
mist settles over her just like a veil*

*and she has no strength left
to stretch out her wings and to fly*

*she lifts her
head
and says good bye²³*

²³ (Sattler 1987)

The word “floats” is the focal lyric that coincides with the rasp I’m looking for in mm. 4 (Figure 3.1).

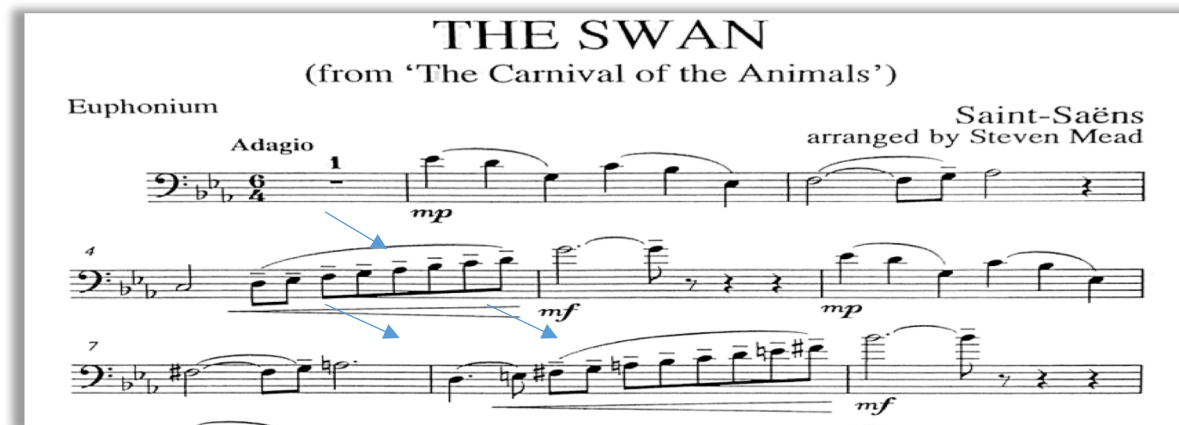


Figure 3.1 - *The Swan* (Saint-Saëns 2009)

I concentrated particularly on the way the first consonant, ‘f’, sound when pronouncing *floats*. I find it particularly interesting how the top teeth are involved with the bottom lip to create this sound. After trying to use the exact ‘f’ lip shape to articulate the E-flat, the euphonium’s tone was stifled and had a nasal quality. As I had done before in singing, I needed to find a particular articulation that allowed clarity and fullness in the tone while recreated the airy rasp I was searching for. The compromise was using a soft ‘p’, as the initial articulation in place of the ‘f’, along with a slightly less-intense airflow. In order to keep energy in the tone while still using the lyric as a guide, I also chose to omit the ‘l’ from *floats* in order to prevent the tone and mouth cavity from closing up and becoming choked or pinched sounding. The articulation that I found worked the best replacing the pronunciation of “floats” ended up being a *P-oh* sound. The repeat of the motive in the next phrase allows another opportunity akin to *floats*, but this time the lyric *now*. Using the ‘n’ in *now* as the articulation creates a soft, but clear, entrance. I chose to change the articulation of the lyric to *no* instead of *now* to once again avoid the mouth cavity from closing up and becoming choked or pinched sounding. I found this to be a positive

implementation of using lyrics and singing to create a way to practice an idea and make it an approachable and repeatable process.

Once that is established, the next step would be to see how the dictation of the consonants could affect the articulations. One can use the proper pronunciation of consonants and vowels in singing in order to add this practice to our prelogical repertoire. One would need to make other decisions such as if the lyrics have a diphthong, or two vowel sounds back to back, and a brass player would like to give this effect through embouchure manipulation, how one may manipulate the buzz to emulate this. The same decisions can be approached for brass articulations when deciding to use staccatos, legato, or accents in place of consonant sounds used in the lyrics to the music. Then start piecing the puzzle together in our head. This is what the line is going to sound like, and the music should be shaped in this manner. After these decisions are made, one can carry the decisions throughout to enhance their story through our performance of the piece.

We can use the tools we gain from pronouncing text much like a speech therapist does in order to improve our student's sound and tone. A therapist listens to a patient in order to dissect and diagnose the issues and then prescribes possible treatments and exercises. We, as instructors, can approach this in the same manner, but from hearing tone issues and building an embouchure and articulative structure we can use to help correct issues.

This is where the following questions could be asked; Does this have a sharper attack, a smoother attack, or even no attack? How is the consonant pronounced? Does it have a wispy sound, a delicate sound, a harsh sound? Could it be interpreted as an accent, marcato or legato because of that pronunciation? The idea behind using a syllable to show articulation has been around for a long time, but if we approach this the same way vocal pedagogy does we could establish a base, or constant.

Ear-voice coordination

Once we establish the tongue's physical starting point for this articulation and then the follow-up of a vowel sound to symbolize the air flow needed to follow the note, we can then start incorporating it with longer lengths of air by singing it. First, by simply holding pitch. Next, as slurring up and down from a comfortable tone to the highest possible and then down to the lowest possible, concentrating on the first syllable of *Tah*. Then, moving forward to matching the first pitch for two counts and then slurring up and then down again. This is teaching the students control between the pitches and their capable ranges. It also shows those who think they cannot sing that it is purely manipulating the pitch and learning the coordination and control of those pitches along with one's ears to recognize when to steady the pitch. I call this Ear-voice coordination.

The control and practice of ear-voice coordination helps to engrain the pitch in their head. It helps them to get more comfortable with audiation, which in turn helps a student's idea of hearing the notes before buzzing. As referenced here in Chapter I, Arnold Jacobs bases much of his pedagogy on this concept. Jacobs suggests that the first step to developing this tool is to practice the hearing of the note in your mind after it is played, which is called audiation. Next, a student should practice hearing multiple notes like a short motive, then an entire phrase, and ultimately the goal would be the whole piece. The use of attaching and singing lyrics can help both the memory process and the preparation of producing the real sound.

The last step is to reproduce the audiation into real sound by singing and pronouncing the consonant articulations on the mouthpiece or horn. If done correctly, the tongue is prepared to get out of the way as it was trained to do with the pronunciation of the vowel, or *ah* portion of the *Tah*, *Lah*, or *Dah*, and create a full, vibrant tone.

Vocal Resonance vs. Brass Resonance and Buzz.

Overtones in a sound are what give that sound a fullness that can carry and project. In singing, overtones are produced by resonance. Thanks to my vocal lessons, I learned to allow the sound to reach into my nasal cavity or to open my soft pallet up as to allow it to produce the most resonation possible in my skull. Resonance in singing is dependent on the oral cavity and the capability of creating overtones as the sound vibrates in the nasal areas. I achieved this by manipulating my oral cavity to allow the air to reach into the nasal cavity. By doing this, I was able to produce even better projection because of that resonance. When I achieved this, I could feel the tingle of a vibration all the way into my forehead.

As brass players, we strive to achieve the same fullness and resonance through air projection and buzzing. When we get the balance of a full buzz and energized, projected airflow, we can achieve the paralleled resonance on a euphonium. The resonance can manifest itself by making the strings on a piano vibrate and hum, or make the lights on the ceiling vibrate. It is a telltale sign of good tone and projection on the instrument.

In order to achieve this, the only tension in the body should be in the diaphragm, and it should be steady and controlled. Air should travel unobstructed up through the trachea and through the relaxed but focused oral cavity, across the full buzzing lips which allows the cup of the mouthpiece to evenly funnel the now fully-vibrating air into the amplifier.

How does one define where the tension is? By singing, of course! If we record ourselves singing a passage and then listen and self-analyze, we can discern if the singing sounds breathy, nasally, or even raspy. We can listen for good airflow. We can listen to the articulation of the syllables to judge if we are dragging the consonant sound into the vowel sound, or if we are being percussive enough (or not) with the beginning of the articulation and discern whether it is

appropriate or not for the piece we are performing. We can use singing to hear how we are taking care of the ends of notes, their pitch, tuning, and energy.

The balance of resonance and volume control transfers to adjusting to the space one is playing in. If you are playing in a very dead space, you need to create even more of the resonance in your tone and projection. In a perfect world, we would never have to adjust the perfect buzz and air ratio. That being said, we also know that there are times, for instance a long passage, that one must allow the ratio to shift to conserve air. When we do this, some of the resonance in tone is lost. If you are performing in a very live hall, the resonance already exists and you do not have to work so hard towards it. However, if we are in that dead space, then the quality of sound would suffer when we cheat the ratio. Singing helps alleviate this problem by modeling the sound and resonance. Using this model give the brass performer a physical feedback on what is needed to prevent the suffrage of sound.

The benefits that vocal lessons and singing have on playing the euphonium are indisputable. Vocal lessons can help a euphonium player raise the level of performance through improvement on their tone, articulation, sound, air projection, and musicality. The pairing of the two can make the performer a stronger performer and assessing what I have learned from my own lessons, I will always recommend my students participate in voice lessons alongside their brass lessons.

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