AN ANALYSIS OF THE PEDAGOGICAL ADVANTAGES RELATING TO
COMBINED STUDY OF EUPHONIUM AND TROMBONE THROUGH
THE USE OF SPECIFIC REPERTOIRE

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Doubling is defined as playing two instruments. It is becoming increasingly necessary for low brass musicians to double in the course of their careers. Euphoniumists often learn trombone, and trombonists learn euphonium. The instruments share several surface similarities but also differ in many significant ways.

Interviews with six professional doublers highlight strategies for learning, teaching, and performing on both trombone and euphonium. Slide and valve technique, adjustment of intonation, tone quality, air usage, repertoire, and skill maintenance are all addressed.

Trombone literature comprises a large part of the euphonium repertoire, due to the fact that most trombone pieces can be performed on euphonium. Euphoniumists should avoid playing pieces that require *glissandi* or extremely loud dynamics to be effective. Euphonium solos are generally too technical to be practical for trombonists to perform. Grøndahl’s *Concert pour trombone et piano ou orchestre* is a standard piece for both instruments. When performing the piece on either instrument, it is helpful to practice the piece on both trombone and euphonium in order to tap into each instrument’s strengths.
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INTRODUCTION

In this day and age, there are limited job opportunities for musicians, particularly for low brass players. For those hoping to make a career as a low brass instrumentalist in the United States, options are generally limited to playing in an orchestra, playing in a service band, teaching lessons, or freelancing. For a euphoniumist or a trombonist to succeed in any of these occupations, versatility is important. A euphonium player in a service band will sometimes be asked to perform on trombone, just as an orchestral trombonist occasionally needs to play euphonium. Music educators and freelancers who play either instrument will find themselves much more marketable if they can teach and play the other as well — in other words, they must learn to “double.”

Doubling is increasingly necessary for professional euphoniumists and trombonists to maintain a career, but it is also advantageous for personal musical growth. While the euphonium and the trombone share many common aspects, such as range and fundamentals of tone production, they differ in ways that complement one another, such as the euphonium’s lyrical qualities vs. the trombone’s innate power. Low brass musicians will find that studying the different aspects of a secondary instrument actually promotes the development of further skills on their primary instrument. Learning to play both the euphonium and the trombone helps musicians tap into the strengths of both instruments, regardless of which one they are playing at any given time.

The first chapter of this study will identify the similarities and differences between the euphonium and the trombone and analyze the challenges and advantages native to each instrument. The second chapter will consist of a discussion of the process of learning or teaching a secondary instrument, the advantages of doubling, and how playing one instrument can help
improve and refine performance on the other instrument. The points in this chapter will be supported by thoughts gleaned from six interviews with professional musicians from a variety of backgrounds who play or have played both the euphonium and the trombone in the course of their careers. The third chapter will describe the attributes of euphonium and trombone repertoire and discuss what kind of literature can and cannot be shared between instruments. The fourth chapter will analyze specific excerpts from the first movement of Launy Grøndahl’s *Concert pour Trombone* from both the euphonium and the trombone perspectives, and discuss how playing a passage on one instrument can improve performance on the other.¹

¹ For the purposes of this study, the term “trombone” refers to a large-bore tenor trombone with F attachment, and the term “euphonium” refers to a four-valve compensating euphonium. Scientific pitch notation (i.e. middle C = C₄) is used throughout.
CHAPTER I

AN OBJECTIVE COMPARISON OF THE EUPHONIUM AND THE TROMBONE

Musicians who play euphonium or trombone will find it logical to learn the other as a double due to the similarities between them. The trombone and the euphonium are both constructed on the B-flat overtone series and share approximately the same range (B-flat₁ to C₅, expandable by as much as an octave or more in either direction by advanced players). Also, both instruments require the same elements to produce sound. All brass players blow air into their instruments, initiating a sound wave that is influenced by the vibrating lips and the shape of the instrument as it reflects back and forth between the beginning of the bell flare and the mouthpiece.² John Mueller notes that “while the timbre of the trombone and euphonium differ, the general sound production and articulation are the same.” He then explains that to play either instrument successfully, musicians must eliminate bodily tension and develop their embouchure, airflow, articulation, and intonation.³

Another significant similarity between the euphonium and the trombone is the embouchure. Of the five major brass instruments in the wind ensemble (horn, trumpet, trombone, euphonium, tuba), no other two can be played with the same embouchure, mostly because of the vast differences in mouthpiece sizes and shapes amongst the other three instruments. Euphonium and trombone mouthpieces come in many varieties and differ in some ways, but the mouthpiece rims (the parts that come in contact with the lips) are all relatively close in size, and mouthpiece placement is the same. One trombone text says that “ideally…the

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trombonist’s embouchure should be exactly in the centre of his mouth…however, almost all players play fractionally off-centre, some very much so.” ¹⁴ Various texts recommend upper lip-to lower-lip ratios of two-thirds/one-third,⁵ 60/40,⁶ and 50/50.⁷ John Griffiths claims that “almost all low brass players use a vertical placement of the mouthpiece which uses two-thirds upper and one-third lower lip or, at the very least, half and half.” ⁸

The most salient difference between the trombone and the euphonium is the fact that the trombone uses a slide to change notes while the euphonium uses valves. As a general rule, the seven valve combinations of the euphonium directly correspond to the seven slide positions of the trombone. The trombone’s slide makes it unique among brass instruments in that it enables the instrument to clearly produce any pitch in the spectrum without an embouchure adjustment (as in glissandi) whereas the euphonium is limited to the pitches produced when the various combinations of valves are depressed. These two different pitch-changing mechanisms result in a markedly different approach to intonation and slurred articulations between the two instruments.

Pitch adjustments on euphonium and trombone require two different sets of skills, presenting a challenge to musicians who wish to play both instruments. Euphoniumists would seem to have a significant advantage because while there is a lot of grey area with trombone positions (as there are hypothetically an infinite number of possibilities for slide placement), valve combinations are very much black and white, either down or up. However, the upshot of this is that euphoniumists must make minor pitch adjustments with their embouchures, thereby altering the timbre very slightly, while trombonists are capable of playing every single note.

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⁵ Ibid., 21.
perfectly in tune using only their slide. Many trombonists compare the trombone slide to a giant tuning slide. Harold Brasch, the euphonium soloist with the U.S. Navy Band from 1936–1956 claimed that “trombones must be considered as instruments with perfect pitch, similar to the violin or cello. A well-constructed trombone is never out-of-tune; it is rather the immature trombonist who plays the instrument out-of-tune.”9 As for the euphonium, Harvey Phillips and William Winkle wrote that “the well-trained ear of the performer coupled with automatic lip adjustments is the best assurance of good intonation.”10 Additionally, “good intonation really depends on players getting to know the idiosyncrasies of their individual instruments.”11

Due to the trombone’s ability to play between the chromatic pitches, trombonists have more options in the way of positions that sound in tune on each note. For example, euphoniumists are taught to play G₄ with the 1+2 valve combination on the sixth partial, which corresponds to 4th position on trombone. Trombonists are able to play G₄ in 4th position on the sixth partial, but they are taught to use a shorter/sharper version of 2nd position on the seventh partial. Similarly, trombonists are capable of playing F-sharp₄ in 5th position on the sixth partial, which corresponds to the 2+3 valve combination on euphonium, but they will usually play F-sharp₄ in a shorter 3rd position on the seventh partial. On the euphonium, as on most other brass instruments, the seventh partial is virtually unusable, even with lip adjustments, due to its extreme flatness, but trombonists only need to utilize shorter positions to make the seventh partial perfectly viable.

The intonation flexibility afforded by the trombone’s slide allows for many possibilities in the way of alternate positions. Trombonists, unlike euphoniumists, often need to incorporate alternate positions into their playing. There are several reasons for this, a frequent one being to

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11 Ibid., 49.
minimize slide movement, particularly in fast passages. Scott Whitener explains that by using alternate positions, “a number of changes of slide direction and long shifts can be avoided…unlike most alternate fingerings [on other brass instruments], differences in intonation between the regular and altered positions can be corrected by the trombone slide.”

For example, when playing in the key of E-flat, trombonists will often encounter passages that involve D₄ leading to E-flat₄. Most trombonists will play the D in the alternate slightly longer/flatter 4th position on the sixth partial, which is slightly sharp. This alternate position corresponds to the 1+2 combination on euphonium. Normally, this note is played in 1st position on the fifth partial, comparable to the open combination (no valves pressed) on the euphonium. Trombonists might use the alternate position in this situation because moving from 4th position to 3rd position is a shorter distance than moving from 1st position to 3rd position. Also, using 4th position for D₄ enables the trombonist to perform both D₄ and E-flat₄ on the same partial, which ensures that the notes will match in timbre. A euphoniumist would only play D₄ with the 1+2 combination under unusual circumstances, for example, needing to tune D₄ particularly sharp for a chord in an ensemble or wanting to avoid fast lip slurs from F₄ or B-flat₄ (both fingered open.)

As another example, trombonists will often play F₃ in 6th position on the fourth partial if they are going to or coming from any note in 5th position. On euphonium, this translates to playing F₃ with the 1+3 or 4 combinations, which euphoniumists would never do because it is almost invariably more difficult than playing it open, as well as extremely stuffy.

The differences between valve and slide operation also factor heavily in defining the technical limitations of each instrument. Compared to the trombone’s slide, the euphonium’s valves give it a significant advantage in the area of facility. Professional trombonists can move their slides very quickly, but rarely is it a match for the valve technique of equally experienced

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euphoniumists. Edward Bahr writes, “the slide should move any distance in the same amount of
time, but this is not possible…the length of time used in pressing the valves is identical, whether
fingering long tones or a rapid passage. Therefore, one must admit that fast passages are more
readily obtainable on the euphonium.”

It is very possible to play fast passages on a trombone, but clarity and accuracy are very
difficult to achieve. While euphoniumists need only worry about pressing their valves all the
way down, trombonists must work to maintain accurate slide placement for each note, which is
understandably troublesome at extremely fast tempos. Many trombone texts warn of lazy
technique and poor intonation in rapid passages and emphasize slow practice for slide accuracy,
lest their slide end up “in an intonational no-man’s land.” Edward Kleinhammer, longtime
bass trombonist in the Chicago Symphony Orchestra, recommends that trombonists, “keep the
slide in motion, playing each note as you go by its respective position…there is a certain amount
of “faking” in this procedure. Constant checking of intonation and slide coordination will
ensure that this “faking” will be of good musical quality.”

Trombone slide technique is further complicated by the need to articulate each note
(natural or lip slurs being exceptions) to achieve clarity. When playing in a detached style,
whether tenuto or staccato, euphoniumists and trombonists will articulate in much the same
way. Slurred passages are different; Bahr explains, “shifts of the trombone slide must be
concealed by skillful use of legato tonguing when a melodic passage is slurred.” On a

13 Edward Bahr, “Idiomatic Similarities and Differences of the Trombone and Euphonium in History and
14 Edward Kleinhammer with Doug Yeo, Mastering the Trombone (Hannover: Edition Piccolo, 1997), 37.
16 Edward Bahr, “Idiomatic Similarities and Differences of the Trombone and Euphonium in History and
euphonium, no articulation is required during slurred passages due to the natural articulation afforded by the changing of valves.

The other main difference between the euphonium and the trombone is the nature of the tubing. The euphonium is a conical-bore instrument, meaning that the tubing grows in diameter throughout the length of the instrument (except for the valve section, where the tubing maintains the same diameter). The trombone’s tubing remains largely the same diameter throughout the length of the instrument, until flaring out in the bell section. Bahr explains that “the trombone is basically 2/3 cylindrical and 1/3 conical, while the euphonium is 1/3 cylindrical and 2/3 conical.” This difference in bore shape is what gives each instrument its characteristic tone quality. The cylindrical bore “enhances the production of the higher partials” while the conical bore “tends to reduce the number of upper partials, thus resulting in an even less brilliant, more deep, pure tone quality.” In addition to tone quality, the different bore shapes also yield differences in response.

It is important to note that the euphonium and the trombone are the same in length, but not in shape; the euphonium has many more bends in the tubing, particularly when valves are depressed. The trombone has only two bends in its tubing. Additionally, the .590–.610-inch euphonium bore is substantially larger than both the .547-inch tenor trombone bore and the .562-inch bass trombone bore. Also, the euphonium’s conical tubing means that the bore gets approximately .7 inches larger throughout the length of the instrument, as evidenced by the visibly different ends of the main tuning slide. The issues of tubing and bore size produce significant differences in response and resistance, as well as the volume and speed of air required to produce a characteristic sound. Many of these aspects are difficult to measure or compare due

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17 Ibid., 33.
to their subjectivity, but certain consequences of the variance in instrument shapes cannot be denied, such as the fact that it is much easier to play grotesquely loud on a trombone than it is on a euphonium. Along the same lines, and also due to the upward- vs. front-facing bells, euphoniumists must use a more exaggerated articulation than trombonists to achieve equal clarity. Trombones respond more easily in the high range, particularly above B-flat\textsubscript{4}. Consequently, it is easier to produce lower notes on a euphonium, particularly pedal notes such as B-flat\textsubscript{1} and below.\textsuperscript{19}

There are also several differences between the euphonium and the trombone when it comes to performance practice issues. For instance, trombonists must own and be prepared to play with a wide array of mutes. Euphoniumists may or may not own a straight mute, which is only rarely called for in solo and ensemble repertoire.\textsuperscript{20} Another important performance practice matter is that of vibrato, which can be performed with the diaphragm or the lip/jaw on either instrument, and also with the slide on trombone. However, since vibrato is so subjective across the solo, band, orchestral, jazz, and other genres, not to mention across international borders, there is no definitive difference between euphonium and trombone vibrato. Finally, there is the matter of clef, which also can depend on genre and country. Trombonists and euphoniumists are both expected to read bass clef and tenor clef fluently. Given the large portion of euphonium literature that comes from British brass band composers, euphoniumists also must be fluent in B-flat treble clef. Trombonists must read alto clef for certain orchestral excerpts as well as C treble clef. Many low brass musicians are able to read all five of these clefs/transpositions regardless of their primary instrument.


\textsuperscript{20} Ibid., 34.
Clearly, although the euphonium and trombone are closely related, there is an extensive list of differences, some greater than others. However, this should not deter musicians from learning one or the other as a double, as the rewards of doubling will far outweigh the hassles of overcoming these issues.
CHAPTER II

THE CHALLENGES AND ADVANTAGES OF DOUBLING

Interviews\textsuperscript{21} were conducted with six subjects representing a variety of musical backgrounds. All of the subjects are professional musicians with extensive experience playing euphonium and trombone.

Subjects whose first instrument was euphonium:

- Dr. Brian Bowman began playing both the euphonium and the trombone at an early age. He played euphonium in the U.S. Air Force and Navy Bands and earned a doctorate in trombone performance. Dr. Bowman is the Professor of Euphonium at the University of North Texas, which is the only full-time euphonium professorship in the United States.

- Jay Friedman began playing euphonium at age nine and began playing trombone in college to increase his job prospects as a professional musician. He is the Principal Trombonist in the Chicago Symphony Orchestra.

- Dr. John Mueller began playing euphonium at an early age and began learning trombone in high school. He played euphonium in the U.S. Army Band while earning two graduate degrees in trombone performance. Dr. Mueller is the Assistant Professor of Trombone and Euphonium at The University of Memphis.

- Dr. Demondrae Thurman began playing euphonium at age 12. He learned trombone for the first time in high school to fulfill the needs of the marching band, and began to pursue the trombone at an increasingly serious level as he became more interested in jazz and orchestral

\textsuperscript{21} The author was certified to conduct interviews after completing an online course on human research subjects. The interview questions can be seen in Appendix A.
literature as a college student. He recently completed his doctorate in trombone performance. Dr. Thurman is the Associate Professor of Euphonium and Tuba at The University of Alabama.

Subjects whose first instrument was trombone:

- Dr. Eileen Meyer Russell began playing trombone at a young age and did not play any valved instruments until college. Her desire to teach low brass led her to seriously pursue euphonium as a double. She began studying euphonium as a master’s student and continues to take lessons and work toward developing her skills as a euphoniumist. Dr. Russell is the Associate Professor of Low Brass at Southwestern University.

- M. Dee Stewart was already playing trombone with the Philadelphia Orchestra when he decided to learn euphonium (and bass trumpet) so that he would be able to cover orchestral parts for those instruments when necessary. He is now the Professor of Trombone and Euphonium at Indiana University.

When asked about the most challenging aspects of their secondary instrument, all of the interview subjects seemed to agree that at first, technical issues presented the largest obstacle. A pattern emerged from several of the subjects’ answers, identifying a progression of difficulties. Learning the slide/valve positions was the first hurdle, followed by perfecting intonation, and then developing a characteristic sound. This progression can be seen as analogous to conditioning the muscles, developing the ear, and educating the mind.

Easily the greatest challenge for euphoniumists attempting to learn trombone is the slide technique. Experienced euphoniumists spend years refining their valve technique with scales, exercises, and etudes, but when they begin to play trombone, their valve skills cease to matter.
Learning the slide positions is a massive undertaking with two components: conditioning the arm and training the ear. Similarly, trombonists studying euphonium struggle the most with valve technique. To a native trombonist, valve combinations will seem somewhat random until they are extensively drilled.

Aside from the technical challenges of learning to move a slide or operate valves, doublers must learn a new way to adjust their intonation. Trombonists adjust with their slide while euphoniumists must do so with their embouchure. In surveying dozens of orchestral trombonists on the challenges of playing euphonium, Matthew McCready found that “the three most troublesome items involved technical problems peculiar to [valves] – valve technique, intonation, and ornamentation.”

Achieving a characteristic tone quality on the secondary instrument also presents a substantial obstacle for doublers. The differences in bore shape, resistance, and embouchure manipulation all contribute to the challenge of producing an appropriate sound. Bruce Gleason notes that “trombonists often have a shallow tone on a euphonium and euphonium players learning trombone tend to produce an unfocused sound at first.”

Many of the interview subjects agreed that an important element of developing a sound concept is to listen to good players and play with them in ensembles if possible.

For some musicians, it is a question of allowing the equipment to decide on the sound. When asked how he developed his tone concept, Mr. Stewart claimed that his “involvement in the tone quality ends at the rim of the mouthpiece.” As he was such an advanced trombonist with sound fundamentals, he knew that he could trust that he was doing everything correctly as far as air and embouchure, so he let the different shape of the instrument take over from there.

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24 M. Dee Stewart, interview by author, 5 June 2010, audio recording.
Interestingly, he played a smaller, non-compensating euphonium, and felt justified in doing so because he could play it in tune, get a good sound, and it was more similar to his trombone than a compensating euphonium would have been.

Several other subjects cited equipment as something that helped their sound; for instance, even though it is quite possible to use the same mouthpiece for both instruments, the subjects generally supported having separate mouthpieces for each instrument. Several texts caution doublers about selecting a second mouthpiece. Reginald Fink writes, “you must use a euphonium mouthpiece which has a [rim] diameter exactly like or quite different from your trombone mouthpiece, so that only one lip groove or two separate and distinct lip grooves will be developed.”25 Arthur Lehman went so far as to recommend a detachable rim to go back and forth between mouthpieces.26 As far as instruments, Dr. Thurman emphasized that doublers should buy a professional model instrument if they are serious about their secondary instrument. Dr. Bowman felt that it was difficult to produce a characteristic sound on his trombone, and found that his sound became more characteristic when he bought a new instrument that he felt had more resistance. Dr. Russell struggled with the idea that a professional model euphonium is so much more expensive than a professional model trombone, but she bought one anyway, which seemed to inspire her perform on euphonium more often.

Dr. Russell characterizes the two biggest tone production issues for euphoniumists attempting to play trombone as “the manipulation of pitch with the embouchure rather than the slide and an air stream that is going the wrong speed.”27 The issue of air came up in all of the interviews, although there were some discrepancies among the subjects’ answers. Some subjects

felt that the trombone requires more air, and some felt the opposite. This raised additional questions about which instrument is more resistant, and whether one instrument requires slower or faster air than the other one. The confusion here is almost certainly due to the subjects judging air usage in different ways. Some may have objectively considered the data involved, such as the bore size, and others may have simply judged it subjectively based upon how it feels to them. The conflicting answers seem to point to a conclusion that while it can’t be determined for certain whether the euphonium or the trombone blows easier, it does seem readily apparent that they blow quite differently.

Posture was an issue for both subjects for whom euphonium was their second instrument. Playing a trombone while seated is fairly painless, but playing a euphonium while sitting can cause problems because for many adults, the euphonium’s lead pipe sits significantly below the mouth when the instrument is resting on the left leg. Some players are able to hold their euphonium off of their leg using their upper body strength as they would do if they were standing up. Others place a towel, pillow, or other device between their euphonium and their leg. Mr. Stewart’s answer to his euphonium posture difficulties was to develop a euphonium stand; the Stewart Stand remains to this day a popular invention. Dr. Russell wanted to hold up the euphonium on her own, so she began swimming to build up her arm strength.

Several interview subjects mentioned that one challenging aspect of doubling for them currently is maintaining a high level of proficiency on both instruments. As Dr. Mueller described, “depending where I was in my career, one of the instruments often took priority or I was required to play one more than the other…maintaining a high level of technique can be a challenge when you do not have regular practice and performance time on both instruments.”  

Two of the subjects claimed to usually only practice one of their instruments (the one required

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for their respective jobs) unless an opportunity should arise to perform on the other instrument. Dr. Thurman discussed the importance of practicing the instruments separately.

There was a great deal of variety in the answers regarding what routines, etudes, studies, or pieces the subjects used to learn their secondary instrument. Mr. Stewart was unique amongst the subjects in that he first started playing euphonium when he was already playing trombone in the Philadelphia Orchestra. In other words, he was no longer a student, while the other subjects began doubling while still in high school or college. Mr. Stewart learned to play the euphonium entirely through the euphonium orchestral parts such as those in Strauss' *Ein Heldenleben* and *Don Quixote*. Somewhat similarly, Dr. Thurman recalled building his trombone skills through the use of solo and ensemble repertoire rather than with routines or etudes. He recommends this process for new doublers, suggesting that they “start with music and then allow the technical problems of the trombone to show their hand so that you’re not wasting time learning things that you may not need to learn…don’t waste time on things that you can already do.”

He also mentioned that he prefers to learn his trombone solos on euphonium first so that he has them in his ear before he attempts to learn them on trombone. All of the subjects referenced Joannes Rochut’s editions of Marco Bordogni’s vocalises, commonly known as the “Rochut etudes” or “Bordogni etudes.” These etudes are often used to teach musicians to play in a lyrical style. Lyrical playing is especially important for euphoniumists, given their role in the wind ensemble and the lyrical requirements of so much of the euphonium solo repertoire. The Rochut etudes are also widely used on trombone to develop the ability to play *legato*, which does not come as easily to trombonists as it does to other brass players due to the complication of the slide and the need to avoid the unintended *glissando*. The importance of *legato* playing on trombone and

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29 Demondrae Thurman, interview by author, 4 June 2010, audio recording.
“developing a singing style”\textsuperscript{30} was heavily emphasized by all of the interview subjects, and several claimed that their ability to play \textit{legato} on trombone was profoundly influenced by their work on euphonium.

Regarding the question of which pieces from the trombone and euphonium repertoire are suitable for both instruments, most interviewees named several trombone pieces, but claimed that most euphonium pieces are ill-suited for trombone (though not necessarily impossible) due to the abundance of fast technical passages. This will be discussed further in the next chapter.

When asked “in what ways has studying a second instrument strengthened your skills on your primary instrument,” the subjects offered many different answers. Dr. Bowman felt that playing trombone made him more accountable for his clarity of articulation, saying, “on trombone, if you’re a sloppy articulator, it’s very evident, but on euphonium you can get away with it.”\textsuperscript{31} He also mentioned that he realized how much better his high range on euphonium could become after becoming acquainted with the free-blowing high register of the trombone and hearing what the pitches sounded like played well in-tune without embouchure adjustments. Others agreed that their secondary instrument helped them develop a wider dynamic range, a larger palette of tone colors, increased aural awareness, and more flexible airflow, among other things. Some subjects answered that their second instrument enriched them in ways surprisingly unrelated to any technical aspects of playing either instrument. These responses highlighted heightened levels of enthusiasm and musicianship. Mr. Stewart discussed how the soloistic qualities of euphonium orchestral excerpts inspired him to approach his second trombone parts with a new level of musical dedication. Dr. Russell emphasized that learning euphonium has

\textsuperscript{30} Jay Friedman, interview by author, 4 June 2010, electronic document.
\textsuperscript{31} Brian Bowman, interview by author, 6 June 2010, audio recording.
kept her “engaged in terms of lifelong learning and a daily love of playing low brass.”

Dr. Mueller mentioned that “exposure to different composers and genres helps in all interpretation and general musicianship.”

All of the subjects seemed to agree that being extremely proficient on their primary instrument played a large part in their success on their secondary. There were several skills that they were able to transfer to their secondary instrument, including music reading, fundamentals of tone production and embouchure, range, a well-developed ear, and good musicianship. These responses point to the conclusion that learning a secondary instrument does not necessarily require the same approach as learning a primary instrument.

Several subjects mentioned that while they initially experienced substantial success in doubling due to the wide array of skills that they could transfer from their primary instrument, they eventually found that the more they improved on their secondary instrument, the more different the two instruments seemed to become. Doublers seem to make their greatest improvement when they are finally able to break down the mental block that compares every single note that they play on their secondary instrument to the way they would perform on their primary instrument.

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CHAPTER III
CHARACTERISTICS OF TROMBONE AND EUPHONIUM REPERTOIRE

There is a substantial overlap between euphonium and trombone repertoire. Because the euphonium is a relatively new instrument, most original euphonium literature was written within the last 40 years. Euphoniumists habitually borrow literature from other instruments, mainly bassoon, cello (particularly Baroque transcriptions), trumpet, voice, and especially trombone. Much of the easier, high school-level euphonium repertoire is comprised of transcriptions meant for trombone and pieces originally written for trombone. Many of these pieces come from France, specifically the pieces that emerged from the contest tradition of the Conservatoire National Supérieur de Musique de Paris. The Conservatoire has been responsible for commissioning over 60 trombone solos for their annual competitive jury examinations, which began in 1842. Commonly played solos that arose from the Conservatoire tradition include Morceau Symphonique by Alexandre Guilmant, Pièce en mi bémol by Joseph Guy Ropartz, Solo de Concours by Paul Véronge de la Nux, Cavatine by Camille Saint-Saëns, and Andante et Allegro by Joseph Edouard Barat.34 The Guilmant and Barat solos are such standard pieces for both instruments that it would be difficult to find an adult trombonist or euphoniumist that hadn’t played one or the other. The Ropartz and Saint-Saëns solos are widely performed on trombone, but only occasionally played on euphonium. Strangely, the de la Nux is played more often by euphoniumists than trombonists.

Baroque-era transcriptions, whether intended for trombone or euphonium, can easily be performed on either instrument, although the ornamentation will likely vary. For a

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euphoniumist, the trills called for in many Baroque pieces are simply a matter of blowing consistent air while quickly moving between two valve combinations, usually only involving one or two fingers. For trombonists, certain trills (such as C₄ to B-flat₃) can be performed with the valve that operates the F-attachment, but most trills in the staff need to be omitted, slowed, or changed to a different ornament. Generally, trills above D₄ can be performed on either instrument in only one position using only the lips to oscillate between the seventh and eighth (or higher) partials. This technique is called a “lip trill.”

As a general rule, anything that can be played on a trombone can also be played on a euphonium. The glaring exceptions to this rule are trombone pieces that make extensive use of glissandi, such as Brian Lynn’s “Doolallynastics” (below).

Ex. 1: Lynn: “Doolallynastics,”₃⁵ mm. 24-27

In this piece, the grace notes are meant to be “smeared” rather than articulated. These smears, combined with the glissandi that appear in this passage and elsewhere in the piece, render it unsuitable for performance on euphonium. The occasional ornamental glissando can be “faked” on euphonium by fluttering the valves or depressing them halfway, but this is inadequate for performances of solos that rely heavily upon such gestures.

Another genre of trombone solos that euphoniumists should avoid is any piece whose effectiveness depends on extremely loud dynamics and edgy tone quality, such as Folke Rabe’s “Basta” (below).

₃⁵ Brian Lynn, Doolallynastics (Coventry: Warwick Music Ltd, 2003), 1.
Ex. 2: Rabe: “Basta,”\textsuperscript{36} mm. 1-3

The dynamic and edge commonly used in this introduction can only be approximated on the euphonium. Euphoniumists can play this particular passage effectively, but it does not have nearly the impact that it has when performed on a trombone.

The exchange of repertoire between euphoniumists and trombonists cannot fairly be said to go in both directions. Much of the repertoire written for the euphonium, such as Philip Sparke’s “Pantomime” (below) contains passages that are too fast and awkward to be practical for the trombone.

Ex. 3: Sparke: “Pantomime,”\textsuperscript{37} m. 29-30

Just as a euphoniumist can only approximate the trombone’s harshest tone colors, a trombonist can only approximate the smoothness native to the euphonium. While an experienced trombonist could certainly play this passage (as it is basically a glorified A-flat

\textsuperscript{36} Folke Rabe, \textit{Basta} (Stockholm: Edition Reimers AB, 1982), 2.
concert scale), it would sound angular and sloppy compared to how a euphoniumist would play it.
Launy Grøndahl composed his *Concert pour Trombone et Piano ou Orchestre* in 1924 for Vilhelm Aarkrogh of the Royal Danish Orchestra. The Grøndahl concerto has three movements and is a staple of the trombone repertoire and enjoys increasing popularity among euphoniumists as well as tubists. It is not a terribly difficult piece and lies comfortably within the abilities of most younger college students. The excerpts below all come from the first movement, which has no title but is marked *moderato assai ma molto maestoso*. This movement offers many styles and style changes, making it an excellent example of how practicing a solo on both euphonium and trombone will result in a higher level of performance on either instrument.

Ex. 4: Grøndahl: Concerto,\(^{38}\) mm. 2-3 (similarly, mm. 14–15, 60–61, 105–106)

![Music notation]

The first four notes of the opening motive do not have the same impact on euphonium as on trombone. On trombone, the desired effect can be achieved by using a light “da” articulation. The same articulation on euphonium will result in a much weaker, less declamatory statement. Playing these four introductory notes on trombone and endeavoring to imitate that sound on euphonium by using a stronger “da” articulation and blowing a broader column of air can help deliver an equally powerful sound on both instruments. Some euphoniumists might be tempted

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to use a fast vibrato throughout the opening section. This is inadvisable, as it will cause the music to seem more lyrical and detract from the power that comes from delivering a pure, straight sound. Some vibrato can be used on the longer notes.

Ex. 5: Grøndahl: Concerto, \textsuperscript{39} mm. 15-17

When the motive returns for the second time in this lower key, it is difficult to perform on trombone due to the C, D-flat, and B-flat. The D-flat must be played in 5\textsuperscript{th} position, so the two possibilities for slide positions on the C, D-flat, and B-flat are: 6\textsuperscript{th}–5\textsuperscript{th}–3\textsuperscript{rd} (with valve), which can produce an inconsistent sound on the B-flat, or 1\textsuperscript{st} (with valve)–5\textsuperscript{th}–1\textsuperscript{st}, which requires very fast slide movement from 1\textsuperscript{st} position to 5\textsuperscript{th} position, which are fairly far apart. Regardless of the combination chosen, playing this passage on euphonium will allow the trombonist to hear an even tone quality throughout, develop a firm concept of the pitch centers, and concentrate momentarily on the musical energy of the line rather than on slide accuracy. To practice hearing and achieving differences between \textit{staccato}, \textit{tenuto-staccato}, and accented notes, euphoniumists can practice this passage (or others like it) on trombone, which articulates more clearly and easily.

\textsuperscript{39} Launy Grøndahl, \textit{Concert pour Trombone et Piano ou Orchestre} (Copenhagen: Samfundet, 1974), 2.
Ex. 6: Grøndahl: Concerto, \(^{40}\) mm. 24-30

This *quasi cadenza* passage contains many slurs and serves as a style transition to the lyrical second section of the movement. It is extremely idiomatic for the euphonium, on which it can be easily played in a sweeping, romantic style. Trombone players who practice this passage on euphonium may find that not needing to tongue each note frees them up to play more expressively and colorfully. Having these new ideas and sounds in their ear, the musician will find them easy to execute upon returning to the trombone. Euphoniumists should practice this passage on trombone because the more free-blowing nature of the trombone’s high register will help them blow more consistent air and achieve a fuller sound, particularly on higher notes, once they return to the euphonium.

Ex. 7: Grøndahl: Concerto, \(^{41}\) mm. 35-36

The low D-flats in these measures must be played in 5\(^{th}\) position on trombone. The B-flats and high D-flats can either be played in their regular positions (1\(^{st}\) and 2\(^{nd}\), respectively) or

\(^{40}\) Launy Grøndahl, *Concert pour Trombone et Piano ou Orchestre* (Copenhagen: Samfundet, 1974), 2.

\(^{41}\) Launy Grøndahl, *Concert pour Trombone et Piano ou Orchestre* (Copenhagen: Samfundet, 1974), 2.
they can alternatively be played in 5th position. Changing positions could result in a messy slur or a *glissando* due to the distance between 5th and 1st positions, whereas playing the first six notes in 5th position requires only minor slide adjustments. However, tone quality and intonation may be affected if these alternate positions are used. This passage presents no challenges when played on a euphonium. Practicing this passage on euphonium will help perfect the airflow necessary to navigate through the alternate positions with an even tone quality. It will also train the ear to hear the passage played in tune, which will alleviate intonation problems associated with alternate positions on the trombone.

Ex. 8: Grøndahl: Concerto, 42 mm. 38-39

Musically, it is important that the pick-up notes lead strongly into the following measure. It is common to slur the D-flat to the B-flat, although there is no slur marked. On trombone, this is most easily accomplished by playing the B-flat in 3rd position on the ninth partial. The outward motion of the slide combined with the crossing of partials creates a situation where no articulation is necessary to define the B-flat. On euphonium, slurring this passage can result in a “dirty” slur, wherein notes between the D-flat and B-flat can be heard; if a player prefers a cleaner slur, it is wise to use a trombone-style “da” articulation on the B-flat so that the connection is evident but the transition is clean and the note well-defined. The C-flat in this passage is one of several notes that is uncomfortable on euphonium due to poor intonation. Playing this passage several times on trombone will help the ear create a firm concept for both

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the pitch and the quality of the C-flat. Likewise, playing the passage on euphonium can help with pitch accuracy on trombone for the last three notes of the same measure, which can and should all be played in some variant of 3\textsuperscript{rd} position: the B-flat slightly longer (ninth partial), the A-flat slightly shorter (eighth partial), and the G-flat significantly shorter (seventh partial). Playing each note on a different partial as such allows for a natural slur, eliminating the need to use a \textit{legato} tongue in this slurred passage. The same positions apply in the following measure until the F-flat in 2\textsuperscript{nd} position.

Ex. 9: Grøndahl: Concerto,\textsuperscript{43} mm. 78-84

This passage takes place just before the climax and should lose a bit of momentum in the first three measures to make the upcoming build-up more dramatic. Trombonists should practice the slurred groups on euphonium to provide themselves with an example of smooth, connected playing so that they can imitate this as closely as possible on the trombone. In m. 81, the trombone is in its element as the music builds to its highest, most dramatic point. Euphoniumists should practice these four measures on trombone to develop the hard “da” tongue for strong, resonant accents and a broader air stream for an increasingly intense tone color.

\textsuperscript{43} Launy Grøndahl, \textit{Concert pour Trombone et Piano ou Orchestre} (Copenhagen: Samfundet, 1974), 3.
In the final two measures of the movement, it important that all of these notes are strong and centered. On trombone, the first two notes must be played in 5th position, and the third can be either in 3rd position with the valve or in 1st position. Regardless, the trombonist can practice this passage on euphonium for security with the first three pitches. Depending on tempo preference, it may be necessary to triple-tongue the first three notes. The last three notes must be tongued very firmly and can have a little bit of edge to the sound. This will take more air and a more exaggerated articulation on the euphonium than it will on the trombone, so the euphoniumist should practice this passage on the trombone to develop a sound concept.

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CONCLUSION

The euphonium and the trombone have some surface similarities, but on the whole they are two extremely different instruments with different strengths and weaknesses. Many aspects of playing both instruments will vary from player to player. Due to the vast pedagogical differences among individual low brass musicians, many elements of playing the euphonium and trombone are highly debatable, and there is much more research that can be done. Based on the current state of the professional musical world, the evidence given by the interview subjects, and the author’s personal experience, doubling on euphonium and trombone is highly recommended to all low brass musicians wishing to build a career. Playing both the euphonium and the trombone enables low brass musicians to develop new thought processes and increase their knowledge and understanding of their instruments, repertoire, and pedagogy. Doublers have not only a wider range of professional opportunities, but also countless opportunities to teach themselves to be better brass players, better brass teachers, and better musicians.
APPENDIX

INTERVIEW QUESTIONS
For the purposes of this survey, “primary instrument” refers to the instrument you first became proficient on (probably the one you played the most in college). “Secondary instrument” refers to the instrument you learned as a “double.”

- Please describe your background as a low brass player, i.e., how did you get started on your primary instrument, at what point did you begin your secondary instrument, what path has your career taken, etc.
- In your opinion, what are most challenging aspects of your secondary instrument?
- What routines, studies, etudes, or pieces were the most helpful for you when learning your secondary instrument, and why?
- What methods did you use to develop a sound concept for your secondary instrument?
- In what ways has your primary instrument helped you learn and perform on your secondary instrument?
- In what ways has studying a second instrument strengthened your skills on your primary instrument?
- Has doubling on trombone and euphonium ever caused you any problems? If so, please describe.
- What advice would you offer a trombone student who is beginning to learn euphonium?
- What advice would you offer a euphonium student who is beginning to learn trombone?
- In your opinion, what are the professional and pedagogical advantages of doubling?
- Is there specific equipment or literature you would recommend for doublers?
- Which pieces from the trombone and euphonium repertoire would you consider to be suitable for both instruments, and why?
- Is there anything more about doubling you would like to add? (Anecdotes, advice, resources, instrument choices, etc.)
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