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**UNIVERSITY OF OKLAHOMA
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**THE ART OF TENOR/BASS TROMBONE DOUBLING:
AN EXAMINATION OF THE PERFORMANCE PHILOSOPHIES
AND PRACTICES OF THREE SELECTED TROMBONISTS**

**A DOCUMENT
SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
degree of
DOCTOR OF MUSICAL ARTS**

**By
LAWRENCE JOHN PEARCE
Lawton, Oklahoma
2002**

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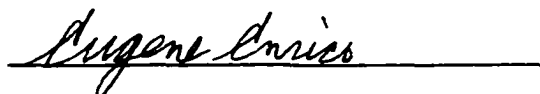
**THE ART OF TENOR/BASS TROMBONE DOUBLING:
AN EXAMINATION OF THE PERFORMANCE PHILOSOPHIES
AND PRACTICES OF THREE SELECTED TROMBONISTS**

**A DOCUMENT APPROVED
FOR THE SCHOOL OF MUSIC**

BY

A handwritten signature in cursive script, reading "Irvin L. Wagner", written over a horizontal line.

Dr. Irvin Wagner, Major Professor

A handwritten signature in cursive script, reading "Eugene Enrico", written over a horizontal line.

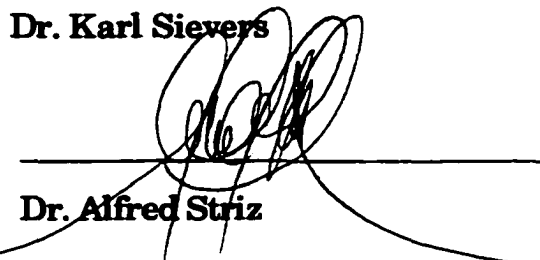
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Dr. Alfred Striz

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The author would like to thank Mr. Charles Vernon, Dr. Donald Hildebrandt, and Mr. Brian Rogers who participated in this study. It is hoped that this study will illustrate in some way the talent, knowledge, and dedication brought to the profession by these musicians.

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ABSTRACT

The purpose of this study was two-fold. First, it examined the performance philosophies utilized by three musicians who practice the art of tenor/bass trombone doubling. The second purpose of this study was to identify the performance practices of these three musicians. The three musicians who were interviewed for this study were Mr. Charles Vernon, bass trombonist with the Chicago Symphony, Dr. Donald Hildebrandt, low brass professor at The University of Delaware, and Mr. Brian Rogers, bass trombonist with the Rockford Symphony.

The study involved interviewing three prominent musicians who perform professionally on both the tenor and bass trombones. The principal method of acquiring this information was through a personal interview. The questionnaire asked the participant to address the topics of his musical experience, equipment usage, embouchure, warm-up, breathing, tone production, technical development, intonation, and their relationship to tenor/bass trombone doubling. The questionnaire responses were then examined to determine if the participants used similar or dissimilar performance philosophies/practices.

In conclusion, each of the participants interviewed had his own unique and individual approach to the art of tenor/bass trombone doubling. Responses to the questionnaire ranged from almost complete agreement with all three participants on one subject, to completely different responses and approaches on another subject. The author discovered there are many avenues a musician may use in learning a new instrument. Regardless of the differing or similar performance

practices and philosophies employed by the study's participants, they all had the same goal in mind to perform successfully on both the tenor and bass trombones.

CHAPTER 1

INTRODUCTION

The art of doubling on any instrument may be interpreted by musicians in different fashions. For the trombonist, it may mean having the ability to perform on multiple members of the trombone family such as the alto, tenor, bass, or contrabass trombone. In other instrumental families, doubling may refer to having the ability to perform in a symphony orchestra as well as an improvisatory jazz setting. For some musicians, the term doubling may bring to mind the phrase “jack of all trades, master of none” and all the associated negative connotations. However, there are musicians who perform professionally on multiple instruments.

This study examined the performance practices and philosophies utilized by three musicians who successfully practice the art of tenor/bass trombone doubling. The participants in this study included Mr. Charles Vernon of the Chicago Symphony, Dr. Donald Hildebrandt of The University of Delaware, and Mr. Brian Rogers of the Rockford Symphony.

Currently there are no published method books or trombone instruction manuals that exclusively address the art of tenor/bass trombone doubling. In further researching this subject, I found no articles thoroughly addressing the topic in the International Trombone Association Journal¹, Brass Bulletin², or The Instrumentalist.³ There

¹ Vern Kagarice, Ed., International Trombone Association Journal. (Dallas: International Trombone Association).

² Jean-Pierre Mathez, Ed., Brass Bulletin. (Bulle: Brass Bulletin).

³ Catherine Sell Lenzini, Ed., The Instrumentalist. (Northfield: The Instrumentalist Company).

are no essays or substantial discussions in published books including The Trombone- An Annotated Bibliography⁴ by G.B. Lane and Brass Bibliography- Sources on the History, Literature, Pedagogy Performance, and Acoustics of Brass Instruments⁵ by Mark J. Fasman.

The interviews were approximately two to three hours in length and were conducted in person. A questionnaire devised for the study (q.v. appendix one) was given to each participant. The interview began with the participant being asked to describe his musical experience and equipment usage. During this time, the participants were also allowed the freedom to discuss any aspect of tenor/bass trombone doubling he wished. This was done in the spirit of providing documentation of the participants' performance practices and philosophies. Quite often, the participant would answer additional questions from the questionnaire during this time. At the conclusion of the musical experience/equipment usage section of the interview, the author then asked additional questions directly from the questionnaire. Many of the participants' replies necessitated follow-up questions. Transcripts of the interviews were then examined to gain insight into the tenor/bass trombone performance practices and philosophies utilized by the study's participants.

The participants' responses were then grouped and presented in a summarized format according to the questionnaire's subheadings which

⁴ G.B. Lane, The Trombone- An Annotated Bibliography. (Lanham: The Scarecrow Press, Inc., 1999).

⁵ Mark J. Fasman, Brass Bibliography: Sources on the History, Literature, Pedagogy, Performance, and Acoustics of Brass Instruments. (Bloomington: Indiana University Press, 1990).

are musical experience/equipment usage, embouchure, warm-up, breathing, tone production, technical development, intonation, and doubling. Some of the questions and responses were blended together to create a more organized and readable document. In addition, Charlie Vernon was asked a series of questions regarding his double valve tenor trombone which the author deemed german to the study. Unless otherwise notated, all of the information in chapters two through eleven was taken from the interviews in appendixes two, three, and four.

It is hoped that this study will provide information which may help the artist or student who is interested in approaching either the tenor or bass trombone as a second instrument.

CHAPTER 2

PROFILE OF THE PARTICIPANTS' MUSICAL EXPERIENCE/EQUIPMENT USAGE

Charles Vernon began his playing career on a small bore tenor trombone. He played a single valve tenor trombone all the way through high school and college. Vernon was playing with various rhythm and blues bands in his collegiate career with horn sections which were compromised of two trombones. He played the lower parts on his tenor trombone because he always liked playing the lower parts. In November 1970, Vernon purchased a Holton bass trombone with a 2G mouthpiece. He had been playing with a 4G mouthpiece on his tenor trombone. In March 1971, Vernon auditioned for bass trombone positions with the Boston and Baltimore Symphonies. Upon winning the bass trombone position in the Baltimore Symphony, he set aside the tenor trombone for the next three or four years. Prior to the Baltimore final round audition, Vernon had switched to a Schilke 60 mouthpiece for the bass trombone. In 1975, Vernon began auditioning for principal trombonist positions on tenor trombone, and thus began his doubling career. When he first started alternating between the tenor trombone and bass trombone it was very uncomfortable, as the tenor trombone felt very small and constricted. He tried playing the tenor trombone with a Schilke 60 rim with a small cup but it sounded too much like a baritone. Frustrated with attempting to play both the tenor trombone and bass trombone on similar mouthpieces, Vernon decided that he would approach the tenor trombone as a tenor trombone and the bass trombone as a bass trombone. Each instrument would have its own

mouthpiece and unique equipment setup. At this point in his doubling career, when he would play the tenor trombone, it would sometimes take almost an hour of playing before he would feel comfortable on the tenor trombone. Vernon is now at the point where he can alternate between the two instruments immediately. Alternating quickly and efficiently was a gradual process that took years to develop and perfect. His current bass trombone orchestral setup is a .562/.578 dual bore slide with a lead pipe. For years Vernon played with no lead pipe and a modified Schilke 60 mouthpiece with a tuba shank that would accommodate not having a lead pipe. The modified Schilke 60 mouthpiece he is using now is a little deeper and wider than a standard Schilke 60 mouthpiece. He currently is using a customized Bach bass trombone and has also played on various Holton, Edwards, and Yamaha bass trombones. Vernon also plays a Haag contrabass trombone, a Thein alto trombone, and a Bach 16 small bore tenor trombone.

Donald Hildebrandt began his playing career on the trumpet in the fourth grade. He then moved to tuba and continued playing the tuba until he was in high school. Hildebrandt then switched back to trumpet until his new band director heard him playing the tuba one day. From that point on he was playing tuba in band and lead trumpet in jazz band. In a desire to better prepare himself for a career in music education, Hildebrandt decided to learn the tenor trombone in the eleventh grade. He entered Indiana University as a tenor trombonist. While at Indiana University, Hildebrandt switched to the bass trombone. All of Hildebrandt's degree work is on the bass trombone. He also did some studying on tuba while at Indiana University with various teachers. His

first tenor trombone was a Conn 88H with a Remington mouthpiece. Hildebrandt's first bass trombone was a Conn 72H, single valve bass with a 1 1/2G mouthpiece. He then moved to a Holton bass trombone and then to a Bach bass trombone. Hildebrandt next purchased a Bach 42B tenor trombone. He prefers to play on a tenor and bass trombone from the same manufacturer. Hildebrandt is currently playing a Shires tenor trombone with a Schilke 51 mouthpiece, and a Shires bass trombone with a Schilke 59 Weidersdorf mouthpiece. He also performs on a straight Bach 16 tenor trombone with a Schilke 50 mouthpiece.

Brian Rogers began his playing career on the euphonium. During high school he began playing the tenor trombone. Rogers then spent three years in Washington, D.C. playing the euphonium in the United States Army Band. During this time he performed on both the tenor trombone and euphonium. In 1980, Rogers auditioned for the Rockford symphony on bass trombone. This was his first playing exposure to the bass trombone. He won the position with the Rockford Symphony and has been with the organization for over twenty years. Also in 1980, Rogers auditioned for a utility position in the St. Louis Symphony. The audition required the musician to play tenor trombone, bass trombone, bass trumpet, and tenor tuba. It was at this point that Rogers was required to make changes with his mouthpieces. He had used a Schilke 57 for both the euphonium and the tenor trombone. Rogers went to a Schilke 58 for the bass trombone. He then got a set of custom mouthpieces made that included a Schilke 58 rim with a Schilke 60 cup for bass trombone and a Schilke 58 rim with a Remington cup for tenor trombone. After the St. Louis audition, Rogers put away the tenor

trombone and played the bass trombone exclusively. Approximately five years later, he became active in a brass quintet which required him to play the tenor trombone part. He is currently using a custom Conn bass trombone with a custom Schilke mouthpiece which has a 58 rim and 60 bowl as well as other custom Schilke 60's. Rogers currently uses a straight Conn tenor trombone with a dual bore (.562/.578) slide and a Doug Elliott mouthpiece equivalent to a Schilke 50 or 51.

All three participants felt that a tenor trombonist wishing to double on the bass trombone should first have a well developed embouchure featuring firm corners. They also noted that the musician should be at least in the 11th or 12th grade. Hildebrandt would have the student start on a 2G mouthpiece as the beginning mouthpiece for bass trombone. As the 2G mouthpiece would begin to be restrictive, he would move the student to a 1 1/2G mouthpiece. The final move would be to a Schilke 60 mouthpiece. Vernon feels it is not necessary for the beginning doubler to play on a dual bore slide (.562/.578), but rather a straight .562 slide would be better suited for the beginning doubler. Rogers feels a physical maturity as well as an emotional maturity is important for the student to be successful. All participants agree that progressing from smaller to larger bass trombone mouthpieces is the best method for the beginning bass trombone doubler.

Vernon was the only one of the three participants who knew of any professional bass trombonists who began their playing career on the bass trombone. He had played with these two musicians who began on bass trombone, but felt that these musicians were the exception rather than the norm. All three participants felt that a musician should

learn the tenor trombone first before attempting the bass trombone. Vernon generally discourages anyone wishing to double. He states that it will lower their playing ability on the tenor for a period of time thus hurting their chances of performing at their highest level for an audition.

All three participants keep their equipment setups consistent on their tenor and bass trombones and rarely change to fit a certain musical environment. Rogers noted that he does use a standard Schilke 60 mouthpiece to accommodate a larger sound if the repertoire demands it. Hildebrandt noted that in a brass quintet setting, he would use a light weight slide to produce a brighter, more cutting sound if the quintet was were performing music of a pops nature. Vernon noted that Arnold Jacobs used to have three or four mouthpieces lined up on his stand that he would alternate between during a performance to achieve the maximum effect and benefit from each mouthpiece.

CHAPTER THREE

PERFORMANCES PHILOSOPHIES AND PRACTICES RELATED TO EMBOUCHURE

The amount of mouthpiece pressure to use when playing received similar answers from all three participants. Rogers noted that he really does not think about it too much. He did note that it is a point of concern for some players, but his experience is that it has never presented him with any major stumbling blocks. Hildebrandt felt that you generally apply more pressure to the lower lip on the bass trombone as opposed to the tenor trombone. He felt in his studio that students use too much pressure in general and that it was a problem in his own playing. Hildebrandt's solution was to practice mouthpiece pullaways. He stated that this is were you play a pitch on the instrument, then slowly remove the mouthpiece from the lips while keeping the integrity of the buzz and pitch. While maintaining the buzz with no mouthpiece, the musician then reapplies the mouthpiece to the lips. Hildebrandt found that the adhesion of the mouthpiece to the skin on his face was doing some of the work that the embouchure muscles should have been doing. He also noted that when you began to pull the mouthpiece away, you could feel additional embouchure muscles becoming active. Vernon noted that he has a small bump on his upper lip that becomes aggravated if he plays too much. He has learned over time to be sensitive to the area and knows when he needs to give his embouchure a rest. Otherwise, the area becomes stiff and is painful. All the participants agreed that when it comes to mouthpiece pressure, less is better. They all maintain that using just enough pressure to make a

seal is ideal.

In addressing Farkas' statement in The Art of Brass Playing, "Which is the proper embouchure, the smiling or puckered one? A little thought will lead to the conclusion that both systems must be combined"⁶, the three participants all agreed with the statement to varying degrees. Rogers stated that he agreed with the statement and that the pucker and smile embouchure should be combined. Hildebrandt mildly agreed with the statement but stated that the way he thinks about embouchure is probably the reason why he is successful at doubling. He imagines the brass embouchure as being similar to the double reed of the oboe. The embouchure muscles are the support and they need to be firm, and the reed is the vibrating part (aperture) that needs to remain loose. Hildebrandt uses the analogy of a fraternity party to make his point. The party, meaning your aperture, is surrounded by the police, meaning your embouchure support muscles. Playing in the lower register would equate to having a big party. The aperture needs to remain loose, but now there is a greater need to keep the party contained. This is where the police, or your embouchure muscles become more active. The more intense the party, the quicker the police are at your door to control the party. Hildebrandt also noted that the air supply should simply flow rather than drive the embouchure. This provides a unified way of playing rather like the way a water tower supplies a flow of water, the air supply provides a flow of air. Vernon agreed that neither smiling or puckering alone are good. He

⁶ Philip Farkas, The Art of Brass Playing, (Rochester, Wind Music Inc., 1962), 52.

feels that firm corners are the best thing with as much lip meat in the mouthpiece as possible.

All three participants noted that their embouchure was affected when they first started playing the bass trombone. Hildebrandt felt initially he was having endurance problems on the bass trombone because he was not putting enough air into the instrument. He felt that the additional amount of air required to play the bass trombone, compared to the tenor trombone, was the only major hurdle he needed to negotiate when learning the bass trombone. If Hildebrandt wanted to develop embouchure strength he would practice the tenor trombone, but too much strength made it difficult to keep the reed loose for the bass trombone. Hildebrandt noted that the best way to build endurance was to play until near failure, and then rest. Rogers felt that there was no difference in the amount of fatiguing on the tenor trombone or bass trombone. He felt that accuracy was a bigger stumbling block, rather than fatigue. Rogers felt that fatigue was more of an issue related to how much you practiced each day on each instrument.

All three participants had experienced problems with a double buzz at different points in their careers either personally or with their students. Rogers had developed a rattle on a certain pitch after overplaying his embouchure on a performance. He also noted that his embouchure was not in top form at the time. His solution was to put the instrument away for a couple of weeks and let the muscles recover. Vernon has had several students in his studio over the years experience the problem. He felt that the double buzz was almost always focused around g, f-sharp, and a-flat. He personally never experienced the

problem, and asked Arnold Jacobs for a solution to the problem. Jacobs' idea was to control the sound more in his head and try to keep the tongue lower in his mouth. Vernon also found that having the students buzz on their mouthpiece was very helpful in eliminating the double buzz. Hildebrandt found that mouthpiece buzzing was helpful and that he also paid special attention that the instrument and mouthpiece angle was the same so it did not change in the double buzz area. Hildebrandt also noted that the double buzz was much more of a problem with the tuba. Another idea he presented was to just forget about the double buzz and it would take care of itself.

All three participants noted that they do some embouchure shifting on the trombone in the different registers of the instrument. Early in Vernon's career he would play with one embouchure from F to B-flat and another for B-natural and above. He was having problems because he was not matching sound with both embouchures. In a lesson with Ed Kleinhammer the problem came up and Kleinhammer's solution was for Vernon to blow both registers the same. It was a fresh feeling for Vernon and the sounds matched and the lips vibrated very comfortably. He now plays with two embouchures that he can manipulate at different points on the instrument. Vernon states that everyone has embouchure changes and it is just a matter of where you wish to change. The critical point is to be able to get a matching sound on both embouchures. Vernon describes the one embouchure as his regular embouchure that he plays in most registers. The second embouchure is formed by simply taking the first embouchure and putting a little more top lip into the mouthpiece while the lower lip

remains stationary. The second embouchure would be employed as the lower and upper extremes of the trombone were being accessed. Vernon would sometimes practice a one octave B-flat major scale from B-flat to b-flat playing the scale first on one embouchure, then a second time on the second embouchure. Vernon would then practice the scale while switching the two embouchures at different points in the scale. Vernon noted that another important issue was to have absolute control of when and where to implement the shift. Rogers acknowledged a shift that occurred primarily in the pedal register for him. He smoothed out the shifting by intense practicing and playing tuba etudes on the bass trombone, thus minimizing the amount of shifting required. Hildebrandt felt that he did do a little shifting in the very low pedal range around FF. He felt that the mouthpiece comes up a little so he was able to get more upper lip into the mouthpiece. Hildebrandt also felt that everyone needs to do some mouthpiece shifting.

Mouthpiece placement on the tenor and bass trombone received varied responses from all three participants. Hildebrandt stated that the question presumes that there is a difference in the amount of area, so in the terms of feel, he does not notice any difference. Rogers stated that at this point in his career he does not notice any difference. He did note that when he first began doubling on the bass trombone, the bass trombone mouthpiece felt terrible after playing the tenor trombone. Rogers stated that it felt like it was in a different place, like something was wrong. He also noted that when he went from bass trombone to tenor trombone that the tenor trombone mouthpiece felt small. Vernon noted that in the beginning it felt horrible. Initially he was trying to do

both on one mouthpiece and that felt fine, but the mouthpiece was too large for the tenor trombone and too small for the bass trombone. When Vernon started doubling with different mouthpieces for each instrument, he stated it was awful because the smaller the mouthpiece, the more difficulty he had. Vernon noted that if you are going to do doubling the correct way with two different mouthpieces, you are going to have to resign yourself that it is going to be a difficult process of learning how to negotiate two different mouthpieces.

All three participants noted great benefit derived from buzzing on the mouthpiece without the instrument. Hildebrandt noted that during undergraduate school he did not buzz at all. He felt it was idiotic because it did not feel the same as playing on the instrument. This thinking was also driven by the fact that he just could not do it. In further study with Ed Kleinhammer, Hildebrandt made a conscious effort to learn how to buzz. Hildebrandt discovered that he was over-buzzing pitches in general a half step sharp. He now has memorized b-flat so that he can buzz that pitch without an external pitch reference. Hildebrandt now uses buzzing to expand his response and range and feels more comfortable playing things he is able to buzz on the mouthpiece. He also feels that there is a universal embouchure that he uses to play multiple instruments. It works in the same way, just on a different scale with the various instruments. Vernon noted that he thinks mouthpiece buzzing is one of the most important things that you can do to improve and maintain your playing. He feels it is important to establish that rich buzzing sound on the mouthpiece then transfer the sound concept to the instrument. Vernon acknowledges that if you buzz

and do a mouthpiece pullaway, it will feel slightly different and not be the same exact buzz. However, he feels that is not a valid reason to not buzz on your mouthpiece without the instrument. Vernon noted two great benefits from mouthpiece buzzing. He feels the first is that it helps center the sound by creating a core centered tone and enhances the ambience of the sound. Vernon feels the second benefit is that you cannot get a good sound on the mouthpiece without blowing a lot of air, and that you cannot get a good sound on the mouthpiece without singing, or conceptualizing the correct pitch and sound in your head. Vernon feels that by practicing mouthpiece buzzing, it forces the singer in your head to be the leader when you play your mouthpiece. He also stated mouthpiece buzzing reinforces the connection between the singer in your head and the tone production on the mouthpiece. Vernon feels that ideally you want the trombone to be just a resonator or an amplifier of the sound in your head. He feels that the trombone and mouthpiece serve only to guide the tone. The main thing that will determine the tone on the trombone will be the brain conceptualizing the tone. Rogers feels that mouthpiece buzzing is very beneficial and that he enjoys doing it. He uses an adjustable tube that attaches to the mouthpiece that helps the mouthpiece buzz resonate and allows him to buzz the mouthpiece in a fashion more similar to playing than just buzzing the mouthpiece alone.

The three participants had differing responses to the question of mouthpiece seating. Vernon felt that the tenor trombone mouthpiece goes on a certain spot on the embouchure, and the bass trombone mouthpiece goes right on top of the tenor trombone mouthpiece area in

a fashion similar to the way Russian nesting dolls work. He stated it took years to get that way and a tremendous amount of work and effort. Hildebrandt felt that the mouthpiece placement and differences in tonguing are why it is difficult to go immediately from one to the other. He felt that transitioning in an ensemble setting was much easier than in a solo recital setting. Hildebrandt felt that you have no place to hide in a solo recital setting to make the necessary adjustments as you sometimes do in a ensemble setting. Rogers stated that he felt he did not have two sets of mouthpiece rings or callouses and now both the tenor trombone mouthpiece and bass trombone mouthpiece feel normal or comfortable to him.

CHAPTER FOUR

PERFORMANCE PHILOSOPHIES AND PRACTICES RELATED TO WARM-UP

All three participants stated that they warm-up in a similar fashion on both the tenor trombone and bass trombone. Hildebrandt stated that he does the same types of things on both instruments. He does not have a structured routine anymore, but he does do some developmental exercises that are derived from music he is performing. Hildebrandt requires his students to do a more structured routine as part of their training. Vernon will do his warmup routine on one instrument and basically do the same on the other, but will expand the ranges higher or lower depending on the instrument.

The participants' responses varied when asked which instrument they performed their initial warm-up on. Rogers stated that he always does his initial practicing on the tenor trombone. He then moves to bass trombone to augment the practice. Rogers feels it is easier to work mechanics on the tenor trombone rather than the bass trombone. Hildebrandt will usually warm-up on the instrument with which he will be doing his most serious playing that day. If he will be performing a bass trombone solo piece, he will play bass trombone with all of his studio students and not play tenor trombone. The inverse will be true if he has a pending brass quintet performance. Vernon stated the if he had the time he would warm-up on the bass trombone first and then progress to the other instruments. He did note that his routine will be adjusted to reflect any upcoming performances.

The participants were asked how they would warm-up before a

recital when they are playing multiple instruments. They were also asked how they would transition between the instruments during the performance. They responded in a similar fashion to these questions. Vernon stated that if he were playing tenor trombone first, he would warm-up on bass trombone first, then move to tenor trombone before the program. Vernon also stated that he will do mouthpiece buzzing to make the transitions between the two instruments and also blow a couple of notes. Hildebrandt noted that he would probably warm up on both instruments, depending how severe the performance demand. When transistioning between the two instruments, Hildebrandt stated that he would buzz some sirens and do some tonguing. If time allowed, he would also include some lip slurs. Rogers noted he has had only a few performance situations that demanded him to play both instruments. He would briefly rehearse what he was going to play and not put too much thought into it.

CHAPTER FIVE

PERFORMANCE PHILOSOPHIES AND PRACTICES RELATED TO BREATHING

The participants responded in a similar fashion when asked what kind of exercises they do to improve their breathing and lung capacity. Vernon stated that the concept of basic sound production drives his breathing exercises. He wants to be constantly listening to what he is playing with an awareness of basic breathing mechanics. Vernon also feels that you need to sit tall and breathe in from the lips, and not focus on the abdominal region. He feels you should forget the noise and restriction and suck air from the lips and take in much air as possible. Vernon feels you keep it simple by breathing from the lips and letting the air out in the same area. He also demonstrates at clinics an exercise where you breath in for four counts, then play a note for four counts, then in for three and play for four. You play all the way down to taking air in for half of a count and playing for four counts, while still taking in the same amount of air as the four count inhale. Hildebrandt stated that most of his breathing concepts came from Arnold Jacobs. He likes to use Mr. Haney's concept of using warm, wet air and exhaling as if you are trying to fog your glasses. He also uses the concept of saying OH during the inhale and exhale. Hildebrandt used to use a breathing tube to help open his throat, but he now puts his teeth around his mouthpiece and breathes. This has the same effect as his breathing tube did. He will do a stacked breathing exercise where you breath in until you are full. You then keep the air in, and breath in again, and see how many repetitions you can do until you are unable to take in any

more air. He feels this exercise helps him to get used to playing with a full air supply, and develops a great sense of control of the air. He also does an exercise holding a note as long as possible before breathing. Hildebrandt feels it gets you used to the downside of the breath, and forces you to control your body to a certain degree. Rogers does several different breathing exercises. Initially he does long tone warm-ups that work on and isolate the breathing mechanics. He also does the stacked breathing exercise where you take a full breath, then take a quick second breath to expand the lungs ever so slightly so the lungs are at full capacity. Rogers feels that being in good shape physically is important. He feels that if his body is stiff and sore, it affects his breathing, and his rib muscles get cramped up and are not able to expand properly for good breathing. Rogers noted that he will sometimes alternate playing drills with calisthenics or light free weights.

The three participants responded similarly when asked if they felt any differences in the amount of air usage between the tenor and bass trombones. Rogers noted that he really did not notice a whole lot of difference. He also stated that the bass trombone does use the air very rapidly in the low register. Rogers also noted that when he feels his embouchure is in good playing condition, he uses less air on both trombones. He feels that as embouchure efficiency increases, his air efficiency also increases. Hildebrandt feels that you may use a little more air on the bass trombone when playing the same pitch on both the tenor and bass trombone. He feels the biggest differences in air usage comes in the extreme register on both trombones. Hildebrandt feels that the bass trombone sound is the model for which all tenor

trombonists should be striving. He also tries to inhale completely whether the music allows time for full breath or a catch breath. Hildebrandt is always conscious of listening for resistance when he inhales on either the tenor or bass trombone. Vernon feels the tenor trombone takes less volume of air to play as compared to the bass trombone playing the same pitch.

All three participants were asked if they did any exercises to help improve their breath control. Rogers stated that he does a lot of pianissimo practicing. He learned many of his of breath control concepts and practice techniques from Ed Kleinhammer. One was to hold a piece of tissue paper to the wall with just your air column. Another was to lay down a candle flame with the air column without blowing out the candle. Rogers also felt that playing an adagio, legato etude was beneficial for developing breath control. Hildebrandt noted that he also does a Kleinhammer exercise in which you use the concept of step dynamics. You play a pitch for two whole notes at a mezzo forte dynamic level, then the same note at the mezzo piano level, and then finally at the piano level and pianissimo level. Hildebrandt noted that you are trying to reduce the dynamic level by half for each note. Hildebrandt feels that playing softly with a good sense of control is the key to developing good breath control.

All three participants were asked if they felt any difference in the release of the air stream on the tenor and bass trombones. Hildebrandt felt that if he is comfortable on both horns, he feels no difference. He also noted that he does not want to focus on peripheral things when he is playing because then he is not properly concentrating on the music.

Rogers feels that he plays both the tenor and bass trombone the same so he really feels no difference between the two instruments. Vernon feels a little difference between the tenor and bass trombones. He feels that on the bass trombone, especially in the lower register, the pitches just fall out of the horn.

All three participants were asked if they used any mental imagery or breathing devices to help illustrate air capacity to their students. Hildebrandt felt that a Voldyne 5000, an inhalation therapy device manufactured by Sherwood Medical, was helpful and that he used it with his students. He noted the problem was that he could not have the students share a device as it brought up health and hygiene issues. Hildebrandt really admired Kleinhammer because he understood all the mechanics of breathing. He felt Kleinhammer would use these concepts to isolate any problems with playing, but when it came time to perform all his energy and thought was directed to making music. Rogers noted that he incorporates some inhalation therapy devices where you must maintain an elevation of a ball with your breath. He also tries to alternate his breathing routines to keep them fresh.

CHAPTER SIX

PERFORMANCE PHILOSOPHIES AND PRACTICES RELATED TO TONE PRODUCTION

The participants were asked how they would characterize the tone qualities of the tenor and bass trombones. Rogers noted that there is a difference between the tenor and bass trombone sounds. He makes no attempt to blend the sound from one instrument to the other and makes an effort to keep the two sounds separate and distinct. Rogers feels that his current playing requirements also dictate that he create different sounds on the tenor and bass trombones. He thinks of his bass trombone strictly in an orchestral style. Rogers uses the tenor trombone to pursue more of a solo style in his playing with the quintet. Hildebrandt jokingly tells his tenor trombone colleagues that they should ultimately strive to make the tenor trombone sound as rich, full, and dark as the bass trombone. He feels the tuba is like a bull, the bass trombone is like a work horse and that the tenor trombone is like a race horse. He sees distinct differences between each instrument and feels that they all are truly different instruments. He feels the bass trombone is the background sound for a large portion of orchestral literature and that the bass trombone sound has more fundamentals present in its sound. Hildebrandt feels that the tenor trombone is stacked on top of the bass trombone in the orchestral sound pyramid. He feels that it is not necessarily the instrument, but what you put into it that determines the tone.

All three participants were asked if they used any exercises to help eliminate unnecessary tension from their bodies when they play.

Hildebrandt stated that as he got to the point in his career where he stopped thinking about his throat, his throat had less of a tendency to close on him. He realized that the throat is surrounded by muscles, and that if you consciously make yourself aware of them, they can only contract. Hildebrandt noted that muscles exist in either a relaxed state and a constricted state. He also noted that muscles working in opposition of each other are the primary form of motion within the human body. Hildebrandt feels it is best to keep your active muscles active and your passive muscles passive. When you inhale, the diaphragm is active and everything else is passive. Hildebrandt also feels that the tenor trombone generates more tension for him because of the range issues and also because it is not his primary instrument. He feels that students have a tendency to not hold the instrument securely enough and that the instrument moves around on their face unnecessarily. Hildebrandt noted that if he has a student who is creating too much tension when approaching a challenging phrase, he will have them play the passage with just the air and the tongue on a single pitch to help eliminate any unnecessary tension. Vernon feels that by keeping in good physical shape he is able to remain limber and move air more effectively. His conditioning makes him physically able to handle the demands of playing the instrument. He noted that he is an avid swimmer and that he would not be able to perform on the instrument if he were not in excellent physical shape. Vernon noted that you need to be some sort of athlete, or do some type of conditioning to be able to play an instrument at a high level. He also noted the best way to relieve tension, besides having a good resting heart rate, is by having

enough air to play in the lower register on the bass trombone. Vernon noted that you cannot play effectively in the lower or upper register without being relaxed. Vernon says that he likes to frequently play in the bottom octaves of the piano on his bass trombone. He said that you have to move a large volume of air and then that large air volume transfers into the upper register and then to the tenor trombone. Vernon said when he plays low on the tenor trombone and is moving a large volume of air, it creates a sense of relaxation which then transfers itself to the upper register. He feels the correct use of air creates a sense of relaxation.

All three participants were asked who they considered role models for tone production. Rogers stated that he has always enjoyed listening to Tommy Dorsey. He also used to listen to classical trumpet virtuoso recordings when he was growing up. More recently, he stated that he listens to Christian Lindberg and Brett Baker. For ensembles, Rogers stated that he listens to recordings of the Chicago Symphony recordings under the direction of Fritz Reiner with Ed Kleinhammer playing the bass trombone. Hildebrandt noted that his initial sound model was Mr. Haney at Indiana University. After studying with Ed Kleinhammer, he tried to emulate Kleinhammer's sound which was smooth, rich, and strong. Vernon noted that he always enjoyed playing with and studying with Arnold Jacobs.

All three participants were asked if they vocalized at any point in their practice routine. Hildebrandt stated that he usually does not. He also stated that if he has trouble finding a pitch he will be more likely to buzz the pitch on his mouthpiece. Rogers noted that he does not

vocalize during his practice sessions. Vernon stated that you must vocalize within your mind and clearly hear the tone you wish to produce in your mind before you attempt to play the instrument. However, he does not do any vocalizing with his vocal chords during his practice sessions.

All three participants were asked if they felt any difference between the tenor and bass trombones when it came to the area of pitch centering and pitch focusing. Hildebrandt stated that the bass trombone has a greater tendency to spread a sustained tone compared to the tenor trombone. He attributes this to the fact that bass trombone aperture has less support since it is further away from the mouthpiece rim than on the tenor trombone. He also stated that both the tenor and bass trombones will splatter attacks equally due to a lack of focus in the sound. Rogers felt that there is a difference between the tenor and bass trombones. He stated that this difference between the tenor and bass trombone has become less and less over the years for him. Rogers noted that if he keeps current on both trombones, the difference is not a problem. Rogers noted that if he has to put one instrument away for a week, he does have a little problem with tone centering.

All three participants were asked what kind of vibrato they used on both the tenor and bass trombones. Vernon noted that when he plays a ballad on the tenor he uses slide vibrato. He noted that it is easier to maintain pitch with slide vibrato and that lip vibrato may have more of a tendency to let the pitch sag. Vernon noted that generally in the upper register he will use slide vibrato and lip vibrato in the low

register. Hildebrandt stated that he is more likely to use slide vibrato on the tenor trombone, and use jaw vibrato or sometimes slide vibrato on the bass trombone. Rogers stated that he uses jaw vibrato on both the tenor and bass trombone. He also noted that in an orchestral setting on the bass trombone there is not much call for the use of any vibrato.

All three participants were asked if they used any exercises or techniques to improve the openness of the oral cavity or throat and if they felt any differences in the oral cavity between the tenor and bass trombone. Vernon noted that he does not try to think about that so much, but that he would rather focus on keeping the air the same. He did note that the aperture changes in the different ranges, but it is best to keep it simple and focus on the air. Rogers felt that each instrument required the same degree of openness and that he does not think about that area of playing too much. He feels it is best to put the instrument to his face and play. Hildebrandt feels that if you conceptualize the sound you want in your head before you play, the rest will take care of itself.

CHAPTER SEVEN

PERFORMANCE PHILOSOPHIES AND PRACTICES RELATED TO TECHNICAL DEVELOPMENT

All three participants were asked if they did any exercises to isolate and improve the transition into the pedal register on both the tenor and bass trombone. Vernon noted that he likes to do pitch matching exercises with the two different embouchures he uses. He then uses that same thinking when he does his embouchure change for the pedal register. Vernon alternates between embouchures but still maintains the integrity of the tone and tries to make the sound from both embouchures match. He feels approaching the shift to the pedal register from this type of thinking is the best. Hildebrandt states that he does slurs or glisses down and descending octaves or scales. He feels you need to play from where you are comfortable to where you are not comfortable. Hildebrandt also felt that he did more shifting on the tenor trombone than on the bass trombone. He felt the reason was because it feels more natural to him in the pedal register on the bass trombone. Hildebrandt feels that you can transition into the BB-flat range from BB-natural without shifting on the bass trombone. It creates a more open response so he tries to do as little changing as possible. Hildebrandt noted that on the tenor trombone there is a huge difference in response when going from BB-natural to BB-flat. He feels the pitch F is the beginning of the low register for him. Rogers feels the shift is accomplished by putting a little more upper lip into the mouthpiece and then learning how to deal with the embouchure shifting.

All three participants were asked if they felt there was a

difference in the tonguing technique when comparing the tenor trombone to the bass trombone. Hildebrandt feels that on the tenor trombone he uses a lighter tonguing style than on the bass trombone. Vernon stated that it is easier for him to tongue on the bass trombone because there is more room inside the mouthpiece. He feels that this applies to the middle and middle low registers on the bass trombone. Vernon stated that in the upper register it is easier to tongue on the tenor trombone. He also stated that he does not treat them differently, and that he tries to match the sound on both instruments. Vernon also stated that at various points in his career he has played through the Arban method book completely over a given period of time. He would play each exercise up an octave, as written, and down an octave. He noted that his tonguing and overall technique were at an all time career high for him when he completed the method book for the first time. Vernon was taking every exercise and trying to make it sound the same, no matter the register, and he was amazed at how much it developed his embouchure strength. Rogers felt that the tonguing does change a little from one register to another. He feels that overall, tonguing is more range specific rather than tenor or bass trombone specific. Rogers feels that it is important for the musician to have a toolbox of different articulations to be an effective trombonists. Rogers feels that the tenor/bass trombone doubler must have a slightly larger toolbox to be effective.

All three participants were asked if they tried to use the valves on their bass trombones as much as possible or did they try to use the slide as much as possible. Vernon noted that some bass trombonists have

been criticized for sounding like a slide tuba. He feels that he wants his legato sound to be as liquid smooth as possible. Vernon noted that on some recordings a valve popping sound was problematic, and that he solved it by using regular positions. Hildebrandt stated that his choice of positions is driven by technical concerns. He noted that the bass trombone sound has changed dramatically over the years, but that too large a bass trombone sound does sometimes pose problems in an orchestral setting. Hildebrandt will ultimately let his ear determine which positions will sound good. Rogers stated that it is good to be able to play exercises with or without the valve. By varying which combinations you use, you will develop a mastery of the valves, which is essential.

CHAPTER EIGHT

PERFORMANCE PHILOSOPHIES AND PRACTICES RELATED TO INTONATION

The study's participants responded differently when asked if they felt any differences in tuning between the tenor trombone and the bass trombone. Hildebrandt stated that he did not feel any differences between the instruments, but he was more likely to run into intonation problems on the tenor trombone than the bass trombone. Rogers stated that the problem he experienced was that the harmonics on the tenor trombone seemed different than those on the bass trombone. He felt that part of the problem was not using a mouthpiece on either instrument that worked well for him. Rogers noted that it took him years to arrive at using a certain mouthpiece on tenor trombone and a different mouthpiece on bass trombone to help the two instruments respond in a similar fashion. Rogers stated that when he first started doubling, he tried to use a similar mouthpiece on both horns, and that it caused him to play consistently sharp on the tenor trombone.

All three participants responded in a similar fashion when asked if they played a pitch in tune on the slide or if they had to "mouth" some pitches. Vernon stated that he blows straight into the instrument all the time, and that his right arm makes the adjustments and plays in tune. He also noted the trombone can be played perfectly in tune at almost all times. Hildebrandt stated that he rarely has to make any adjustments as the players he performs with are stable pitch wise. He noted that a pitch will not always ring true but that is more a matter of which chord tone you are playing and the inherent adjustments you

must make. Hildebrandt feels that there is a lot of tactile memory on different pitches. Rogers stated that he does not assume any note will be in tune and that he listens and adjusts to correct any problems. He feels doubling has made him play with better intonation because you have to alternate between the two instruments and you cannot become complacent with just one instrument.

All three participants responded in similar fashions when asked how they have their valves tuned on the bass trombone. Hildebrandt stated that he has his first valve tuned to F and G-flat on the second valve. He sometimes tunes both so he gets a D in first position with both valves. Hildebrandt stated that he also uses G-flat in third position for the second valve. Vernon uses a similar setup and Rogers uses a single valve tuned to F on his bass trombone.

CHAPTER NINE

PERFORMANCE PHILOSOPHIES AND PRACTICES RELATED TO DOUBLING

The participants were asked how long it took them to feel comfortable on the bass trombone when they first started learning the new instrument. Hildebrandt stated that within a general sense it took only a matter of weeks. He was able to perform a jury on the bass trombone after only two to three weeks of playing, but admitted he did not do a stellar job performing on that jury. Rogers noted that it took a couple years for him to feel comfortable with the bass trombone.

The participants were asked if they ever got discouraged when they first started doubling on the bass trombone. Vernon felt that it really was not so much getting discouraged, but that it took a lot of time initially to get comfortable alternating between the tenor and bass trombones. Vernon also noted that Jacobs advised him not to go by how it feels, but by how it sounds. He feels that bit of advice by Jacobs has helped him through some challenging situations. Vernon also noted that when he initially went back to playing tenor trombone after laying off of it for three or four years, his lips would sometimes feel awful. He then would play the bass and it would feel very refreshing and comfortable. Rogers noted that he experienced a lot of discouragement. Hildebrandt noted that he never really got discouraged, but that it did take a great amount of courage and determination. He felt that it takes a lot of courage to learn a new instrument and then perform on it in public.

The participants were asked if they considered themselves either a tenor trombonist playing bass trombone, or a bass trombonist playing

tenor trombone. Hildebrandt stated that he feels he is a musician first, in the enigmatic sense. He also feels that he considers himself a bass trombonist first. Rogers and Vernon both feel that whichever instrument they are playing, that is what they consider themselves to be.

The participants were asked if they have a preference for the order in which they would perform multiple instruments on one performance. Hildebrandt stated that he prefers to perform on the tenor trombone, and then move to bass trombone. Vernon prefers to perform on bass trombone first and then go up according to instrument size. He also noted that programmatically, the big instrument to small instrument sequence does not always work. Vernon noted that most of the time in recital performances he does go from smaller to larger instruments. This was something he just had to accept and learned how to overcome the situation. Rogers noted that he would let the program dictate the order of performance, if he had that situation.

The participants were asked if they had any fatigue problems with their left hands. Vernon uses the term "bass trombone claw" to describe the way his hand feels while holding the bass trombone. It describes the position of the thumb extended away from the hand with the middle finger stretched to operate the second valve on the bass trombone. He has worked with his sister who is in the health field to develop a pre-molded plastic device that would be strapped to the palm of your hand and then be attached to the bass trombone. This would help carry the weight of the bass trombone in the palm of your hand and provide less tension on the individual fingers of the hand. He feels the

awkward and stressful way in which we hold the bass trombone is a major issue that needs to be addressed by an instrument manufacturer. Hildebrandt noted that he developed a frozen shoulder and that he needed an injection of hydrocortizone and physical therapy to restore range of motion to the shoulder. Rogers noted that he experienced problems with his left hand and that he used an athletic wrap to help provide support for the hand.

CHAPTER TEN

CHARLIE VERNON'S DOUBLE TRIGGER TENOR TROMBONE

Vernon performed on a double valve tenor trombone at the 2001 International Trombone Association annual meeting in Nashville, Tennessee. The trombone was a standard Bach 42 with a Greenhoe double valve arrangement mounted onto it by Gary Greenhoe. The bell was one that Vernon previously owned and had it mounted onto the double valve tenor trombone. The slide section was one that Vernon owned, and was a .562 bore. He plays the instrument with a standard Bach 2G mouthpiece. Vernon noted that for years he played a Bach 42B with a tenor bore (.547) slide. Then he started playing on a dual bore (.547/.562) slide and recently moved to the .562 bore slide on the double valve tenor trombone. Vernon admits that to some people, the instrument may look like nothing more than a small bass trombone setup. Vernon stated that this configuration is the ideal setup for someone wishing to double on the tenor and bass trombone. He feels the double valve tenor trombone allows him to begin his warmup as he would on his full sized bass trombone. Vernon then is able to go directly into his tenor warmup, while keeping the smoothness of sound qualities he enjoys on the bass trombone. It allows him the technique and smoothness of the double valves combined with the ability to play C's and BB's. He felt the instrument has helped his ability to play in the upper and middle register with this setup. Vernon stated that the only non-valved trombone he will ever play on again will be a Bach 16, and that he has a nice place on the wall to hang all his single valve tenor trombones. Vernon felt the double valve tenor trombone was also useful

in the orchestral setting. He sometimes uses the double valve tenor trombone in the Chicago Symphony when the literature requirements match the playing capabilities of the double valve tenor trombone. Vernon feels that it matches the sound of the other tenor trombones very well and that it is easier to play. He feels that the orchestral tenor and bass trombones were too far apart in size in some instances, and that this instrument along with the larger bore tenor trombones make for a more blended trombone sound within the orchestra section.

CHAPTER ELEVEN

SUMMARY AND CONCLUSIONS

Doubling on tenor and bass trombone is indeed an art. The interviews and subsequent responses from the participants have indicated doubling on the tenor and bass trombone takes a great deal of time and energy to master. The study's participants have approached tenor and bass trombone doubling at varied points in their musical careers. The participants were intentionally chosen for participation in this study because of their different backgrounds and experiences. This was done to provide a cross-section of varying approaches to the same musical goal, the ability to perform at a professional level on both the tenor and bass trombones.

Charlie Vernon began his music career on the tenor trombone and played the tenor trombone exclusively until age 23. He then performed exclusively on the bass trombone for three to four years. Vernon then began the process of teaching himself how to double on the tenor and bass trombones over the next several years. Currently he is the bass trombonist with the Chicago Symphony and has also recorded works on the tenor trombone.

Donald Hildebrandt began his musical career on the trumpet. He then learned tuba and was playing both the trumpet and tuba until his second year in high school. Hildebrandt then learned the tenor trombone in the eleventh grade and entered Indiana University as a tenor trombone player. After two years he switched to the bass trombone. Hildebrandt is currently the low brass professor at The University of Delaware, and tubist with the Delaware Symphony.

Brian Rogers began his musical career on the euphonium and learned the tenor trombone while in high school. In 1980, he then switched to bass trombone and played the bass trombone exclusively for several years. He then spent the next several years teaching himself how to double on the tenor and bass trombone. Rogers is currently the bass trombonist with the Rockford Symphony and plays tenor trombone in a professional brass quintet.

Each of the participants interviewed had their own unique and individual approach to the art of tenor/bass trombone doubling. Responses to the questionnaire ranged from almost complete agreement with all three participants on one subject, to completely different responses and approaches on another subject.

One common thread that was mentioned repeatedly by all three participants is that learning a new instrument takes a considerable commitment of time on the part of the musician. All three participants noted that it also takes a great deal of dedication as well as the willingness to have your level of performance be adversely affected on your principal instrument for a period of time.

The author feels that there is not one standard method or correct fashion in going about learning a new instrument. Every musician is unique and this document was created to help guide the aspiring tenor/bass trombone doubler through some of the obstacles and challenges that he or she may face. Regardless of the differing or similar performance practices and philosophies employed by the study's participants, they all had the same goal in mind, to be a successful tenor/bass trombone doubler.

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APPENDIX 1
INTERVIEW QUESTIONNAIRE
MUSICAL EXPERIENCE/EQUIPMENT USAGE

- 1. Please chronicle your instrumental playing history. Include how long you have played each instrument, what prompted you to learn each instrument, as well as your performance philosophies, practices, and developmental history on each instrument.**
- 2. Please describe the tenor and bass trombone equipment set-ups that you currently are utilizing, any other setups you may have utilized, and for how long on each. Please include the factors that prompted you to alter your equipment set-ups and if the factors were the same for each equipment change.**
- 3. If you knew of a tenor trombonist wishing to approach the bass trombone, or vice versa, what equipment would you initially recommend? What criteria would influence your suggestions? Would you recommend changes later in the musician's career? In other words, would you suggest a smaller bass trombone set-up initially, then progress to a larger bass trombone set-up?**
- 4. Would you recommend a student begin his or her instrumental career on the bass trombone in lieu of the tenor trombone? If no, at what point in a musician's career would the musician be sufficiently developed to approach doubling on the bass trombone?**
- 5. Do you know of any accomplished musician, either first or second hand, that began their playing career on the bass trombone? If**

- yes, please elaborate upon the musician's performance career.
6. Do you utilize different mouthpieces/leadpipes/bells/slide sections to fit a certain musical environment on either the tenor or bass trombone? In other words, do you deviate from your standard equipment set-up on either the tenor or bass trombone? If yes, please describe the changes you make and what criteria influence your decisions.
 7. Please comment on any aspects of tenor/bass trombone equipment usage that I did not address in this section that you would like to discuss.

EMBOUCHURE

8. Please describe your use of tenor and bass trombone mouthpiece pressure. Do you apply the greater amount of pressure to the top or bottom lip, or do you apply pressure equally across both surfaces? Do you use the same pressure principals for both the tenor and bass trombones?
9. Phillip Farkas in his The Art of Brass Playing states, "Which is the proper embouchure, the smiling one or the puckered one? A little thought will lead to the conclusion that both systems *must be combined*."⁷ Would you agree or disagree with this statement or agree with only certain aspects of it?
10. Please describe your thoughts on the tenor trombone and bass trombone when addressing the issue of lip puckering and corner

⁷ Philip Farkas, The Art of Brass Playing. (Rochester: Wind Music Inc., 1962), 13.

tensioning. Are there differences and/or similarities between each instrument?

- 11. At the outset of learning a new instrument, did your embouchure fatigue quickly on the secondary instrument? How did you develop and/or increase endurance on your secondary instrument? Was your embouchure altered or affected at this time on your principal instrument?**
- 12. At any point while learning a new instrument did you experience or have problems with a “double buzz” on either the tenor or bass trombone?**
- 13. Do you shift your embouchure and/or move your mouthpiece to improve range or to enhance other aspects of your playing on either the tenor or bass trombone?**
- 14. Does the mouthpiece placement on the teeth and lips feel similar or dissimilar on the tenor and bass trombones? Is there a difference in the feel and amount of lip vibration between the two instruments and how does it affect your embouchure when alternating between the tenor and bass trombone?**
- 15. Do you buzz on your tenor and/or bass trombone mouthpiece? Please elaborate upon your philosophy and practice procedures when buzzing the mouthpiece. At what point in a musician’s career would he or she be sufficiently developed to begin buzzing on his or her mouthpiece?**
- 16. As a brass player, the embouchure will have a tendency to imprint or develop pressure rings/marks where the mouthpiece normally seats itself. Muscles will also have a tendency to**

thicken and callouses will sometimes form to help cushion the mouthpiece against the teeth. Did you have any difficulties in developing two sets of mouthpiece seatings, one for the tenor trombone and another for the bass trombone?

- 17. Please comment on any aspects of the tenor/bass trombone embouchure that I did not address in this section that you would like to discuss.**

WARM-UP

- 18. Please describe your warm-up routines for the tenor and bass trombone and how they are similar and dissimilar.**
- 19. Do you always perform your initial warm-up on your primary instrument? Once you have done your initial warm-up on one instrument, do you feel warmed-up on the second instrument?**
- 20. Will you warm-up on both the tenor and bass trombones prior to a performance when you will be utilizing the tenor and bass trombones for that performance?**
- 21. How has your warm-up routine on the tenor and bass trombones evolved through your career, and is it still in a state of revision?**
- 22. If during a performance you had three to five minutes backstage to transisition between the tenor to bass trombone or vice versa, what exercises or routines would you utilize?**
- 23. Please comment on any aspects of the tenor/bass trombone warm-up that I did not address in this section that you would like to discuss.**

BREATHING

- 24. Do you have specific breathing exercises that you utilize on a regular basis? Would you please explain the concepts behind your breathing exercises and why you feel they are beneficial.**
- 25. Describe the differences and similarities in the amount of air usage on the tenor and bass trombones. Please include such variables as dynamics, register, and air velocity.**
- 26. Trombonists talk of breath capacity frequently, but do you do any exercises that target specifically breath control? Please describe the exercises and how breath control varies between the tenor and bass trombones.**
- 27. The release of the air stream at the point of initially articulating a pitch is an area that many trombonists struggle with, especially after an extended period of rest. What are your thoughts on the “turning around” of the air stream? In others words, describe the point in the playing process where we must stop inhaling and we must begin expelling air to create lip vibration and how the process varies between the tenor and bass trombones.**
- 28. What mental imagery do you use to help a student understand the breathing process? Do you utilize any breathing devices such as an air bladder or a resistance chamber to help isolate certain aspects of breathing?**
- 29. Please comment on any aspects of tenor/bass trombone breathing that I did not address in this section that you would like to discuss.**

TONE PRODUCTION

- 30. How would you characterize tone production on the tenor and bass trombone in relation to the fundamental tone and overtone series? What mental imagery do you utilize to conceptualize the different tenor and bass trombone timbres?**
- 31. It is generally agreed that our tone production and quality is determined by many factors such as breath control, embouchure, efficiency of the player, etc., and that unnecessary tension is a common hindrance experienced by players in these areas. Do you perform any exercises or routines that are designed to help eliminate unnecessary tension from any area of the body? Do you find differences or similarities in tenor or bass trombone performance when addressing these areas?**
- 32. Who were your models for tone quality when you were a developing player? In regard to tone quality, to whom do you currently recommend students listen? Please include examples of tenor trombone and bass trombone players.**
- 33. Do you do any vocalizing in your practice routine? How do you go about it and what benefits do you receive from it?**
- 34. Do you find any differences between the tenor and bass trombone when it comes to the area of tone focusing/pitch centering?**
- 35. What criteria do you utilize to determine your vibrato on both the tenor and bass trombone? Are there any similarities or differences in the vibrato production on the tenor and bass trombones?**
- 36. Please describe any exercises or techniques you utilize to improve**

the “openness” of the oral cavity and the throat. Do you feel there are differences in the oral cavity and throat when performing on the tenor and bass trombones?

- 37. Please comment on any aspects of tenor/bass trombone tone production that I did not address in this section that you would like to discuss.**

TECHNICAL DEVELOPMENT

- 38. The smooth and seamless transition into the pedal register on the bass trombone, as well as the tenor trombone, is an important skill to develop. What exercises do you do to isolate the transisition?**
- 39. Do you consider the pedal register beginning with pedal BB flat as a shifting point on the trombone? Do you do any mouthpiece pivoting, embouchure changes, or oral cavity changes in the transitioning to the pedal register? Do you do anything different on the tenor and bass trombones when transitioning in and out of the pedal register or while playing in the pedal register?**
- 40. Do you change your approach to tonguing from the tenor to the bass trombone? Please include such areas as legato and detached tonguing, and differences in registers, dynamics, and air velocity.**
- 41. With the advent of the independent double trigger, increasing bore sizes, and open wraps, it is possible to make the bass trombone sound similar to a tenor tuba. In your approach to the bass trombone, do you try to play as much of the composition “on the**

slide” or do you make as much use of the valves as possible?

Please explain your philosophy and what criteria you use to help guide your decision.

- 42. Please comment on any aspects of tenor/bass trombone technical development that I did not address in this section that you would like to discuss.**

INTONATION

- 43. How do you know when you are playing in tune and how does it feel? Please describe any differences between the tenor and bass trombones.**
- 44. Do you find yourself “mouthing” pitches or changing your embouchure or oral cavity for pitches, or do you always try to find the “sweet spot” on the slide for every single pitch? Please describe your philosophy and any differences or similarities on the tenor and bass trombones.**
- 45. What pitches are your bass trombone valves tuned to? Are there any valve/slide combinations that you want lined up on a specific spot on the slide? Are there times when you deviate from your standard valve slide tuning?**
- 46. Please comment on any aspects of tenor/bass trombone intonation that I did not address in this section that you would like to discuss.**

DOUBLING

- 47. Would you agree that for some musicians developing a secondary**

instrument requires a great deal of mental toughness and courage? Did you ever get discouraged in the learning of your secondary instrument? Did you go through developmental stages when first approaching a new instrument where your sound was less than professional? What kind of instruction have you had on your secondary instruments?

- 48. If you are originally a tenor trombonist, when you play the bass trombone, do you think of yourself as a tenor trombonist playing the bass trombonist or do you identify yourself as a bass trombonist? Please substitute instruments to fit your particular situation.**
- 49. If given the opportunity to program the order in which you play your tenor and bass trombones, would you play tenor trombone then bass trombone, or bass trombone then tenor trombone? Would you ever program more than one trombone switch in a performance?**
- 50. Have you ever had to perform in an instrumental order with which you were not comfortable? What solutions were you able to devise. How would you prepare yourself for any such comparable future performance demands?**
- 51. Have you ever had fatigue difficulties with your left hand and arm on the bass trombone? What did you do to help elevate tension and build strength in your left hand and arm?**
- 52. When setting the trigger operating ranges of your bass trombone left hand, do you try to keep the fingers of the left hand in a relatively closed or open position?**

- 53. Do you use a marking system for the three different valve combinations on your music? If yes, please describe the system and the reasons why you use it.**
- 54. Please comment on any aspects of tenor/bass trombone doubling that I did not address in this section that you would like to discuss.**

DOUBLE VALVE TENOR TROMBONE QUESTIONS FOR MR. VERNON

- 55. Please elaborate on the production process and design specifics for your double valve tenor trombone.**
- 56. What inspired you to want to create this trombone?**
- 57. What niche or area do you wish to fill with this trombone?**
- 58. What would be the potential benefits to a musician performing on this trombone?**
- 59. Please comment on any aspects of your double valve tenor trombone that you would like to discuss.**

CONCLUSION

- 60. How could I have improved upon this questionnaire and interview?**
- 61. A statement from the author thanking the participants for their time, energy, expertise, and willingness to participate in this study.**

APPENDIX 2

THE INTERVIEW WITH CHARLES VERNON

What is your instrumental playing history? What instrument did you start on, and when did you begin playing additional instruments?

I started on the tenor trombone, like all of us did, on a pea-shooter. I played that all through high school and college. The last year or so of college, I was playing with this rock band down in Atlanta, Georgia. I played with a lot of bands. I played with James Brown, Isaac Hayes, all those guys. Paul Revere and the Raiders went on several tours with this teeny bop rock kind of band, and so I made some money. I always liked the bass trombone, I liked the idea of it. I liked playing down low all the time, playing down an octave. We used to do gospel type recording sessions. We had two trombones and I'd always play the lower part because it just sounded better. They were bass trombone parts, but I played them on tenor. Then I had some money and bought a bass trombone, a Holton, in November of 1970. Within two days of getting the instrument, I came to Chicago and had lessons with Jacobs and Kleinhammer. I had played tenor trombone and had lessons with Jacobs a year before that and he gave me all of this stuff. I'll never forget, I'd just gotten this bass trombone, I came to Chicago and he really gave me a hard time in saying that he didn't hear any improvement. I'd worked pretty hard in that year, trying to figure out the stuff he'd told me and I felt really bad that he said that. Also I was playing something completely different, a bass trombone with a 2G mouthpiece which was huge to me at that time, going from a 4G to a 2G.

It was a big change. Then I went to see Kleinhammer the next day and he was great, just kind of helped me along, pulled me up, and had me playing a few things and trying this and that. Really, I had just switched and decided to play the bass trombone. That was November, and I had Thanksgiving up here (Chicago). Then I went back to Atlanta. Then in March, I auditioned for the Boston Symphony and Baltimore Symphony within a week. There I was with my new bass trombone after I'd been playing it for three months. I was frantic trying to learn excerpts and all this stuff. I remember going to the Boston Symphony audition, there was this huge room filled with bass trombone players, who'd been playing bass trombone all their lives. So I was just listening and it was scary. I heard a lot of crap, but I also heard some great bass trombone sounds coming out. I didn't play in there, I was just listening, I was nervous and didn't get anywhere. Then I left and went to Baltimore, stayed a couple days in motel there and played and got in the finals. I remember calling Kleinhammer and crying on his shoulder. He was so great about motivating me. Basically then I went back to Atlanta, practiced my butt off for a month and a half, switched to a Schilke 60, put it in there and went crazy practicing. Then I went back up to Baltimore and I got the job with the Baltimore Symphony when I was 23. It was a pure shot in the dark. All of a sudden I was a bass trombonist, even though I wasn't in my head, so I learned. There were some things that I went through physically. On tenor trombone, anytime I played between F and B-flat it was one embouchure and another embouchure for B-natural and above because I did not know any better. I could kind of do it then, but I wasn't matching the sound. I

was in a lesson with Kleinhammer and he said, "blow them the same", and it worked, it was new meat. I was playing a higher note than I'd ever played before on that low embouchure. I went right into it and it was so fresh. I will never forget that feeling, the feeling of my lips vibrating in that way but the sound was even. We were on strike in Baltimore at that time and I was playing for an ice show and the circus. I remember this circus in Atlanta went on for weeks, three to four shows a day. I played the bottom part in the trombone section on the bass trombone (pitches from FF to b-flat), and on a lot of the loud stuff on the B-flat to B-natural area where I used to shift. I spent that time learning, playing the ice show, learning and getting my lips to where they would respond on those notes and I got it where I could get up to a tuning b-flat. All those notes below tuning b-flat on the way down were cream, I could blow those notes. When I played the upper embouchure in the middle range, I couldn't control the notes when I crescendoed or diminuendoed. Over that year of time I had a struggle, but over the years it got better. That was one thing I noticed going from the tenor to the bass, that middle/low-middle register I had to develop it. So I spent four or five years playing only the bass trombone, no tenor at all. On the two horns do you feel there is a middle area/register or common ground? Even though there is possibly a common ground/area on both instruments, you found it to be an uncommon ground.

It was for awhile, this was at the very beginning. For awhile I didn't even try to do the upper range the same way on the bass trombone. I was going straight into the instrument for the one embouchure, where

the other embouchure was more top lip, more of an angle. That was the way I played the tenor trombone. So when I only played the bass, I lost that ability to play in the middle register with the embouchure like that. Then when I picked up the tenor trombone, I was playing with a jazz group, four or five trombones at a party, and there was another bass trombone player, so I picked up the tenor. That started me right away playing the tenor trombone again.

So you really laid off it for...

For at least three or four years. I was going for developing the bass trombone thing, the lower register and playing all over the place. I'd go up high and make a change and come back down and make a change again. Then I started playing the tenor trombone some because it was easier to play and I liked playing high, playing solos, and I started auditioning for first trombone positions. I started that in 1975 and ended that this past June. I've been doing that a long time because I really wanted to do that. I wanted to play lead and I got close a bunch of times. I was in the finals for first trombone in the Boston Symphony, but Ron Barron got that job. There was some natural thing, I didn't ever lose the high thing, as a matter of fact, the high notes have gotten better in the past few years. What I did notice, when I started going back and forth in the beginning, it was a real drag, because I'd play the bass for awhile, then I'd play the tenor trombone, and it was a small, constricted thing. I tried it with a Schilke 60 rim and a little cup but it sounded too much like a baritone, so I stopped doing that. It was a good way to make the change. Then I decided that it would be like this: bass trombone would be like this, tenor trombone would be like this,

completely different mouthpiece and everything. Every time I played the tenor, it would seem like it would take forty-five minutes to an hour of just playing things trying to get the sound, it was a drag. Then I'd go back to the bass and it also was a drag. I did this for years and years and the tenor got better, it took less time to get it to where it sounded o.k., but it is always more difficult to go from bass to tenor than tenor to bass. But over the years, I don't think about that anymore. The way that I play now, it takes a couple minutes to come back to this (bass), and it takes about five, maybe ten minutes to go to tenor. If I have to go immediately, I can do that too, but it took many years to get to that point. It was really frustrating because going through the embouchure changes that I had, when I picked up the tenor trombone, I didn't play the way I used to play. I was playing the way I'd learned during that year, and I was able to go up high, into the screaming range. It was great because I had two embouchures. We'd be playing in a quintet, and everyone would be getting tired, and I'd just switch to the other embouchure, and I could keep going. It was an unusual thing that happened, this shifting back and forth, being able to do that. Sometimes I would practice a B-flat major scale from B-flat to b-flat playing it all on one embouchure, then the other, then switching between the two at different points in the scale. I would do that sometimes just to practice, to see if I can get a similar sound on all of the notes. Everybody has embouchure changes, just some people do it in different places. Some bass trombone players that I know have the misfortune of having embouchure changes around E-flat to D, in mine, on the tenor, it was a little unfortunate where it was, but I smoothed it out and it enabled me

to do things in the middle range that most people can't or won't do. So you played tenor through college, then switched to bass cold for three or four years. Then you have gradually been flip-flopping back and forth, and have narrowed the comfort range to where you can basically shoot from the hip on both of them. I played a lot of times on concerts and recitals where I've played all three instruments. There are two concertos, one especially I like, Norman Bolter wrote Of Mountains, Lakes, and Trees, and I've played it twice with an orchestra now. It starts off on bass-mountains, lakes is tenor, another movement, then alto is trees and the bass is the epilogue, it comes back to it. I talked to him the other day in Boston, and we were going to try and fix the epilogue, take it and rename it, and take some of it down an octave and maybe play it on the contra bass trombone. On the performance of that, starting on the bass trombone, its great, I feel real good, having to play the tenor, the way the piece started was in the middle-upper register. So I was able to play it on that upper embouchure, and it was fine. The alto trombone started on a b-flat and it was easier for me to go from bass to the alto trombone than from this (bass) to the tenor trombone. Its a strange thing, and it is easier to go from the alto back to the bass. Going back to the bass is pretty easy now, it always works out. I have played several recitals now where I have started off with Albrechtsberger or something like a Mozart concerto on the alto trombone, and play a piece or two on tenor trombone until intermission then do bass trombone. The only thing that I don't like about that is the level of subtleness, the level of how great it is, it is not one hundred percent on all of them. It is like ninety-five

percent on each of them and there is no way that I, or anybody for that matter, would be able to play the bass trombone as well as I could play it when I only played that. I could never do quite that when I was going back and forth on instruments. There is always a trade off in doubling, but when I play the tenor trombone all of the time, it is at a real high level. When I play any of the instruments by itself for an extended period of time, I can get it to a high level. It is just that going back and forth, the doubling thing, the mouthpiece thing, the huge difference in the air, it is harder to play, harder to hold, and you are moving the air more, moving the slide more. Everything is much bigger, and the contrabass is even bigger. It is much more of a physical thing to play. When I get through playing the bass trombone at a recital, my hand is killing me, my back hurts from standing, and I'm just tired physically, and I'm kind of stiff in the chops from playing the middle register and the low register. The middle register is where you play most of the time with the orchestra, and it is much harder to play in the middle register on the bass, rather than on the tenor, stamina wise. Tenor trombone is much easier to play, physically holding it, the air, the range, everything about it is easier, except the low range of course. When I play the tenor, if I've got something to play like Of Mountains, Lakes, and Trees, and I don't have a lot of time, of course I practice the individual part on the individual instrument, but when I practice, I will play a bunch of high notes on the bass trombone because it develops chops. Then on the tenor trombone, I have a double trigger, it is great. Gary Greenhoe made this for me, I am loving it.

I saw you at Nashville with it. Let's go ahead and talk about it.

I think you can buy it, get on-line and order it. I don't know if you can get it yet, but you can order a valve section and have it put on anything you've got. That is really a great, fantastic thing because of what it has done for me. When I start off playing the bass trombone, it is most always on a B-flat to BB-flat, I noodle around in arpeggios, play pedals, valve pedals, all in that register, then I move up and let it move into the other registers, all legato slurs. Then on the tenor trombone with the Thayer valve that I've used all those years, I could do some things and I thought o.k., I can still do some slurring, but I'd play a C and get the slide all the way out, and you can't play a BB-natural. I got so sick of that. When he (Gary) did this for me, it changed everything. Now when I pick up the tenor trombone, and I've stuck in the 2G the thing is it doesn't affect the range, but it is more comfortable. I can play C's and BB's, and the technique of the double trigger, after playing it for twenty-five years with a double trigger, it is no problem at all. It is like a piece of cake to me. It enables me to start off on the tenor trombone the same way I start on the bass, with the smoothness in sound. It has really helped the upper register and middle register, just by having that, it is the weirdest thing. Playing a Rochut or something really down low and being able to treat it the same way, it is just smaller. It hasn't affected the high notes at all. The only criticism I have about the double trigger tenor trombone is that, (and Gary doesn't believe me- I have tried to tell him), I think it is the way it is weighted or balanced, is that it is heavier. It is heavier than my bass.

Yes, and those are heavy to begin with.

This one is pretty heavy with his valve, and it has a lot of tubing in

there. That has been a tremendous thing for me, and I'll never play a straight horn unless I play on a Bach 16 again, or even a single trigger. I think I'll keep one just to hang it on the wall, but I'm still on my new Shires. It is a wonderful instrument, a wonderful valve and everything, but you're supposed to be able play a C's and BB's and slur to an E-flat and F-sharp and do all this stuff and make it sound musical, you'd be silly not to do that. I think that trombonists and the next generation of trombonists, somewhere along the line, it will be the trombone of the future. The double valve tenor trombone, because you can play anything on it. Anything that you'd have to play, and you can play smooth. You can't play smooth on a single valve bell, so I'm really into the double valve tenor trombone. I like it a lot.

So that was a Bach 42 with the Greenhoe valves cut into it. So it was an "off the rack" Bach 42?

It was one of my bells, they put it together. For years and years I played the Bach 42B with a tenor slide, then I started playing with a dual bore slide, tenor/bass, and I liked that a lot, and I did that until last May. I decided, I had a regular bass trombone slide, I had the nickel silver taken off so it was lighter, so it was a bass trombone slide.

.562 on both sides?

Yes, so I put that on. Some other guys in the orchestra play on a lightweight version of that. I put that on and the middle register, and fast running eighth notes were much improved. That has been the sticking point of all of these that auditions I've gone to, playing clean and clear in that register. The sound things are great, the high things are great, but moving around, that cleared it up another thirty to forty

percent. I have graduated to this double trigger tenor trombone with a bass trombone slide and a 2G. To most people, this is a small bass trombone, and it is when you look at the mouthpiece, the slide, the double trigger give it the “sense” that it is a bass trombone, with a small bore and the bell section is basically a tenor, but I can play it in the orchestra for a third trombone part, and I do. It is easier to play and it fits in with the tenors better. I’ve come a long way, from having them this far apart, and now the tenor is coming closer to the bass, and the alto is taking up the void for the “pea shooter” kind of stuff. Although I did that, I did the Pugh in Nashville and it works fine. It doesn’t affect the upper register at all.

What kind of set up are you playing on your bass?

Usually in the orchestra nowadays, I am playing a duel bore slide, .562 and .578 or something. There is a lead pipe about this long (three inches). For years and years I played with no lead pipe, and just had a tuba shank that would fit. I liked that and I played that way for a long time. I still do it from time to time. It is a huge mouthpiece on here, it is not a Schilke 60, a little wider and deeper, everything is a little bigger than a 60. I just kind of graduated to it, over the years, and that is plenty big enough. I was telling these guys, when I get to sixty-five, I’m going to put the 60 back in there and have an easier time of it. For now it is fine, a big mouthpiece, half the time no lead pipe on a big slide and these axial-flow valves are really good. Gary’s making me a new valve section for my bass bell. I have a New York made in about 1951, a friend, Dan Satterwhite, played in Santiago, Chile in an orchestra. He found this bell which had been an old military instrument. The bell was

in great shape, he had a new horn that he traded for this. They thought they were getting a great deal. I paid about three thousand dollars for this long ago. No, I didn't actually pay cash. I gave him a Mount Vernon, with axial-flow valves, a complete valve section and he gave me this bell flare. This is what I play most of the time, and I have a couple others. I have a red one I got from Jeff Reynolds, it was made in 1933, the prototype copy of the Conn Fuchs model that Bach made. I got it with a narrow, lighter slide and a Conn-looking valve section. It is nice, but not as good as my yellow bell. That is basically what I play on the bass trombone. On the contrabass I play this Haag, Swiss made, fantastic instrument, finally I found one that's good. I've played these other instruments. I used to own a Holton bass trombone, and I've played Yamaha, and Edwards. I played Edwards for years, but it got too heavy to hold and the sound was one-dimensional. It was great in the middle register, a good orchestral horn, but it didn't have much color to it, so I went back to this and it is just great. Now the tenor I play is a 2G. Usually it has been a 4G with a duel bore slide and no valves. I play on a Thein alto trombone. I like it because the slide is bigger than other altos, and it feels like a real trombone. I tried the Glassel, but the slide is tiny. It is a great horn and on the Bach 16, I play a 4C.

If you know a tenor trombonist wishing to approach the bass trombone or vice versa, what equipment would you initially recommend for the student, and would you recommend changes later?

That is kind of what I did. I went to a Holton bass trombone with a 2G mouthpiece and I slid into it that way. A Conn with a 1 1/2 G, that is an

old style bass trombone. Back then a 1 1/2 G was big. The last time I was in Japan, I did a master class, a recital, some teaching, and two or three years before that I did the same thing in the same place. At the first one, all these kids came in with different hybrids of bass trombones or tenor trombones. I had a lot of bass trombones at that time, and I had my Bach, they came in with Conns, and all kinds of things. Three years later I went back I was doing a different thing, playing first trombone in a festival orchestra, Rostopovich was conducting, it was great we did a pick-up thing, a two week festival, and I took a bass trombone along because I knew I was doing this other thing. It was my old instrument I had in Philadelphia, it was a normal in-line, normal valves, slide, and I'm sitting there, and every one of them, eighteen to twenty-two years old, every one of them comes in with a big Bach bass trombone or Shires, or Edwards, with axial-flow valves, at least a bass trombone slide, maybe duel bore, exact copy of my big mouthpiece, no lead pipe. I could have picked up any of their instruments and stepped into the orchestra ready to play, they had great horns, beautiful horns, but they weren't ready to play them. They were too young, eighteen to twenty-two years old, with puffy lips, the mouthpiece was too big, the duel bore slides are specialty things for players in a big orchestra. People don't play this kind of stuff when they play in dance bands, or shows. They go and play the other ones, the Conns, the Holtons, with 1G's or 2G's. That 1G is a great mouthpiece. It is just a step down, but it is easier to play in the middle register. When you play something big like this, I told them, you're going to have to practice another hour a day to get the middle register where you can get a solid hold on it. I gave

them a hard time about that, but I also was honored that they'd copied everything that I did and played. It was amazing to see that. I was in Italy in September, late August. There were fifteen bass trombone players in this big room, and I saw them a couple times for sessions. In the last session, in this book of mine, I have this cycle of fifths, I wrote it down twenty-five years ago, for tenor trombone. Nobody could do that, only George Roberts could do that then when I started playing bass trombone. So here I am in a room of bass trombones, and I played that first one, no music because everyone there has gotten my book. I played it, then they played it. Then I did the next one all the way down the line. All the way to the very end, when it is really low. At the end there are two or three guys playing it. I stopped and I said, this is the most amazing thing to me. Thirty years ago, this did not happen, when I was starting it up, nobody could do it. Now there is a whole room of guys who can play this. I was just doing something simple, years ago it was amazing, now everyone can do it, in Italy, in Japan. The level has gone way up.

Quintet playing either the fourth part on tenor or the fifth part on bass has presented challenges.

That has always been the case with playing in a brass quintet. I can never play high enough to break into that other embouchure. It has a stiffening affect.

My thing is that I always felt inadequate working with a bass student while playing tenor. My reason to learn the bass was to be a better teacher.

That's what I do. To teach, I taught tenor and bass for many years,

when I'd have one bass trombone student for every five tenors. And when I had a bass trombone student, I'd play the bass trombone. Sometimes I'd play the bass during the tenor lessons, but the technique of the double trigger and all that is so commonplace for bass trombone playing, even if you aren't into that, you would have to make them play music down an octave and make sure that every breath was a full breath. I make all of my guys play Rochut in tenor clef down an octave, bass clef down two octaves, down on the bottom of the piano keyboard. We play a lot of music down on the bottom, and you have to breathe, you can't get a good sound if you don't have air in the body, and you've got to figure out how to make it smooth. Even bass trombonists who are accustomed to it, still struggle with it. I think the doubling thing, they both help each other. The high notes that I have on the tenor would not be nearly as good as it is, if I hadn't played so many high notes on this (bass).

Did you consider yourself a better tenor player after you played bass?

Yeah, definitely. I remember playing this Zwilich bass trombone concerto in 1991. I remember getting that music in May the year before, and playing in February so I had six to eight months and I just played the bass trombone, I put the tenor away, didn't do anything with it. I just worked on stuff out of my book that Jacobs would have me do. Just simple things like playing high notes, in one lesson Jacobs said, "start on upper F". Some people play these warm-up slur exercises for an hour with the intent of I can do this until it feels like I can play, then I'd hear them play music not slurred. I'd be like, "what's the point", but

that is another story. So I'm doing this thing for him, an f-major scale in dotted half notes followed by a quarter rest in this fashion: f1 - e1 - f1 - d1 - f1 - c1 etc., and he says, "No, the octave above that". When I did it for him that first time, it was all over, sounded like someone moving furniture. He slapped me on the leg and called me a rank amateur. I was in the Philadelphia Orchestra and I can play high notes, but I hadn't worked on them on the bass. He said that if I did this every day for three weeks, I wouldn't be an amateur. Go back and do the f2-major scale exercise again, those notes that you aren't getting except for a split second, you can improve upon that. You can make a bad sound into a good sound, but you can't make NO sound into a good sound. You have to have something to start off with. I had to start working in the upper register on the bass. Then later, I was going to play this Zwilich concerto. Then in the last measure I had to play f2-sharp, f1-sharp, f-sharp, F-sharp, FF-sharp, in succession, ridiculous. Then there were a couple things in the cadenza that had f2 slurred up to a high e1, amazingly completely by myself in front of the world. So I worked on that, working up an octave, and working on the low, low things. The piece had a lot of up and down technical things that disappointed me. It was more technical than musical, and I tried to make it as musical as I could. I recorded it with Koch records. The reason I'm saying this is that Saturday or Sunday after performing this thing, I hadn't played the tenor in a long time. I went down and picked up the tenor, went YYAANG on the note, like a b2, it was huge, loud, effortless. No one was there to hear it. It was unbelievable, as good as anybody could do it. I wondered if I could do it again, and it was good, but not as good. It

showed me clearly, that if I need to play high notes on the tenor trombone, I work on them with the bass. Then it is easier on the tenor. Same with the low notes, usually I don't have as much trouble, it is just an air thing, but even so, if I practice the low notes on this double trigger tenor, it is so much easier on the bass. So they help each other in the areas they are difficult in. I practice the tenor trombone a lot in the lower register.

I think a lot of guys don't want to learn both horns because there will be that period of time when you don't sound great on both horns, especially if you are teaching in a university, or playing for an orchestra, it is hard to find six months or a year that you are willing or able to do that. I remember my brass methods class, picking up the trumpet and sounding bad. Most low brass players complained about how it was going to screw up their trombone embouchure.

I just thought of something, for people to double, and I am going to advise people when they ask about it, this double trigger tenor trombone, if you put a bass trombone slide on it with a huge mouthpiece, say a 1G or 1 1/2 G, a real bass trombone mouthpiece, if you work at it, you can double and get by on it. I've done some recording sessions where they say they might want me to play bass. I just take that thing, put it in a microphone, you can't tell the difference. For pure doubling, if I had to play a bunch of stuff right there, on the spot, low notes/high notes, sound like a bass trombone here, sound like an alto trombone there, I'd play that thing I've got. It is a perfect match. But you have to know what these instruments should sound like in your head, or it won't work.

Most people won't do that. They'll still be playing tenor trombone even with the bass slide and mouthpiece. I'm used to playing with my head. I don't ever suggest that people double. People see me doing it at a moderately high level, one instrument after another on concerts, but it takes years to do that. So it is not something I recommend. If you double, be aware that it takes some time. Sometimes I kind of wish that I didn't have anything above c2, like a lot of bass trombone players, then it wouldn't be a problem, I would just play bass all the time.

Would you ever recommend a student to begin their career on the bass as opposed to the tenor?

Not really, I've had high school students who want to play the bass trombone. I always tell them to play the tenor trombone first. Bass trombone is a specialty thing and very few people start out on bass trombone.

Do you know of anyone who started on bass?

Jeff Taylor, a former student in Waukegan he's played extra with us. I started him out on bass trombone at seventeen in Atlanta. Blair Bollinger, I think started on bass, I saw him when he was sixteen or seventeen, so I think he started on bass. Those are two really great sounding models. Usually people don't start out on it because it is big and heavy. It depends, when students come in and want to talk about doubling, I usually discourage it because of the level at which they will play each one will come down, and you need the highest possible level of playing to get a job today, to even be considered. You don't need to mess around. Pick one and try to make it as great as they can. If they get something, get a job, then maybe they could double. I have friends in

New York, tuba players, trombone players, doublers on bass trombone/tuba, it blows my mind that people can do that.

I was considering doing more with the tuba doubling, but decided to keep the focus on tenor/bass doubling.

Dan Satterwhite, a student of mine, bass trombone player started playing tuba. He played F tuba with the Dallas Brass for years, and he is as good on tuba as he is on bass trombone. He is one of the few guys in New York, but he is in Florida with some lady friend now. He left New York because he was subbing, he didn't get a show of his own, I think the key to the New York thing is to get a show of your own. But there are people there who play bass, contrabass, and tuba, back and forth, but none of them are very good on any of their instruments. It is a doubling life, not a good life. I don't think of it as doubling. I play solos on whatever instrument I have in my hand-that is the instrument I play. I've played all those Haydn and Mozart concertos with orchestras and everything. When I'm out there, with an instrument, THAT is the instrument I play. You got to get each instrument at a high level, "jobber" doublers don't get to that high level, it is next to impossible. I never suggest that someone learn the bass trombone, unless it is someone who has great low notes on tenor and awful high notes, then I might say try the bass trombone a little bit.

Embouchure, we talked a little bit about the shift, I saw on that one exercise, you got your upper lip more tucked in.

I just put more upper lip in the mouthpiece on higher notes. It is just a technique. I've know some people who do the opposite, some tuba players go up and put more bottom lip in on the high notes. One

trombone player, Harry Maddox, he puts more bottom lip in. It looks weird, but it works. Most people have a down stream when they go up, and others go up. It works, but I don't teach it or think about it. If they have a problem, I can help them with it. The helpful thing for doubling in the beginning is to have a mouthpiece with the same rim size, and after awhile you realize that it isn't going to work either, but in the beginning it can help. The superbone that I had, if you put a big mouthpiece in and play everything, high/low, wide/small, everything and learn how to get it using your brain. Sitting there with Jacobs sitting next to me everyday in the orchestra for three years, listening to him making music, amazing how he was able to make music with a body that's falling apart. He'd have four to six mouthpieces on the stand, play one thing, switch mouthpieces, play something else. It all sounded great, it all sounded the same, but he felt like he could control things better with the different mouthpieces. He played all kinds of high stuff on a big C tuba with a little mouthpiece. He didn't mess around with an F tuba, Mahler First maybe but rarely. Just put that little mouthpiece on the big tuba. Nobody could get a middle C like he could, clear as a bell, big beautiful sound.

Mouthpiece pressure, I am wondering about it because when I first started going back and forth, I threw in the towel and used too much pressure. My lip tore internally, kinda of like an old bias belted tire with a sidewall bubble, it tore on the inside and I had a knot under the surface of the skin. Spent a week with an ice pack on it.

I've got something there (motions towards upper lip), it has been there

thirty years. It is just where the mouthpiece went. Early on, I'd just play and not think about it. I wasn't pressing, but just a lot of playing. When I play a lot, this swells up. I know when to stop. The older you get the more you know when to take it easy. When I have a big performance coming up, I know I have to build it carefully, or this thing gets out of control and hurts, it gets stiff, you know like playing on your teeth.

When you play do you try to apply the pressure equally on the upper and lower?

On the bass, it is pretty equal, I think.

Not so much how much lip in different registers, but the amount of lip pressure.

It creates a seal, and you see a ring, so there is some pressure.

Developed players get enough to seal, and that is it?

I think less is better.

Farkas, with his "Brass Player", smiling or puckered embouchure?

I think smiling is not good, smiling up is not good, the embouchure is getting thin, there is no flesh there around the aperture. The best thing is firm corners, you can think pucker if you want. It is much better to have lip meat in the mouthpiece than not. Firm here on the corners and flat as possible with your chin.

Like the clarinet as opposed to the saxophone embouchure.

I guess.

My corners get firmer as I go low, and the aperture gets looser. I work with students and say they need a great lower register

first, then you can take that sensation of looseness up high. You look at Bill Watrous, and we've had discussions about mouthpiece buzzing and embouchure changes. He doesn't believe in mouthpiece buzzing. He buzzes with the lips only, and I think you should have a rim there. Watching him play, there is hardly any movement, nothing going on that you can see, but inside, I bet that if you had a see-through mouthpiece, there has to be some adjusting of the aperture size, or something. I do think that the rim is important to have there. I have cut-away rims on mouthpieces, I think it is important to have the rim, not to spend a lot of time, but spend some time on a tune to get the lips to vibrate, getting the upper and lower embouchure going. I think buzzing the mouthpiece is one of the most important things that anybody can do because when you buzz a mouthpiece, your lips are vibrating, getting a rich buzzing sound, and when you put the mouthpiece in the trombone and play, with all that buzzing in practice. You will approach it in a different way, although it is a little different, if you play, buzz, and pull it out as you are buzzing, it's not going to be the same buzz as it was when you were playing, but that is not a reason not to do it, and I've tried telling people this all the time. It helps two things. One of the great benefits of buzzing the mouthpiece is that it helps center the sound, creates a core centered tone, and helps the ambiance, the sound. Another benefit is that you can't get a good sound on a mouthpiece without blowing a lot of air, and you can't get a good sound on the mouthpiece without singing the right pitch. The main thing, is that to do that, you have to be leading with the singer in your head on your mouthpiece. Anything you can sing, you should be able to buzz

immediately like that, and get the response from your head to the lips. That is why you buzz the mouthpiece. The other things are just desserts, help the sound, help the breathing, and all that. The main thing is you're talking up in your head and transferring it to your lips. So when you are playing, doubling or playing all these instruments, in the beginning it was always, oh man, I have to do this or play on this. The main thing now is, I'm not thinking about the trombone, I'm thinking about the song and the sound I want to get. The synopsis in my brain sends to my lips the way a singers work to the vocal cords. If you do that, the trombone is just a resonator, an amplifier of the sound you have in your head. A big one like that, or a little one like that. The trombones themselves help guide the tone that you'll get, but the main one is the one in your head. So when you do this, make sure that it is the most important thing, not the equipment, the size, the mouthpiece, the main thing is the brain that is sending the message.

In transitioning, going back to the tenor, did you ever experience a double buzz? The lower lip out of synch with the upper lip?

I know what you are talking about.

Any students with this?

Yes, students.

How did you get them to work their way out of it?

I'd get them to work the mouthpiece like crazy on those notes, a little above and below, I'd get them to think about keeping their tongue down, out of the way of the air column. Mainly it is the concept of matching, because a lot of people will get that double buzz on f-sharp.

Yes, it is right there, on one note.

It baffles my mind- g, f-sharp, a-flat. I've never had that problem, but I had some trouble playing loud in that register on the bass trombone. When I was working to get the job in the Baltimore Symphony on that other embouchure, so if I played a lot of the top lip in the middle register, and I was trying to play loud, it would spread, but it was not the double buzz. If I have students with that, I just get them to buzz the mouthpiece. I've had twenty or thirty students in the past, most of them get better, some of them get rid of it, some don't ever get rid of it. I've asked Jacob's about it. His idea was to control the sound more in their head and try to keep the tongue lower in the mouth. That is something that I really have not had, always one student every two to three years who has a double buzz and it is tough, I don't know how else to fix it.

Mouthpiece placement on the teeth and lips, just a physical feel. We've already talked about starting with the same rim, so there is only one rim, that is half the battle. Just physically, how does it feel different on both of them?

Like I said, in the beginning it was horrible. In the beginning, I was doing both on one mouthpiece, and that kind of felt o.k., one was huge, one was smaller, the sound was just kind of screwed up. When I started doing it "the correct way" with two mouthpieces, it was awful, really awful because the smaller the mouthpiece, the more difficulty I had with it. Especially when you play something so big for so long, then you pick up the small one and say, how could anybody play anything so small? I've tried a 5G and laughed at it because I couldn't get any sound out. I'm much better off with a bigger mouthpiece. The 2G in the tenor trombone

now is great. As far as the feeling goes pertaining to doubling in the beginning, if you do it the correct way with different mouthpieces on the different horns, you are going to resign yourself to the fact that it is going to be a pain. You are going to have to take the time.

For the muscle memory and everything.

Yeah, it takes time.

The lip vibration between the two, do you notice a change on one or the other?

Not a real lot. Playing low notes on the bass for a real long time, sometimes the vibration will make it hurt, and that doesn't happen on the tenor trombone. I've had pains, but that is another thing. A year ago, after a tour in South America, I ate something, and I looked like Homer Simpson on the plane, all of a sudden my upper lip swelled up huge, then the bottom one did it a couple days later. I had a recital I was going to play with the Frumerie Sonata and a bunch of high stuff. Three pieces on the tenor trombone, and all of a sudden this thing happened and I had to stop playing in the orchestra for a few days and I made the mistake of trying to come back too soon on the tenor trombone. It sounded bad, and all of a sudden - ZING-, I felt something up here that I just wanted to rub it away. Something happened like a muscle pull and it was scary. The only time I've ever had that be a problem was after a lot of auditions where I'd been playing extremely high stuff, all of a sudden, after all these clinics, I could barely play b1, and I picked up the bass trombone and it was airy and fuzzy, awful. So I tried buzzing the mouthpiece and it was like a piece of steel. It was like o.k., you've done something now. This happened twice. Both times I figured out, just put

the thing down and stopped playing for a week and came back real slow. I'm one of these guys, I never think about how it feels, I just play and play and play. That has gotten me a long way in my career, playing wise, but you've got to use your brain a little bit, and I've learned I can feel something like that coming on. I've had a couple of scary things, and one of them happened with Jacobs, so that helped me the second time, remembering what he had said. This last thing happened after he was gone, that is the one really bad thing about being left, I studied with him for thirty years, there are a lot of us out here, but nobody has the knowledge that he had. I miss him, not daily, but weekly because I can't call him and ask him questions, along with just plain missing him. Kleinhammer was from a different mold. He worked his ass off, sheer determination and hard work. Jake knew everything that was going on with your body, he just knew.

Was it intuitive?

He studied it medically, he knew all of this stuff, it was a hobby of his. That is the sad thing, no one else knows all that. No one can do what he did.

Going with the mouthpiece set, do you develop two sets of seatings for the mouthpieces, two sets of calluses?

I think the bass trombone goes here, and the tenor goes here. Basically, the bass trombone goes around the tenor. That's why it is very weird, the even numbers of Bach mouthpieces I can play. The 3 and the 5 are awful, they fit at the wrong place. I've tried them and the 2 and 4 are great. That little difference. The bass goes on top of whatever it is, especially the 4G. It took years to get it that way. That's why I don't

encourage people to double, you do it if you're crazy.

Do you warm-up on your bass? I guess you've answered that, it depends on what you are playing.

If I am playing an alto trombone concerto, I'll play the bass trombone first. I wouldn't play the tenor first. Bass to alto is a good switch because it is so different. If I had a choice and the time, I would play the bass first. However, with the new tenor trombone with the 2G and the double trigger thing, I don't really have to do that anymore. So if I'm playing the tenor trombone, and that is what I'm playing, I'll just pick this thing up and do it. I can play some low notes like I'd have played on the bass.

If you are doing a recital where you play both instruments, will you warm up on both of them?

I would warm-up on bass trombone first, then do tenor trombone, then play tenor trombone first in the program. It is always which ever one I start with is the one I play right before. I usually start off the warm-up with the other one. If it was starting on bass and going to tenor, it would be the opposite. I warm-up on both, but it depends on the program.

That makes sense. What about transitioning backstage? When you did the Pugh and the Ewazen you didn't have a chance to go backstage, but when you do have a chance....

I buzz the mouthpiece, sometimes I don't even get the horn up to my face, just the mouthpiece to get the feel. Most of the time I go to the locker and get the bass trombone, and on the way back upstairs, I buzz the mouthpiece, go upstairs and blow a couple notes, and go back on stage and that's it, I'm there. I had to do that down in Nashville, it was

ridiculous, everyone was in the room when I was trying to rehearse with the piano, and I thought that's it, I'll let you have it. It worked at that time. Just picking up the bass and playing it is because that is what I do. I'm on stage with it all the time, and I'm confident about it. I did think about not knowing the first piece very well, even though I'd had the music for a few months, and I'd played the beginning, but it just did not do anything for me. I just did not want to play it. It was page after page of repetitive, middle register, every now and then a low note. First movement was legato, second was a jazz thing. I didn't enjoy practicing it. I'd just finished playing the Pugh, I always liked Eric's music. I ended up the night before, I knew the Pugh, I knew Eric's piece, and that new piece, I was basically sight reading it the night before with the piano player. Next day, came in without a warm-up and tried to play the Pugh. I had to turn it on, I had to lie to those people, and pretend like I knew the music. I had to concentrate on every measure because I wasn't on top of it. It wasn't prepared like it should have been. There was a good response, and he sold twenty copies, and said people were interested in the piece. There are certain pieces I'll play them if I'm asked to play any of them, I guess, but I'm not going to put them on a program. Canto Two, I recorded that for Sam Adler on this record called First Chairs, and it had all his cantos on it, and I hated playing on that. On bass trombone it was no fun, middle and upper registers the whole time, no fun.

When they write for you, I'm sure you have different experiences with different composers, but have they listened to your solo works, or do you sit down with them and ask for certain things?

Yeah, Eric Ewazen has done that with me. He's rearranged two pieces for me that were clarinet and oboe things. He listens to me very well and I like his music anyhow, so I don't have a problem with that. Ellen Zwillik, I played in her face for an hour in Carnegie Hall. Gave her this book of mine and showed her the things that I play. I made the mistake of playing this arpeggiated thing up and down (f2-sharp to FF-sharp), and she put that in there. She did put some things I'd requested in her piece, but this Sam Adler piece, I'd had that piece of music since 1970, the first movement is cool. I'm practicing and even back then, I didn't like it. It is not low enough, it is too technical, it is too much middle register, maybe it would be good for tenor trombone. I played it at a concert in November, and I should have made a tape of it that day, but I waited and waited, and finally in June went to a studio in Grand Rapids and sat in there for two or three hours and recorded it, spliced it together. In listening to it, all the others were done in concert halls you could tell by the sound. This one you could tell was done in a studio. It sounds good, and sounds like a good piece of music, but I'll never play it again, even if I'm asked. I'm not interested in playing music that's not fun to play anymore. I like Eric Ewazen's music because it is healthy to play. **It is very engaging.**

It is good for you. When you take a piece and play it, it is fun with little licks and when you put it together it is just fun. I played a concert with him at DePaul. It was an Eric Ewazen concert, he played piano. Eric played every one of them, and he talked in between, it was a delightful program. I look at some things people bring me some time, and I like challenges, range, technical, things like that, but I cannot stand

humming, swaying, or hitting things. I'm just not into that. I've tried to play Berio, and I get a little ways in and I hate it. Other people like it and that is fine, they can have it. The older you get, the more you get into playing the things you like to play on the equipment you like to play, and it doesn't matter anymore.

You've earned that right, that is part of the reward at this point in your career.

I can do anything I want.

Now about breathing, not as a means to an end, but are there breathing exercises that you use, any of Jake's stuff?

Are you familiar with the book, the singing approach to trombone?

Yes.

In there the first pages are basically the most important, the concept of sound, thinking about what you are playing and basic breathing. I have done some breathing exercises, like the bag where you breath in four beats and out four beats, three/three, two/two, one/one. You are trying to get the same amount of air in your body every breath. Breath in from the gut, all the focus on here. The key is to sit tall and suck air from your lips. Suck air from your lips. Forget noise and restriction, and get the air in. I also have a clinic example where I breath in for four, play a note for four, then in for three, play for four, in for two, play for four all the way to in for a half, play for four, still going for the same air. I sat next to the greatest, Jacobs was phenomenal puffing like this. He had half the air capacity I did, but he got it in faster. Keep it simple and suck from here. Your body is doing it, but the concept of breathing from the diaphragm is a bunch of bull. You breath from right here (lips) and

let it come out. You control the fashion that it comes out, you don't think about pushing it out unless the music calls for it, or to push a tiny bit to get it started.

The release of the air stream, the point where you switch from sucking in to blowing out, do you feel any difference on tenor or bass in that?

A little bit, the bass trombone it depends on the register. Low register just falls out. On the tenor trombone if I play the same note, I can play it longer because it takes less air, but it is less volume, less air coming out.

It feels hungry, like it can't get enough.

Yes, it is funny, on the contrabass trombone, the middle register notes are a pain to play. It takes more air than that, it is funky, but when you get down low, I can hold the notes longer, a lot longer if it is soft, five beats on the bass, maybe eight beats on the contrabass. So it depends on which instrument and which register. In the upper register it takes more air than you think. It takes a lot of air, even on bass trombone on the high notes. The bass is more demanding in every way.

Do you do any exercises that eliminate tension?

The first thing, the physical part of playing instruments, moving air, being in shape, that is a major factor. I try to work out and swim, but I have problems with my shoulders. If I wasn't a swimmer, I couldn't play the instrument. Kleinhammer was a walker, he walked all over the city of Chicago. He carried canoes up in Canada, he was a mountain man of sorts. You have to be an athlete of some sort, that is a part of it. The best way to relieve tension other than having a good heart rate and

having enough air, is playing in the lower register. You cannot play in the lower register and not be relaxed. You can't play in the upper register without being relaxed. The best way to teach that is to play in the bottom octaves of the piano. I do that all the time, make all these people do that because you are sucking in air like mad and that transfers in to the upper register, into the other instruments, the tenor trombone, when I play low on it, moving a lot of air, that is the relaxing factor. When I'm playing low on the tenor, it works into the upper register and keeps the relaxation because of the air.

Vibrato, any different feeling between tenor and bass?

When I play ballads, I use slide vibrato on the tenor, alto I may use lip or slide vibrato. You can match slide vibrato to lip pretty easily, but lip vibrato may go down in pitch.

For me the lip vibrato is great for terminal vibrato, but if you want it to be static, if you want to keep the tension, you can't do slide vibrato.

I use both of them. In the high register I use slide vibrato, in the low register I use lip vibrato, mainly anyway.

Openness of the oral cavity and throat, the bass is magnified.

I don't think about that so much, I just try to keep the air the same.

The range, the aperture, they all change, but basically it is about the air, I try to keep it simple.

Switching between more upper lip and less upper lip, kind of like a trigger matching exercises, get the B-flat here, and here, and here, just matching the tone. Instead of doing different alternate positioning, you are doing different embouchure

exercises.

In both that, what you said about the the two changes, matching and trying to make them sound the same. That is the key, to make them sound the same. Whatever you are making different, you want to make the sound as close as possible. The same goes for the embouchure change on the pedal notes, you change like that, but you try to get the same sound as much as you can, it is a mental thing.

Tonguing-do you feel any difference in tonguing between bass and tenor, does one take a lighter tongue?

It is easier for me on this (bass) than it is to play on tenor, because there is more room in there for me to tongue and get the note, more room in the mouthpiece. I find that tonguing in the middle register like that, middle low register, it is easier to play on bass. Up high, it's a different story. It is easier to play on the tenor. I don't treat them differently, it is a sound thing. I'll tell you this, in November, 1994, I played the entire Arbans book on the tenor trombone. I divided it up into sections, and every day I played one thing from each section, it took about forty-five minutes. The reason it took forty-five minutes, is that except for the characteristic studies, I played every exercise in the book where it was written, then down an octave and up an octave. Every one of them, f2's, tonguing, I did them slowly on purpose. I play every exercise in all three octaves. It was unbelievable, I had great chops after three months of that. I picked it up, when I was in college, I played "at" Bluebells of Scotland, I could play parts of it always, but I played "at" some of these things then, didn't really play it. After that, I put it on the stand and played the heck out of it. Of course, nobody was around. I put

my horn down, and I said that's how these guys do this. They spend all their lives playing in Arbans, in technique. I gained not only a lot of clarity in technique, and figured out, just trying, the music in it is not that great. I was trying to make music out of it. Forty-five minutes a day, and that made a huge difference in the way I played the tenor trombone, technique wise. My next, I had two more attempts, and have since fallen down on them, the next one was intensive. The next one was Redding, which is tenor clef. So I did tenor clef up and octave and down. The third one, I didn't finish. This was alto trombone played in alto clef. I had made an attempt to do that. I got the idea from Christian Lindberg, he said he played through the Arbans book six times, and I did it once, and tried to do it two more times, and it got to be, if some of the music was fun to play, most of it was just notes. The benefit of taking every one of those and trying to make them sound easy, with the same approach, the same air, no matter where I was, I was amazed at how much chops I developed because of that, it was really good. I can't play Bluebells now, I can play it better than I used to. I would have to work on it. I tell people to do that, but they don't. The key, I think, is to find music, find something, a book that has every kind of music in it. I get so tired of playing the first part of Rochut over and over again.

With the advent of the double trigger, do you try to play everything on the valves, or use the slides? The criticism is that we've gotten too big on the bass with the triggers, we almost sound like a tenor tuba. Is there anything that drives your thinking on that?

I am one of the guys who wants it to sound as smooth as possible.

When you play a note on a tuba from here to here and it is really smooth, that's what you want, a slide tuba. I'm getting closer to that on this contra-bass trombone. I really don't care what other people think. A lot of us have been criticized for that, but you can play smooth, or you can play "twah twah" or you can move to all of these long positions, and still play it smooth, but there is a lot of work involved. My whole thing with playing legato is playing liquid smooth, and sometimes, unfortunately right up close on a recording or something, you can hear valves pop. If that is the case, like on this recording, I did regular positions.

To me, the trombone sound, it is always going to be a trombone sound, it has different flavors, one guy I knew, he said that it sounded like a valve tuba, and I wondered, what is wrong with that?

When you play up high on a bass trombone, if you are doing it right it should sound more like a tenor trombone in the higher ranges. You have to play with those guys on the same notes and you don't want to be like a slide euphonium sound. When you are playing with the tuba on the same notes, you want to mold into that sound, so you can't tell what it is. If people have complained about me, they will have some real complaining to do when I get my contra-bass trombone to a high level. It is great, to go from a FF to CC without changing the embouchure, go three or four or five beats. Contra-bassoon is great, they can hold notes forever, and a tuba is great, also, but it has a problem with air, too. This is great, it may turn into a slide F tuba, but I don't care what people think anymore.

On the pitches on the slide, do you nail every pitch for intonation on the sweet spot, or do you tend to lip it?

I blow straight into the instrument every time, and my right arm plays in tune, the right arm makes the adjustments for what ever is going on. The trombone can be played perfectly in tune and hardly out of tune. Mike and I used to do that, he'd walk by my horn and push all of the tuning slides in, and I'll start playing, and adjust to it and think it was kind of weird, and here he'd screwed up all the tuning slides. It is amazing, it is your ear that is doing it.

We get so involved in tuning.

Some of these guys, get the little protractor out. My slides are pretty much in the same place they've always been.

Factory tuned.

Yeah.

One time, I put my horn in the case on stage, and came back out and picked it up and started playing. I didn't realize I'd pushed all of the slides in when I put it in the case. I was playing and the B-natural in second position was the only note I not able to get in tune. During intermission, I was wondering why I was so tired, maybe I didn't warm-up well or whatever, then I realized that the tuning slides were all the way in. I've heard about some instructors, first semester, they make their students play with the tuning slides all the way in, then second semester they play with them all the way out, you just have to strengthen your embouchure to do it.

I remember one time, playing a recital with both valves all the way in

without realizing it. I was adjusting and playing, not even thinking about it, then I listened to the tape and it is sharp, I looked at the horn, I couldn't believe I did that. That's with the valves, with a B-natural, if it is out, you are going to know it. The valve notes are different.

Did you ever get discouraged when you first picked up the bass.

You mean when I was first doubling? It wasn't so much getting discouraged, it just sucked, it took a lot of time to go back and forth, taking too much time of not sounding good, and having it feel bad.

For me it hurt.

It didn't hurt for me, it was uncomfortable. Jacobs told me not to go by how it felt, go by how it sounds. That helped me through a lot of times. I'd be on the tenor, and it just felt awful, little crusty on the lips, and I'd go back to bass trombone and AAHHH, it was so nice. When I play the contra-bass it is even better.

Was Jacobs pretty supportive of going back and forth? What about Kleinhammer?

I don't think I've ever played the tenor trombone for him.

I went through his book, and he did not ever mention doubling.

I don't remember. He knew, and he's heard me playing the tenor a lot. That guy has been great, extremely supportive. We didn't talk about it, but Jacobs and I were always working on the tenor, preparing for something.

With the order, what is your preference?

In with the bass, and go up.

What solutions do you come up with when you are forced to play in an order you are not comfortable with?

The worst transfer would be tenor-alto. If they are close by, I'd rather go tenor to bass than bass to tenor. I'd rather go alto to tenor. I'd prefer to go alto to bass than alto to tenor. The bigger difference is better. I want to try to get a program where I play all four horns. I've found that the best transition is from contra-bass to tenor, not contra-bass to bass. So it is like 4- 2- 3- 1.

Unfortunately, the music doesn't work. You want to start off with a baroque alto trombone thing, not end with that. I'll just have to get over that. Maybe I could do alto-bass-tenor-contrabass.

Left-hand, do you try to do your trigger hand close to a natural hand position?

Over the years, the bass trombone claw, those two bass trombone pieces you heard in Nashville, when I was done playing, I was going like this (shaking out left hand) like crazy. The hand gets stiff, it is a repetitive motion thing. My sister and I are working on something like this, it doesn't work well yet, it isn't the right material. You strap it on and it holds the instrument- I saw one in Nashville, so it has the support. When you are holding the instrument, and trying to move your hand like this, there is so much tension.

Kind of like a batting glove with a rigid support.

I think the slide should be made with some space-age fiberglass thing, so you slide your hand in, and it is free to do this. That is a major thing for us to get settled.

I took a hand squeezer and tried to build the muscles when I first started, my hand was so sore. What do you do to mark your fingerings on music?

I put positions. I know if I have a low E with a 4 under it, I know what that means.

This has been great. I think this is gong to work out well.

Thanks for your time and expertise.

APPENDIX 3

THE INTERVIEW WITH DONALD HILDEBRANDT

What is your instrumental playing history?

I started on trumpet in the fourth grade, when I moved to a new school, and because I played trumpet “so well” I had to switch to the tuba. I had problems with the band director. So I switched to Eb tuba and played that in high school band. Then we moved again, and I didn’t tell the new director that I played the tuba because I wanted to play the trumpet. I did well at the audition, but one day he heard me playing tuba (because I was lonely for it) and he said, “Boy, I could use a good tuba player.” That was through high school, I was playing tuba, and was also playing trumpet in the jazz band, lead trumpet. Then I decided I wanted to be a music education person, a high school band director, and decided I should learn something about the other brass instruments. I picked the trombone because of the slide. That was in eleventh grade. I then entered Indiana University as a tenor trombonist. After two years there, I was having trouble with my very high range, like c2 and above. I had a big, fat sound and played really well low. Van Haney was there and I switched to bass trombone. Do you want teachers now?

Yes.

First serious study was with Buddy Baker, the first half of my undergraduate program. Then with Van Haney for the second half. In the meantime, I took tuba lessons from Bill Bell, because it would have been stupid not to. I lived near Chicago, northwest Indiana, and I could have gone up to see Jacobs but I never did. I then went out to teach, came back a couple years later to get the performing degree.

What did you teach, high school band?

I taught high school and junior high band. We started the kids in seventh grade, so I taught seventh to the twelfth grades. I went back for a master's degree. I was always interested in getting as many ideas from as many people as I could, so I went back with the intent of studying trombone with Tom Bridgers, but he went on sabbatical after the first summer, and Henry Smith was brought in. I spent a year with Henry Smith finishing my master's.

Was this also at IU?

Yes, all of this was at IU.

Your master's was more concentrated in tenor work?

No, it was bass trombone from the midpoint of my undergraduate on. All of my degree work is on bass trombone. Then the following summer, Jay Friedman came down to teach and I studied with him for a semester. He put in my mind that I should see Ed Kleinhammer. When I went out from there, I got a college teaching job and looked up Kleinhammer and did some study with him on a very occasional basis.

Where did you teach college?

Stevens Point, Wisconsin, UW. Followed Vern Kagarice there, I was an interim. They said I needed a doctorate. I looked at some schools but I was not impressed either the teacher or the program. I ended up back at Indiana and studied with Henry Smith until he left for the Minnesota Orchestra to conduct. I have studied with some magnificent people, and then Keith Brown was there. I did my doctoral work with Keith Brown and Harvey Phillips had come in on tuba, so I took some lessons with him thinking I'd be an idiot not to do that.

How did your primary instrument teacher feel when you took lessons on a secondary instrument. Was there ever a problem taking lessons with two different professors?

No, they were always very supportive. I think they would have been less supportive if I would have gone to study the same instrument with another teacher.

Instructors can sometime be possessive and do not want students to work with other instructors, even to learn a double. I think it was because my instructors were not doctrinaire people and they weren't "You have to follow my example or you'll go no where" kind of people. Everyone used common sense for things that worked or did not work.

As you went along developmentally, did you feel yourself progressing toward the professional level at the same rate or at a different rate on the different instruments?

I just have to make a comment about the tuba. One of the reasons I worked so hard on the trombone in high school was that out of my ignorance, I thought that I had reached the end of what a tuba could do. There were not the solos, recordings, and resources available then as there are now. I could play Arban solos and stuff like that. From my trumpet playing, I could read treble clef fluently, so I'd play the cornet solos. There wasn't a lot of tuba literature back then. I graduated from high school in 1962. Of course, the tuba literature that there was, I would have had a lot of trouble playing it, if I'd known about it, especially the Vaughn Williams with a BBb sousaphone. I switched to BBb sousaphone by the way. I went to a music camp at Ball State

University. I won principal chair in the orchestra on Eb sousaphone. The guy took one look at me and said, "No, you are going to play a tuba." The irony is that the Eb sousaphone sounded more like an orchestral tuba than the recording bell BBb. So that week I learned to play a BBb tuba, an old recording horn, a sousaphone wrapped up in the shape of a tuba. Bill Bell was amazing about that, I'd ask him about fingerings, or what kind of sound to produce. The trombone players there were very interested in the sound. We were talking about dark sound, bright sound, and warm sound. I was playing an F tuba, that was the only thing I could get from the school. It was an old Alexander F, probably from the 1930's. I asked him what kind of sound I should get on the F tuba, a big sound, full sound, or a bright? Bill Bell rolled his fingers on the desk and said, "Oh hell, Jay, just get a good sound." I asked him how he could go from C tuba to Eb tuba to F tuba and have no trouble with fingerings? He said when it says play an "A", I do what it takes to get an "A". It was a deep thought. I don't succeed at it as well as he did.

What kind of tenor and bass trombone set-ups do you have now, and what other set-ups have you used, and what prompted you to change set-ups if you did?

Historically, the first trombone that I owned was a Conn 88H. My dad said that I should have the best instrument and I took that to college. When I switched to bass trombone, I went to the Conn factory and got a Conn 72H, single valve bass. I was using the Conn mouthpieces, on the bass I used a 1 1/2 G. On the tenor, it was a Remington mouthpiece that came with the horn. It wasn't a bad mouthpiece. I threw them all away along the way. I was playing Conns and went teach at the

university and found out that I wasn't using my tenor very much and my bass was wearing out. So I went to look at a new horn. The new Conn horns were not good at that point in time as they were being made in Mexico or someplace and the quality control really suffered. I tried Holton and they just didn't play the way I did, so I got a Bach. That was under the influence of Ed Kleinhammer. That was a Bach 52, silver plated. I went to the factory and they had about fifty horns, different bells and different slides. The best set-up of the day was silver plated and it was a dependent system. I had them put a spatula on it. It had rollers and I asked how they could fix it, and they put a spatula on the bottom roller. That is the horn that I played moving here, a 1 1/2 G that was modified. Someone had bored out a little at the back. I got here and was asked to play some tenor trombone solos. I was incompatible on my Conn tenor after playing the Bach bass for so long. They felt so different to me, so eventually I bought a Bach tenor, a 42B.

Do you feel more comfortable when you do your doubling on horns by the same manufacturer?

Yes I do. One thing that was interesting. When I switched makers of horns, I had the experience that I had to pull out a long way. I usually play very low on a horn with very little tuning slide out. When I played on the Bach horns at first, I had to pull way out, then after a couple of weeks, the tuning slide was back in again as I got used to the horn. I don't remember if the same thing happened when I went from tenor to bass. I was playing in a brass quintet with the Bach and a salesman came around with a gold brass bell, a heavy bell and I tried it and really liked it, so I bought it.

Was that playing bass trombone in the quintet?

No, tenor trombone. I played bass trombone mostly in orchestra, big band gigs, and as a soloist, that sort of thing. Those did very well, and a few years ago my Bach was wearing some, I'd already had the slide tubes replaced.

So did you switch to the Bach with the dependent?

No, I had it opened.

So you still used the dependent system until a couple years ago?

Yes. The modifications you might be interested in. I got to know Chuck Alexander up in New York and he had some leadpipes for me to try. I found some that worked really well. That brings me up to now. I bought two Shires horns. First I bought a bass, that has an independent system with Thayer valves.

So that came from Shires with a Thayer valve? I think you can also get Greenhoe valves from Shires also.

Yes and they work very well.

The only thing with the Thayers for me is that they are heavy compared to the other bass trombones that I have picked up.

Yes they are.

So you are the Shires on both horns now?

Yes.

And what mouthpieces are you using?

I have a Schilke 59 Beversdorf, which is just short of 60, on the bass. I have a Schilke 51 on the tenor. I also have a little horn, a Bach 16 that I play in a church band.

Did you take these mouthpieces off of your other horns?

Yes, I switched the 1 1/2 G to the Schilke in 1982 or so.

And from the Remington?

That was a long period of trial and error, probably would have been in 1985 or 86.

Do you feel like you have the manufacturer similarities in your mouthpieces like in the horns? They are both Schilkes.

The rim contours are similar because they are from the same company. I tried a tone intensifier on my Bach bass and I liked it. I tried it on the Bach tenor and I liked it there. Then I got the Schilkes and tried the bass without the tone intensifier and it sounded great. With the tone intensifier ring, it sounded greater. Then I got the tenor and started with the tone intensifier and thought it was bad, so I took the tone intensifier off and it was o.k. I never saw a horn that it had a negative effect on.

Anything else you want to mention?

The first real serious tuba I bought was an F Tuba. I was a tuba player before I was a trombone player, using school horns, and I wanted a good horn. So I bought a Yamaha F with the idea of playing it for solos and teaching/modeling.

When you came here, were you hired as the low brass person?

Yes. All they needed to know was that I'd studied tuba with Bill Bell and Harvey Phillips. I bought the F tuba around 1985 or so. I bought a lot of instruments around then. About nine or ten years ago, I felt the need to get a full-sized C tuba so I bought a used Cervemy "Piggy", a nice full sounding one. Playing with the Colonial Tuba Quartet on euphonium, I decided I shouldn't still be using school horns, so I bought a Wilson probably eight years ago.

When you switch to euphonium, what mouthpiece do you use?

I use a 51. Lately I've been using a Brian Bowman mouthpiece, but most of the playing I use a 51B, I play so flat, that the upper register takes a dive in terms of pitch. It sounds like an F Tuba when I play on that.

What mouthpiece do you use on your jazz horn?

A 50. What I was looking for in all of these things is what gives me the best sound and the most comfortable response, endurance, and intonation. What I found was that it was more difficult to switch between similar mouthpieces. Like the 51 on my tenor is a full shank, and the 51 on my euphonium is a euphonium shank, and that gives me almost more trouble than the 51 on my tenor and the 50 on my jazz horn. I'm not exactly sure why. Those are both pretty small differences, but actually the 51 and 50 are pretty different. What I found in the past, doubling on trumpet, that the mouthpieces were different enough that they felt different on my face so I wasn't confusing them.

So your body would say, "That's the big one" or "This is the small one".

So rather than trying to use a huge tenor mouthpiece to play some bass, or a small bass mouthpiece to play some tenor, I use a tenor mouthpiece on the tenor and a bass mouthpiece on the bass.

That is actually an area I did not address here, but if you look back in an old Schilke catalog, they'd have them lined up and when they got around to the 57 or 58, it would say "great for the full-time tenor/part time bass trombonist. I'm not convinced with the part time or the middle of the road description. Do you

use those sized mouthpieces as a developmental step?

I have a student, a tenor player who is switching to bass. I had him use a 2G which is a great switch over mouthpiece. It worked great for three or four weeks, and it started feeling kind of stuffy, so I gave him a 1 1/2 G. It will be a while before he is ready for a 60.

So you don't get that sensation of throwing him in the deep end, but making it a gradual transition.

The players I know that double very well, are either tenor players that play with large mouthpieces as a matter of course, like our principal tenor player with the Delaware Symphony, he plays on a 52E2. He plays that and also plays great on bass trombone. There are either players like that or those who play bing and bang with completely different set ups. Usually players who try to use one mouthpiece for two instruments sound weak on the bass or tubby on the tenor.

That goes right into our next question. If you knew of a tenor player who wanted to go to tenor, or vice versa, what equipment would you initially recommend?

Yes, we just talked about that. I would never suggest that a person play a mouthpiece that is going to screw up the harmonic series on a horn so that the top register is flat and the bottom is sharp.

Would you find these tendencies right away, or only after they'd been playing for awhile?

There is a lot on this, ninety-eight percent is personal, but there are some acoustical things. I've never heard of anyone playing a 51 on a bass trombone that sounds like it is a bass trombone without going a mile sharp in the upper register. So there are acoustical limitations.

So you would recommend that a student do a step-up transition, into a 57-58 range, then work into that until they are pretty comfortable. One student may be six months to do that, another six weeks.

I don't think you'd find students getting stuck at that 57 level, not college students, maybe a high school student would. I also don't feel like there is a need to work everyone up to a 60. I don't think the person with the biggest mouthpiece wins.

So you want to get to a point where you are making characteristic sounds on the instrument. Would you recommend a young student begin their instrumental career on bass trombone? Starting in sixth or seventh grade? If not, at what point in their career would you think they are developed sufficiently to approach doubling on bass trombone?

No, there is a lot of individual variance in students, but I cannot imagine bass trombone playing happening before tenth or eleventh grade.

Some states will have separate auditions for all-state bands on the tenor and bass trombone.

I think that is o.k. because you'll have juniors and seniors, and maybe even some sophomores who are bonified bass trombone players.

Is there a particular level or a certain solo they should be able to do, or a guiding point before you'd recommend bass trombone?

I'd be looking for somebody who was at least decent musically and has a big, rich sound on the tenor, throughout their range, even if their range doesn't go up really high.

We were talking collegiate students/undergraduate students.

Would you do the same methodology with a high school student then? The step up setting?

I think so. Also you need someone with the arm strength to deal with the left hand.

Do you know of any musician who began as a bass trombonist?

No.

Would you start anyone out on a bass trombone?

I would not have any problem starting an adult on bass trombone or a beginning college student. We have brass methods classes, and are team-teaching them now. I have a girl in my class, a clarinet player, who plays trombone in our symphonic band. So she doesn't need the trombone experience in the brass methods class, so she is going to play bass trombone so she can learn more about it.

What text do you use?

Scott Whitener's "A Complete Guide to Brass". It has great text, a lot of teaching from Arnold Jacobs, Ed Kleinhammer, people like that.

Do you utilize different equipment in any particular musical environment? In other words, do you change lead pipes/ bells/ slides/ etc? Do you deviate from your standard equipment set-up on tenor or bass?

I have. We were doing a pops concert with our brass quintet. I used the lightweight slide, and it came with its own lead pipe, which gave it a brighter, cutting sound. I stayed with it for awhile, though I'm not a big fan of that as a rule. Maybe if the economy goes good and I make more money I will try doing some different bells on the Shires horns. I'd like to see what would happen with a Conn kind of bell.

What bell set-up do you have for the bass?

I have a nine and one half inch. I've never had a larger bell and that is because of Ed Kleinhammer again. He steered me away from it, and I started listening to players, and the ones with larger bells all sound blatty. I can tell you that I've developed an attitude which is not very helpful. The pragmatism, I find a horn that works and I like it. The composite of materials, I can't tell the difference between gold brass and yellow brass. I know what they look like, but I think that the materials are overrated. I've played red brass with gold brass characteristics, and yellow brass with red characteristics. The other thing is that there are tendencies, the red brass is supposed to have a warmer sound, but there are differences in individuals, different mouthpieces and the whole set up that overrides the general tendencies. I think that it is good that they are manufactured in variety so people can try out different things. I have no problem with companies selling them. I used to have a problem with people thinking that just because they had a large mouthpiece and a red brass bell that they'd have a big warm sound. Unless the odds are right they probably are not. The only way the horn makes a sound is when you drop it. I remember from Harvey Phillips, I'd graduated to a C tuba with Harvey. I complained that the tuba was so badly out of tune. He said, "Look at my tuba, it isn't out of tune, it isn't making any sound at all". Only the player is out of tune.

What about mouthpiece pressure, whether you consciously use more pressure on the upper or lower lip?

Tommy Rizzo had told me that a bass trombonist will generally use more pressure on the lower lip and I've found that to be true. I think

that is mostly true, but I don't tell my students stuff like that. Their main problem is that they use too much pressure. It is a major problem with some people, and it was a problem that I had. When I lived in Wisconsin, I went to see Bill Watrous do a clinic. He was doing some jazz things, imitating sort of half-valve things by pulling the mouthpiece away from the lips. So I figured there is not a lot of Bill Watrous playing I could do at that point, but that was something I could take apart and work on. I found out that it really helped, virtually cured my tendency to use too much pressure when I'm playing high. What I did was systematize it. I would gradually wean my mouthpiece off my face and try not to stop the buzz or let the buzz drop to a different pitch or raise. I negotiated this for awhile and I found that the adhesion on the mouthpiece was doing work that the muscles should be doing. It was holding my skin in place, instead of the muscles on my face holding it. As you start weaning it away, you can feel the muscles coming to the aid of the support. It was a "Eureka!" thing, I used that for a warm-up. I consider it a failure if the sound stops.

Bass trombone in general would take just a little more pressure on the bottom lip?

I think so, it is mostly noticed initially, then becomes a part of the game.

Farkas, in his Art of Brass Playing, proper embouchure-smile or pucker, or combination. Agree or disagree?

I mildly agree. I know what he means, but if you just do a smile and a pucker, you don't get enough of these muscles. Overall, yes, I think so. The way I think about embouchure is one of the ways that helps me be successful at doubling. There is a unified system of playing where air

supply is there, like a water tower provides a water supply, it flows rather than drives. The embouchure is a “lip-reed” principal. You think of it like a double reed instrument, only we use our lips in place of the reed. The embouchure is the support and it needs to be firm, and the reed is the flappy part and it needs to be loose. So the middle for the reeds is always loose, and the lower the note, the wider the reed. It tends to break down in low registers, but it is helpful to my playing. I use an analogy with my students to think of a fraternity party. The low register is a big party, with a perimeter of police around, the party gets more intense, and the police are at your door. All of this happens inside the mouthpiece, so the mouthpiece sits there, and ideally just gives you a little support closer to your business range. Bass trombone needs to have a bigger rim diameter in order to accommodate the lower register. **That makes sense.**

I find no difference in my range between a bass and tenor trombone. I didn't know you weren't supposed to play high. When I switched to bass trombone, I could play higher on the bass than the tenor. When I started, there wasn't bass trombone literature, so I played tenor trombone literature as well as bass literature on the bass. I was able to use the bass trombone to cover this wide range.

I am going to ask Charlie Vernon about his double valve tenor trombone that covers the ranges of both the tenor and bass trombones.

What is that about?

I saw him play it at ITA in Nashville. It is a standard Bach and it is a double trigger with Greenhoe valves and he played the Pugh

(Concerto) on it. You can cover both bass trombone and also play the Pugh on it. It allows you to cover both ends and you can sound legitimate on both.

I sort of had that when I was playing on the modified 1 1/2, although I can actually play higher now. It is more of knowing how to. I routinely play high e2-flat on a bass and a lot of tenor players can't do that.

At the onset of learning a new instrument, when you picked up the bass, did you fatigue quickly when you were learning the new instrument the first couple weeks? When you made the switch, did you go from the Remington to the 59?

You mean from the Bach?

Yes.

I don't remember, it was so long ago. I don't know if I switched gradually to the larger mouthpiece. Concerning developing endurance on the other instrument, the fatigue I had was from running out of air so fast. I didn't have embouchure fatigue. If I wanted to develop strength, I could use the tenor trombone, except too much strength makes it hard to keep the reed loose. Because I was playing an octave lower and louder. The same register, it naturally it just want to be louder. The other part of that question was how to build endurance and the only way I know is to play until near failure, and then rest.

At any point while learning a new instrument, did you get a double buzz?

I know what you mean. I have had that rarely, I've had a couple students who had a problem with it. It is usually in a nonsensical range, like g or f-sharp.

It is like one or two notes within a tone of each other.

I had a double buzz in my playing and was able to correct it, but it doesn't always work for my students. Dave Tall, from New Mexico, a bass trombonist had a double buzz that was difficult to correct. I did mouthpiece buzzing in that area. I was careful that when I played in that range, my mouthpiece was in the same angle. I would buzz with the mouthpiece, then bring the horn up. Sometimes that is a revelation. Got everything focused.

Trombone has less of this, it is a horrible problem on a tuba, kind of on euphonium, because it fits one way on your body and another way on your face. I would buzz sirens up and down in that range. Another technique that seemed to help was just forgetting about it and it would take care of itself.

Embouchure, from tenor to bass, do you shift or move at all when you go from one to the other?

My bass trombone mouthpiece is heavy enough that I find if I'm playing for a long time, it is sliding down my face. No, I put it on where it works and it works. If it is not working, that is one of the things I look for.

Do you do anything to enhance your playing by moving around?

In the very low pedal range, around FF, I do a little shift, very gradual. The mouthpiece comes up, so I get more lip into the mouthpiece. I think everyone does that. George Roberts does that.

Does the mouthpiece placement on the teeth and lips feel similar or dissimilar on the bass and tenor? Is there a difference in lip vibration? How does that affect your embouchure in alternating back and forth?

The question presumes that you understand that there is a different amount of area, so in terms of the feel, I don't notice any difference.

How about the lip vibration, do you feel any difference there?

Not for the same notes. Actually I am feeling like there is more vibration on the bass, but I don't believe there is. I think that on the tenor, the "police" are closer, so there is less consciousness about it. If I'm getting a well-focused sound, if I could de-materialize the instrument and see it, science tells me it would be the same.

Do you buzz on your mouthpiece, and how do you use buzzing?

When are new students developed enough to begin buzzing?

Yes, I do buzz. For the first part of my life, from undergraduate school, I thought buzzing was idiotic because it doesn't feel the same, and I couldn't do it. That philosophy got me as far as the finalist of the LA Symphony, so I wasn't a bad player, but I couldn't do it. Under the influence of Ed Kleinhammer, he wasn't an idiot, I made a conscientious effort at doing it. What I found was I would tend to buzz a little high. If I buzzed a b-flat, it was almost a b-natural when I checked on the piano. So I started working on it then. I decided to teach myself "perfect" pitch, just so I could buzz a b-flat from my head. I started using buzzing to expand my response and range. I can still play things I can't buzz, but the things I can buzz, I feel more comfortable playing. I use it in my teaching.

As a brass player, your embouchure develops a seating/pressure ring. Do you have any problems developing two seatings for the mouthpieces?

Yes, that and tonguing are the primary reasons why it is difficult to go

immediately from one to the other.

The mouth tightens up or the lips swell, and that makes it harder to get set on the next instrument?

It also explains why it is easier to go from high to low. I could probably do a recital playing all of the instruments, I've come close to doing that, if I started with the tenor trombone, then euphonium, then F tuba, then bass trombone, then C tuba it would probably work. I think the most I've done on a performance has been three.

Have you found anything that helps make it easier for you? You mentioned the equipment being different enough so that you know you are on bass trombone.

I think it has to do with the physical differences that happen after you play. I am conscious of using as little mouthpiece pressure as I possibly can without letting the air leak out. If it is something I can control, I try to allow myself time. I'll do some buzzing on the new mouthpiece, a little warming-up, I could probably do tenor and down the line if I didn't have really demanding material on the new horn. I know when I get the embouchure set for one instrument, it takes a little while to adjust to the new horn. I don't have the problem in ensembles, it is more of a problem on solos, no where to hide.

Anything else on embouchure?

Just to summarize, you made me think about this. A unified idea, there is a universal embouchure that I have. It works in a certain way, and it works the same, just on a different scale with the various instruments. That last part, the muscle build up, gets into an issue of the response of the instrument. That is one of the hurdles, to play bass trombone for

awhile, then play tenor and have a sound that is there, that responds the way you want to. That is one reason I like these Shires horns. I wouldn't want a horn that needed a

kick start?

Yes, The other aspect about this is tonguing, and it affects the embouchure in a big way. When you are used to playing lower, with a thicker tongue, and when you play on tenor, that is not going to work because there isn't enough room in the mouthpiece for it. The same way a tenor player on bass often won't use enough tongue. You have air going through the chops at the same speed for a given note, but you are usually playing a fifth lower on the bass, so you are used to the air going through at a slower speed, but a larger quantity, and your tongue has to get used to that. When it gets turned around, it bites. It is another issue. There is one overriding thing. I had an interesting professor, my doctorate was in brass pedagogy. I took a brass methods class, I think it was Leon Foshure, he was talking about definitions. There was Aristotle and a cookbook. Aristotle would say a cake is a sweet pastry covered with sugar and butter icing, and it is baked, etc. A cookbook would say, take a pound of flour, and milk, and follow these instructions to come up with a cake. You can't build a trombone cake and you can't build a musical experience that way. Once I made a list of everything involved in showing up for a gig. Being able to read music, understand the pitches, bring the horn, know how to breath, bring the music, sort of general things. This list ran to over six feet of single item things, and if you could define each of those in a way to make it work, you'd have millions of instructions. Nobody can do that. You have to think of a

result of a result and draw that out, instead of thinking of everything that you put in.

If you want to do something, you have to have an idea of what outcome you want. You can take it apart and work on certain elements, but you still have to have the goal in mind the whole time.

Mr. Jacobs made that so famous, the paralysis of analysis. I think as teachers we need to analyze some students, but I'd be very cautious about what I'd let students do. As a teacher, I'm probably over analytical, I would like to find ways to do less of that. I also think it is important for students to learn how to analyze because they're going to go out and do that.

On warm-up, on your tenor and bass are they they same?

I do the same kinds of things. I don't have too much of a routine anymore. During the season, academic and performance, usually I'm fairly well warmed-up when I walk in the building, but I do developmental exercises. I play a few notes, sometimes I'll do some lip slurs for example, lately I've been working on some fast tonguing. I do things like that, occasion oriented. I have my students do a more structured warm-up, as a part of their training.

On your initial warm-up, do you usually do it on your primary instrument, or always on the primary? Once you have warmed up on the primary instrument, do you feel warmed up on the secondary instrument?

I usually warm-up on the instrument I know I am going to need to next, in a serious way. I played a recital last night, we did a TUTE

(tuba/trombone/euphonium) recital, I played two solo pieces, the Lasson (two fantasy pieces), a nice piece which is approachable by a decent college player and the White, which is not approachable by a college player. We also had play a professional quintet that is just getting started. For the last week, I haven't played tuba with my tuba students or euphonium, I've just played bass trombone. If I'm going out to play with a brass quintet, I'll do my lessons on tenor.

So your warm-ups are kind of on demand.

The other part of that question, I don't feel completely warmed up or completely in touch on the other instruments. I need to play at least a few notes on each instrument to get into a zone where I know where to start, and I'll probably make a few mistakes to start, but the music warms me up as I go.

Do you warm-up on both tenor and bass before a performance if you know you are going to playing both?

Yes, probably, it depends how severe the demand it.

How has your warm-up routine for tenor and bass trombone evolved throughout your career?

Back to the loosening and tightening thing worries me a bit, it really is more like spreading and contracting of the reed, a matter of what the reed is doing. Any mentioning of tightness can be interpreted as a negative. So many players use a dichotomy of the reed needing to be loose and the embouchure needs to be firm to have control. A lot of younger players just split the difference so the reed is loose enough to vibrate, but they don't isolate where the tension is and they tend to get a pinched sound. It is real important to keep the control, keep the police

out of the party.

If during a performance, you had three to five minutes backstage to transition between two instruments, what exercises or routines would you maybe want to try and touch on?

Buzz some sirens and do some tonguing. I'd want to play some legato scales, especially if I was moving to a higher instruments. If I had enough time, I'd probably do some lip slurs. If I'm going out to play bass trombone, and the music demands it, I'm going to recheck some pedals.

Anything else on tenor/bass trombone warm-up?

No.

Breathing, do you have specific breathing exercises that you utilize regularly, what concepts and how do they help you out?

Besides Arnold Jacobs' concepts which I gleaned from other teachers, there are a couple concepts that have really gotten across to me. One was Mr. Haney's concept of warm, wet air, breathing as though you are fogging your glasses. Recently I went to one of the tuba workshops at Arlington and Pat Sheridan was there doing a master class. I'm so glad I went there. He uses an OH sound. This is Pat Sheridan's thing, he had students say OH, then OH long, and then OH long without your vocal chords. It is powerful.

What I use, is for students to say YO on the inhale, then HO for the exhale.

There are some exercises. I'll do one other thing. I don't carry a breathing tube around with me anymore. I found that if I put my mouthpiece between my teeth and breath around it, I get a very similar effect.

Anything to drop the jaw.

If I feel like I'm not getting enough air in, and I need to stretch, I'll do stacked breathing. Breath in until you are full, keep the air in, and breath in again, and see how many you can do. This will show if you have somebody breath in, and they cough, you can tell that the throat is getting involved. I do that to get used to being full. Like a car that was hesitant to run when it was full, get used to playing very full. To get used to the other end, there is a great Schlossberg exercise, holding a note as long as possible before breathing. That gets you used to the downside of the breath, and control you body to a certain degree. It also makes you embouchure very efficient. The breathing tube is a great idea, but I lost mine.

Differences in the amount of air used on tenor/bass, what about dynamics, velocity?

There might be a little bit more air used on bass on the same note as the tenor. The biggest differences come in the register demands. I developed this kind of nasty attitude when I played bass trombone. I told my tenor buddies that bass trombone is what they want to sound like. Sure, there are differences, but ultimately, whatever instrument I am playing I breath the same. I breath more often when I play lower or louder. One of the other concepts I deal with, is to differentiate between a full breath and a deep breath. I mean a deep quality breath. I have my students pant to see the opposite. I always try to play with a deep breath, even if it is a fast deep breath. If I hear high pitches when I inhale, that is a sign that something is wrong.

Describe breath control issues, does it vary between the horns?

No, I don't know about holding the same note longer on the different horns. Usually when I try that, I hold longer on the second instrument, whichever one it is. Then I pick up the first instrument and hold even longer, so it doesn't prove anything. Like on the Schlossberg exercises. One of the Ed Kleinhammer exercises is really good for that, a step dynamics thing, you talk about playing mf then mp for two whole notes, then drop to piano. Another thing I do with students has more to do with dynamics, if they are playing too loud, I keep having them play half as loud until they find what pianissimo really is. The thing I thought about when you said breath control is playing soft. I think it is related to tension. You may get all different answers on this. Control is usually understood as sending thirty pounds of force, holding twenty-five back in order to get five pounds through. The reason I mention that is that the instrument only takes what it is going to take on a given note. It is a way of thinking. Whatever instrument it is, it allows for a musical solution. I can't honestly say that I think efficiency of breathing on a bass trombone is different than on a tenor, except that it is more necessary.

You have to conserve a little more.

Yeah, when trumpets are playing eight bar phrases, tenors are playing four bars, and the bass trombones are playing two bar phrases and working really hard. Great players make it look really easy because they play easy.

The release of the airstream, the point where we are inhaling and have to turn it around to exhale. Describe how that varies from tenor to bass, as far as response time.

If I am comfortable with a horn, no. If I am thinking about stuff like that, then I am in trouble because I am not thinking about the music.

We should all watch out for that because those are danger signals.

Mental imagery to help a student understand the breathing process? Do you use any apparatus to help them visualize?

We talked about volumizers, I have used those, and I think they are valuable. The problem with college teaching is that I couldn't get everyone to buy one, and they shouldn't share. The first time a kid came in with a cold, I thought, this is great. Now I only use it occasionally.

I've been thinking about using some stuff like that again. I am big on getting the students to think musically.

Any other breathing comments?

I had problems with the upper range, and that was one of the reasons that lead me to the bass trombone at the undergraduate level. I wasn't at all planning to be a player, I was going to be band director. Buddy Baker was such a great teacher. I loved the trombone. I wanted to study with Mr. Haney. The underlying reason for switching to bass trombone was I didn't know what to do with my embouchure and my throat would close up. We worked at that, with Mr. Baker, he helped a lot, but it never completely went away. Sometime near the end of the undergraduate degree and through the master's I started to get away from that problem, mostly because I stopped thinking about my throat.

I realized that the throat is surrounded by muscles and if you think about them, they only tighten. I talk with students today about the diaphragm, most of them have no idea what it is. This is a Bill Adam concept, keeping your active muscles active and your passive muscles

passive. When you are inhaling, your active muscle is the diaphragm, and these muscles have to be passive. I finally got straight on that. **The whole idea of these exercises is that you isolate areas for awhile, and train your body so it has the correct feel of it. I sometimes say I'm on automatic pilot when I'm playing. All of the dials are working, but I don't have to pay attention to every dial because I've studied how they work.**

This is one thing I admire so much about Ed Kleinhammer. He has all of this stuff at his disposal and he has it figured out. Still when he went to play he was a musician. He could cook the cake and he knew what a cake was, too.

When you were with Kleinhammer, that was at your graduate level?

It wasn't part of regular study. I would travel down from Wisconsin to see him, maybe three times a year.

Playing bass trombone, he never had a tenor lesson with you?

Yes, only on bass. He was so dedicated to the trombone. His work ethic, not just the hours, but the involvement with the trombone was legendary.

He wrote the Art of the Trombone, which I reference, but there is no mention of doubling in there. Tone production, on tenor/bass, the fundamental of the tone, overtone series. How do you talk about the conceptual difference in the timbres?

I have a concept in my mind of what the bass trombone should sound like. And I have people that I trust that tell me what they really sound like. I have played instruments that I thought had a rich, full sound, and

they did, for about a foot and a half. If you could think of a tuba as a bull, a bass trombone as a work horse, and a tenor as a race horse. I see a position or gap between them, not an in between or a skinny version of another. They are different instruments. The bass is the background sound for a large quantity of orchestral literature. I think of the bass as having more fundamental tones, it is hard to describe. I think of the tenor sitting on top of the bass. I can better answer this from the side of the input. I want a thick sound that is also clean and clear. It is difficult to describe a musical concept. If I am playing efficient, it is the sound that I like.

Unnecessary tension is a hindrance, do you do any routines to eliminate this tension?

I think the tenor generates more tension because of the range issues and because it is not my primary instrument.

Do you do anything with students to help with tension, not just in doubling, but in general?

Yes, I hound them about the wrist. I have them find the straight line so the horn is not bouncing around on their faces. For breathing, I'll have them take a passage and just tongue it with the air and tongue.

Tone Quality models?

My initial model was Mr. Haney. Then it became Ed Kleinhammer once I was exposed to that. Haney was smooth and rich. Kleinhammer's was that plus strong. I was in with Kleinhammer, with my Conn trombone. He said I should get a Bach. I said, "Why, doesn't this sound pretty good?" I don't know what was with me, but I would argue with him. We get along fine, but I would challenge him sometimes. I had my ideas, and

if I was going to change something I wanted to know why. We compared playing one note, and then we switched instruments. I could feel the difference more than hear the difference.

Vocalizing in your practice routine-do you do it and why?

Usually no. Unless I have trouble finding a pitch. Even then I am more likely to buzz it.

Differences on tenor/bass focusing the tone, centering instead of spreading the tone/

A sustained tone will want to spread more on the bass because there is less support for the mouthpiece because it is farther from the center. Both horns can splatter attacks pretty well because of a lack of focus in sound.

Vibrato-tenor/bass any difference, what type do you use?

I am more likely to use slide vibrato on the tenor, I use jaw vibrato on both. If I'm playing a certain piece, like this Lassen from the late romantic period, I'll actually use some slide vibrato on the bass. If I am playing jazz stuff, I'll use it on the bass, too. My set-up is not too good for playing big band. Fred Waring was at Indiana when I was there. He was a bass trombone player and put together a quartet that played dinner stuff. He put a bucket mute on it and played the standards on it, it sounded great.

Exercises/techniques to open the oral cavity and throat? Any differences in these on tenor/bass?

Open! One thing, we were talking about tone quality. I try to imagine the tone quality that I want to produce for a certain piece or style before I start. I would make the same horn sound different with fine

adjustments on different styles of music.

So it is driven by the music. Pedal tones, do you do anything to isolate and make a smooth transition from the BB-flat down?

When I have something to do I'll do slurs down or glisses down or octaves, scales. Go from where I can play well to where it is harder. Make up exercises.

Do you consider that a shifting point, and do you do anything different with a mouthpiece shift or cavity change? Is is any different on the tenor?

I think I do more shifting on the tenor because the bass feels more natural in the trigger range. You can actually get in the BB-flat range on the BB-natural embouchure. The response is a little more open, so I do less change.

Is the BB-flat the beginning of the low register for you?

I think the F above that is the beginning of the low register. There is a huge difference in response with the BB-natural and BB-flat on the tenor, but I try not to think about it, or the pedals sound like I have metal lips.

Approach to tonguing, tenor/bass?

The tenor uses a lighter tongue.

With bass trombones today, you can rather make it sound like a tenor tuba with all the valve possibilities. Do you play more on the slide or use the valves more?

Neither. I don't know anybody who makes the bass trombone sound like an F tuba. We've come pretty far in making the bass trombone a sound. Music has changed, but not necessarily for the better. The reason for

this is making a real trombone sound work in a huge orchestra. The problem is when a prodigy tries to make that same sound in a forty piece chamber orchestra, then scream at the world because the violins can't play loud enough. I push it, too. I can't claim to be a purist. My personal opinion is the sound I can make on a regular .562 trombone is all the bass trombone sound you would want.

How about the slides versus the valves?

That is based on technical concerns. If I have loud D-flats to play in a row, I'll play them on the slide. If I have some passage with the D-flats making sense with the two valves, I'll do that. I'm finding that I'm getting a more open sound with the second valve than the first. Not just on my horn, either. I have had some acoustical revelations. I had no idea why the tone collar would work, none of the explanations made sense. Why is there still a difference in F in sixth and F with a valve, even a Thayer valve? I talked to someone else, and it had to do with the placement of it. If people sound good, they sound good.

Playing in tune? Does it feel any different on the tenor or bass?

No, I don't feel any differences, except you are more likely to have intonation problems on the tenor, and you run into different tuning issues. A major third in the bass causes problems.

When you are playing, are you true to slide positions, or lip adjustments to find the sweet spot?

Usually, and it is because I'm playing with players who are stable. It doesn't always ring true, depending on the chord it is played in. There is a lot of tactile memory on notes.

Pitches on bass trombone, what do you have it tuned to?

F on first valve, and G-flat on the second. Sometimes I tune it so that the two together get a good D. I am moving more towards having the Gb in third, the F in first.

True in third so it lines up on the D

It doesn't quite get a D, you have to pull it out.

Any other combinations or slide pulls that you do?

Not really.

Anything else on intonation?

It is a good idea.

When you picked up the second instrument, how long did it take to feel as comfortable on that as your principal. Did you ever have lapses along the way?

That happened pretty fast for me. In a general sense, within a matter of weeks. I had a school trombone, and over Thanksgiving break, maybe Christmas, my dad gave me money for a new bass trombone. I went back for a couple lessons and played my jury on my new horn, and it was the only time I got a B.

Would you agree that developing a second instrument requires a great deal of mental toughness and courage? Did you ever get discouraged along the way?

Yes, it takes a great of courage and determination. I never really got discouraged. It takes courage to learn the instrument and play it in public.

Did you go through stages as you were learning?

I went through that when I went back to tenor after playing bass for awhile. It was hard, and it took me a long time to get it going again.

You were originally a tenor player, played bass trombone. Do you think of yourself as a tenor trombonist playing the bass, or a bass trombone player playing the tenor?

The enigmatic answer is "I am a musician". But I probably still feel like a bass trombonist first. I use it as an excuse sometimes. Was there a question about the advantages of doubling?

Yes, back at the beginning, when and why did you switch, would you recommend that another person double?

I am a big advocate of doubling. The things you learn, the lightness of approaching the tenor make you a better bass player and the richness of the bass trombone makes you a better tenor player. The registers you play in. Learning to play the valves, each instrument helps the other. There are technical problems, too.

In the instrumental methods class other guys would be complaining that learning all of the brass instruments was mucking up their embouchures. It didn't threaten me to pick up another instrument, I thought it would strengthen my embouchure, not hurt it. What order do you like to perform, you said tenor to bass was logical. Would you ever program more than one switch in a performance?

I have, that's a good question, if I would ever do that again.

Have you ever had to perform in an order you were not comfortable with or proficient at? What solutions did you find?

I know that has happened, but I can't come up with the situation right now at this moment.

How about fatigue issues when you first started on bass

trombone, did you have trouble with your hands?

Yes, I literally had a frozen shoulder.

It locked up on you?

Yes, I went to an orthopedic surgeon and put a needle of hydrocortizone in there to see if he could get additional movement. I could hardly move it at all. He suggested surgery or physical therapy, so I took the physical therapy. I am stronger in my arm now. It turned out that I had a pituitary gland that had to be removed, I was short on certain hormones, like cortisone.

Trigger range on bass trombone, do you try to keep your left hand opened or closed, how do you adjust the triggers?

I don't have a lot of choice. It is comfortable where it is. I guess it is more open, and I contract to move the triggers. I have to do that because my head is thick, so I can't adjust them any other way.

Marking system, what do you use?

Since I have gotten into the independent valve system, when I make marks I do a v or two stacked v's for the second valve.

Tenor bass doubling, anything else you wish to share?

Let the instrument sound. Let the instrument pull out of you what is necessary. If you approach it with the idea of putting in the same stuff, it is not going to get a good sound. If you try to do it that way, you'd go nuts trying to play even one trombone let alone two. If you look at it from the point of your body becoming a resource that feeds the instrument, guided by the mind and the music.

I tell people that the bass trombone is a completely different instrument. I approached it all wrong in the first place, I was

playing lead in jazz band, and orchestra, and taking lessons every other week on bass. I put so much pressure on my lip that I tore my lip internally, I had a bubble like a sidewall bubble on an old bias belted tire. I sat on the couch for a week with an ice pack to get the swelling down. I could find nothing on this topic published.

I'd like to see something on the trombone family and the tuba family. I'd like to get some literature out there to help people. I wanted to help my students, if I had a bass trombone player I needed to be able to tell him what was going on.

You have to let the embouchure, the breathing, the tonguing to flow, get the sound to ring and get a nice flow. Going to bass trombone, it doesn't take a lot of strength to play it loud. I do a demonstration where I play loud in their faces, then I say watch me do it this time. Like Doc Severenson, cramming the horn into his face, then he'd take his hand off to cut the band and I realized that he wasn't pushing it into his face. Bud Herseth was another one, he looked like he was listening to a bank lecture, and have this phenomenal sound coming out. Sometimes I'll go into a hall, and try to imagine that my sound is lighting a light or bringing a corner of the room to life.

Anything else I could have done on this to improve it?

You did great, one thing I want to suggest is that you have to have time to make this commitment.

Guys have to allow a time, like at least two months when they can't take a gig because their principal horn will be compromised while they are learning.

There are times that this happens to me, when I wish I had more time to prepare for a performance.

Many thanks for your time and graciousness.

APPENDIX 4

THE INTERVIEW WITH BRIAN ROGERS

Please describe your instrumental playing history.

Well, I actually started out on euphonium. My father was a euphonium player and my brother was a euphonium player, so we were a family of euphonium players. My father also played trombone and he played tuba in the Rockford Symphony for about thirty years. Just out of family tradition I started out on baritone horn. In high school I saw some limitations playing the baritone so I started playing the tenor trombone. I did not study privately with anyone outside of my family. My brother was a few years older than me and was really my first private instructor. When I got out of high school, I was interested in getting into a service band in Washington, D.C. That was desired because of my father, he followed the musicians from the service bands, the virtuoso performers from the 1940's and 1950's. He was an active musician. Rather than following the academic route like my older brother did, I took a couple trips to Washington, setting up auditions. Nowadays, those bands all advertise in journals, but back in the time I got out of high school, they didn't advertise, you had to inquire and bug them about when an opening would come up. I eventually did get into a band in Washington, and stayed in about three years. I was a euphonium player in the Army Band.

Did you play both trombone and euphonium in high school?

At some point, I quit playing baritone and started playing trombone, probably when I was a sophomore in high school. So I didn't really touch the baritone again until I pursued the service band, and just because of

the necessity of auditioning for whatever vacancy there was, I auditioned on the euphonium. While I was in the Army in Washington D.C., I studied trombone with a fellow named Keig Garvin, who was a trombone soloist in the Army Band for quite a few years. Most of the bands out there have a featured trombone soloist. The Marine band had two soloist, it was Bob Isle and his successor was Jimmy Erdman. Keig Garvin was the soloist with the Army band. When I got in, he was just retiring. He was a trombone student of Arthur Pryor. He was a specialist in the Pryor type solo literature. I realized that the opportunity to study with a teacher in that area would not come along later. I was primarily doing solo playing on trombone, but I did play on a large bore tenor.

Like a .547 instead of a .512?

Exactly. I was a member of the Catholic University Trombone Choir. This was when John Marsellus was at Catholic University, before he went to Eastman, so I was in his trombone choir for three years. The main reason I left the army was to return to the Chicago area and study trombone with Ed Kleinhammer, although it actually took me a couple years to get my act together and become a regular student of his. At that time, it was still just on tenor trombone. A few years later, there actually was a bass trombone vacancy in the Rockford Symphony, so I auditioned for that. My father played tuba in the orchestra, and I don't know if anyone else even auditioned. Rockford was a moderate level orchestra, and that was when I first started playing bass trombone. That same year, around 1980, the St. Louis Symphony was holding auditions for a "utility" player. This was a bit strange. The audition was

on tenor trombone, bass trombone, bass trumpet, and tenor tuba. The audition repertoire included a broad range of material to prepare. For my own preparation, I also worked on alto trombone. So that was the situation when I became aware of the problems of throwing bass trombone into the mix with all of the other instruments. Euphonium and tenor trombone doublers are reasonably common, same mouthpiece, it isn't something that is thought of as being too much of a problem. My experience has been that a lot of trombone players who do double are not real good euphonium players. They think of it as a "faker's delight" being that you can use the same mouthpiece, or very close mouthpieces, it is not a big deal. Now bass trumpet is a sound concept in orchestras. You can use your tenor trombone mouthpiece, maybe with a slightly shallower cup. Alto trombone is kind of a world of its own, too. A lot of tenor trombone players who double on alto, can use their same mouthpiece for that, too. I was playing on a Schilke 57 mouthpiece. At that time, the tenor trombone mouthpiece I was using was pretty large. When I was playing euphonium and trombone that worked o.k., but it isn't really big enough for bass trombone. So when I started playing bass trombone, I went with the Schilke 58, just one size larger. You get quite bit more cup volume and throat size, so it seemed more adaptable to today's trombone. I went to Schilke and talked to Scott Laskey, their technician, and got a set of mouthpieces. I had a mouthpiece made, a Schilke 58 rim, with a 60 cup. For tenor, I used a 58 rim with a Remington cup. Then for small shank horns, alto trombone and bass trumpet, I had a 58 rim with a shallow cup, maybe from a Schilke 47 or something. For euphonium, I used a straight

Schilke 58. So I actually had four different mouthpieces and they all had 58 rims. I had time to prepare for that audition, about three months. So everyday I had all my horns set up, about two hours three times a day on all of these instruments. I found in preparing for that audition, my general performance level seemed to increase, drastically. I had a theory, that switching around the different instruments made my playing abilities become enhanced. I don't know if it was the divergence of the way the embouchure feels, blowing through different horns, or the amount of time I had practicing on different instruments. I had to put in more time. I think it was a combination of the variation in horns and the increased practice time. I'd never played the alto trombone before I prepared for that audition. I found that playing alto enhanced the ability to play in the upper range because of the fundamental pitch of the instrument. I mean if you play an e2-flat on a tenor and alto, your chops are vibrating the same pitch, but the alto is so much easier to make speak. I also found that after I practiced on the alto that I sailed through the high range with no problem at all. That was the situation when I started playing bass trombone, and I had an opportunity to not just double, but I was playing a lot of different instruments, so I kind of started playing bass trombone and playing an alto trombone in the same basket. When I went to the audition, it was overwhelming. They had excerpts from opera scores. The bass trumpet literature threw me. It was written in three or four different keys, so unless you had a chance to transpose and learn the music ahead of time, it was very difficult. A trombone player usually isn't put on the spot for transposing very often like some other instruments are. When I had talked to Scott Laskey, he

said that others were having special mouthpieces made for this particular audition. He said it was strange, including bass trombone with the other instruments, because it is such a different mouthpiece. His suggestion was rather than trying so many compromises, trying to get mouthpieces with one rim size that works for everything, that I should just get a regular bass trombone mouthpiece and learn to make the adjustment. At that time, that was totally unacceptable to me. I had made mouthpiece changes over the years, just on the tenor trombone, like trying a Bach 5G or a Schilke 51. You do experimentation and select one that works well for you. To actually go from one mouthpiece to another within the course of an audition was a pretty abstract thought for me. I had been taught that only inexperienced, immature players would switch around mouthpieces. Like players who get a different mouthpiece to play high notes, commonly seen in a school band. It went against the grain of formal trombone playing. After this St. Louis audition, I put away the tenor trombone all together. I was going to become a bass trombone player, and I did that for several years, playing exclusively bass trombone. I had been studying with Kleinhammer all along here. His opinion of doubling was not real high. There are some players that do it, and they have mouthpiece sets to accommodate, but he didn't recommend it. So that is the course I followed. I ran across an interesting article from one of the old trombone journals, interviews with Alan Ostrander, where the topic of doubling was put to him. His historical perspective was from the era of the 1950's. There was no such thing as a full time bass trombone player.

Yes, the two ranges of the instruments were so close, and for most orchestra work you are in the mid to mid-low register.

There were bass trombone instruments, various manufacturers were making them.

Even those were maybe a little bigger bell flare, maybe a .562, and a single valve.

Exactly, and when a bass trombone vacancy came along, it was just a tenor trombone player who would take on the position. As a few years passed, into the mid 50's Kleinhammer and Ostrander, became dedicated bass trombone players. I remember Ostrander saying, the transition from tenor to bass trombone, the embouchure took about three years. In the orchestral repertoire, if you took the mean pitch, the range of notes and averaged them, the principal trombone averaged out to around d1. The bass trombone parts averaged out to one octave below there. He put a time frame on the person's chops taking three years to become accustomed to the range. I don't really believe that, but at the time I read this, I was a dedicated bass trombonist. Another situation came up in Rockford, a married couple moved to town, a trumpet and a horn player. The trumpet player actually makes violins at a shop. When they came to town, they organized a professional brass quintet, about fifteen years ago. I became involved, and got the tenor trombone out again. Because of the necessity of playing gigs on two different instruments, I became a tenor/bass trombone doubler. In fifteen years, my experience on the two instruments has gone through an evolution. The doubling that I do, I don't ever have to take two horns with me to one gig. The brass quintet is fairly demanding group. Our

repertoire is quite extensive. We have nearly every published quintet work, along with quite a few of our own arrangements in our library. Playing tenor trombone in the quintet is not something that I regard as a chance to slack off, I have to pursue the work seriously. The Rockford Symphony since I first joined, has increased probably one hundred percent from the level it was. We have competitive auditions, the membership draws from Madison, Milwaukee, and Chicago. So these positions are requiring me to maintain my playing on both instruments. **What are you using on your tenor and bass trombone set-ups now?**

The bass trombone, which I play ninety percent of the time, is a Conn made up of parts, Conn bell, something from 70's vintage, and a single axial valve. That sets me apart from a lot of other bass trombone players who use a double valve set-up. I sold my double valve, I had a Bach, a large bell, I sold it to a buddy of mine, and he put dual axial valve on it. I have access to the double valve, but for my general daily practice and in the orchestra I do not need it. I do some classic big band playing, too, but I have not been doing that recently because of conflicts with other work. When our brass quintet was getting organized, I played the tuba part on bass trombone at our first recital. We had someone else play tenor trombone, while we were seeking a tuba player. If we had decided to have a bass trombone in the quintet, I'd have to dedicate myself to the two-valve bass, and maybe not playing the tenor at all. Bass trombone in a quintet is a workout. It is more demanding than orchestral literature, as far as range. There are very few works, Wagner, Bartok, are about the only ones that really require the two-

valve bass trombone, the contra-bass parts. On tenor trombone, I have several different tenor trombones. Made up of Holton and Conn parts. The main tenor I play uses a Holton dual bore slide.

Like a .547/.562?

Yes. But I have a Conn, no valve, large bore, tenor horn. Presently on the bass trombone, I still use the same mouthpiece that I had made for the St. Louis audition twenty years ago, a Schilke 58 rim with a 60 cup. I have an assortment of Schilke 60's, if I needed a "bigger blow" for a certain gig, I would use it, but I don't very often. On tenor trombone, I have some Doug Elliot set-ups. I have a rim size similar to a Schilke 50 or 51. In mouthpiece comparisons from one manufacture to another, rim sizes vary by hundredths of an inch. A Schilke 51 is 1.01 inch. A Schilke 50 is an even 1 inch. I have mouthpieces that are around that size. The 58 is 1.08, about the same as a Bach 1 1/2 G. That was the old standard, but then they started getting into the bigger sizes. I think a 59 is a 1.10 and a 60 is a 1.12 or 1.14, but it starts jumping around. Nowadays, I think a Schilke 60 is standard for a bass trombone player. Kleinhammer told me to do that when I started playing bass trombone exclusively. A dilemma from the past of switching mouthpiece sizes. After a few years, I have to say that they almost feel the same on my face, it is not big deal to switch anymore. More of challenge for me is the way the two horns blow, rather than the mouthpiece itself. When I played bass trombone full time, there were a few jobs when I had to play tenor trombone. When they opened the Rockford Metro center, they would hire local musicians for ice shows and the circus. There would be a couple of those each year. I'd stick my 60 in the tenor, shove the tuning

slide in all the way, and play a little flat, just to get through the gig. What came out of the end of the horn wasn't quite right. I had always liked a larger mouthpiece but when I actually started doubling professionally, I started going down in sizes on the tenor. I found that more legitimate sized mouthpieces for the tenor just seemed to work better on the horn. The harmonics and the characteristic sounds were better. When I started scaling down in size on tenor trombone, getting down towards the 101 size, that was when I went back to my 58/60 cup on the bass trombone mouthpiece, and I found that the transition there between the two different sizes seemed to be workable. So as time went by, each horn that I pick up and put to my face, feels right on my chops. That feeling that this feels tight, or I'm falling into this one seemed to go away over time. It seemed like when I got over the mouthpiece dilemma, I was free to pay attention to more important things in my playing. In that respect it worked out well. Doubling on the two instruments actually seemed to kind of square up my tenor playing, correcting some deficiencies in that. I did run across some supporting comments in various workshops that Charlie Vernon has conducted. I recall him thinking of the same or a similar mouthpiece evolution, going back and forth between the two instruments. I recall him saying that he'd tried using a big mouthpiece on both horns, and that it didn't work out right. The last I heard, probably a couple years ago, was that the mouthpiece size differential that he ended up with is about the same range as I'm using right now, except his is bigger. He uses a 60 rim, he has his own Schilke, the Charlie Vernon model, which has a straight shank, so you can use it with a horn that doesn't have a lead pipe, you

can just put it into the bare slide tube. I know several guys that use that in their Bachs.

He has gotten away from that now, he is using a lead pipe.

He pretty much uses the 60 rim size in the bass trombone, in the tenor, he never really pinned himself down, he said he was playing on something around a Bach 4. He probably has different mouthpieces that he plays on different horns, because he plays different sized tenor trombones, too. A Bach 4 is just slightly larger. The Bach 5 has that 101 rim size, like the Schilke 51. Most of those standard symphony tenor mouthpieces, he is using something just a little bit bigger than that. The differential is probably in the same ballpark, but I'm just using something slightly smaller on both horns.

If you had a tenor trombone player wanting to approach bass or vice versa, what set-up would you recommend initially and would it change? Would you recommend a smaller horn initially, then move to a larger one?

The initial question is, if someone is playing tenor trombone. I personally don't know of anybody who started out on bass trombone, like in the 6th grade.

It is too big and too heavy.

If a tenor trombonist has never picked up a bass trombone, starting from scratch, when you are talking about larger or smaller set-ups, you are just talking about the mouthpiece itself. Most bass trombones come with a smaller, 1 1/2 G, I think Bach sends you that with a new bass trombone, as far as I know. For the initial feel of the horn, I think I would recommend starting with that mouthpiece that comes with the

horn to get the feel of it. If a person is going to be a competitive bass trombone player which is the goal of a lot of bass trombone players, going with a Schilke 60 is going to be needed. If you are going to an orchestral audition, that is the sound that will be expected.

So, if someone was playing on a 52, would you send them to a 57 or 58 first, or go straight to a 60?

That is kind of splitting hairs, a Schilke 52 is a slightly larger, like a 102 size. Let's figure this out for a minute. A Schilke 60 is a 112 rim size. Doug Elliot has a 114 and 116, getting up into the tuba mouthpieces. Let's say Vernon, I don't really know what he is on, maybe something like a 102 or 103 on the large bore tenor. That makes a differential of about 10 hundredths of an inch. I'm playing on a 108, and I also use a straight 100 and the differential of 8 hundredths of an inch. I think the recommendation for someone taking up the bass trombone would be to determine how much of a size differential they were willing to try.

Would you ever recommend a student begin playing bass trombone, or what point in career would you recommend a person switch or pick up the second instrument?

This is an interesting question because it brings up another issue, the ages at which young musicians reach a certain level of excellence on an instrument. The difference is in the different categories of instruments. There might be a few exceptions to this, but there are young musicians that reach amazing levels of excellence at young ages on piano and violin, as can be seen in a lot of competitions for young musicians. Now, young brass players seem to be absent and I'm sure you and I know some reasons for this. It seems that the youngest ages at which some

kind of a level of excellence, which is an arbitrary term, let's say the youngest age you'd expect to see a young musician on a stage in a classical performance of some kind. The violin players are probably the youngest, then the piano. It requires more physical maturity to deal with the keyboard. You are up into high school age when you start seeing the woodwind players. As far as brass players, musically they seem to be the last, and I am sure it is because of the physical demands of the instrument. What you are asking about doubling falls into that stew pot of physical maturity, of when does a student have the physical and mental maturity to double successfully. It seems like brass players actually start to become interested in the instrument at the end of high school, then as they go into college, it rapidly develops. There is some kind of threshold of physical ability the student has to cross. Doubling is even higher than that. It takes a pretty mature student to take that on. Whether a student could do it in high school, would depend on their attitude. It is definitely not something to be taken on by a very young musician. Maybe for the same reason that young players don't take up the bass trombone in elementary school. To add one more thing on to that, doubling on tenor and bass trombone, as is the case in other doubling situations, requires a lot of time to practice. It is more demanding on your time to play the two instruments. Just for that reason alone, some emotional maturity would be required.

Mouthpiece pressure: When you play, do you apply more pressure on the top or the bottom? Do you find any difference between the tenor and bass?

My initial answer is that I don't think about it a lot. I don't analyze it.

My summary is that I just put the instrument to my face and play. My first lesson with Kleinhammer, the first thing we did was play a duet, and his first comment was that I sound o.k. and we won't have to mess around with my embouchure. He made some comment that it can be a real problem area. I can certainly see where in some situations, some analyses would be called for, with a student. In my own experience, I just put the horn up and play. There is a related embouchure issue that I'd like to bring up.

O.K.

When you play tenor trombone, the fundamental pitch of the horn, just speaking from the laws of physics, is BB-flat. To play that pitch, you have to adjust your embouchure to the pedal note. It is not a big consequence, because the range of the instruments starts an octave above that. Now when you play the bass trombone, you actually have to deal with that embouchure shift. It isn't anything that I actually approached with Kleinhammer, I took lessons with him over ten years, sometimes as a tenor player, sometimes as a bass player, and I never had a chance to ask Charlie Vernon either. When you play bass trombone, you have to deal with some kind of a shift. My experience has been as you do wood shedding playing tuba etudes down in the trigger range, that you can over time become accustomed to playing without a shift. It has to do with something I can't put an analytical explanation to. When you go down through the trigger range, and hit BB-flat, there is a change in the harmonics from the physics of the instrument, it forces you to make a change in your embouchure. I recall Charlie Vernon acknowledging that there were two ways to play bass trombone, you

could decide to make the shift or you could eliminate it. It wasn't anything that he could put into words. He did a demonstration of both ways and said that he decided to do it the non-shifting way. It just takes some wood shedding, getting over that hurdle. Like breaking the sound barrier.

Farkas writes, smile embouchure or pucker, or combined?

I have to say combined. In the Farkas book, he has a chapter about the brass player's face, the rogues gallery of the Chicago Symphony brass players and they all have that look of a muscular, strong jawed stance, and I checked myself out in a mirror and decided I looked o.k.

If you look at all those guys with a visualizer, all of the trombone players have the same aperture.

What is going on in the visualizer, there isn't anything pristine about it. I'm a little off center.

I don't think anyone plays perfectly on center all the time. The tenor/bass trombone lip puckering, the lips come forward to a moderate degree. Do you feel any difference in the puckering or the corner tensioning between the two?

Not really. Let me change that. Because of the range of the instruments, the tension seems to be range specific. Going to the bass trombone, I found that I had to learn how to loosen up a little. If you played tenor exclusively, it is a pretty firm embouchure, when you play bass and you get down into the contra range you are losing any tension you have in your embouchure. That is something that has to be learned by a tenor trombone player who plays bass trombone. That is an issue that has to be approached because there are embouchure differences in

playing the bass trombone, but I think it is because of the range. If you could eliminate the fact that it is two different instruments and just examine how your embouchure functions as you go from low range to high range, it should be the same. The transitions in ascending and descending should be uniform from top to bottom. You should not have a major change just by which instrument you pick up. That is what I experience. My religious viewpoint on embouchures is that it is the same on bass or tenor trombone.

You were playing tenor trombone, then you went to bass exclusively, then eventually added tenor back in again. The next question really doesn't fit, it is about when you picked up the second instrument, if your embouchure fatigued quickly and how did you build endurance. There wasn't really a period of time when you were learning the bass trombone, you put your tenor aside, and then came back to it later.

As far as a fatigue problem, it made no difference. It just depended on how much time I was playing the horn generally. If I was having a good daily workout on one horn, then picked up the other one without having played it in a long time, I wouldn't really notice that fatigue would be a big problem. Accuracy would be an issue, but not fatigue. If you are a doubler, you have to practice twice as long anyway.

When you were learning a new instrument, did you ever experience a double buzz?

Yeah, I know what you are talking about. I had a related experience, connected to the doubling thing. I was not in real good shape, and I overdid it on a gig. I developed a rattle at a certain pitch. I can see how

that could be a problem in switching from one instrument to another.

How did you get away from the problem, or cure it?

I had to put the horn away for awhile. I think a couple weeks. It felt like there was some little muscle that let go. Initially, switching from one mouthpiece to another, it would bisect the lip muscle at a different place, and could cause that sort of thing.

The mouthpiece placement on the tenor- teeth and lips- how does it feel, and how much lip vibration do you feel? Is there any difference?

At this point, I don't feel any difference. I've done it for a number of years. When I started experimenting with different mouthpiece sizes, it felt terrible. Going to the bass mouthpiece after playing tenor, that mouthpiece felt terrible. It felt like it was in a different place, like something was wrong. This raises another issue. If the gigs I'm doing in the next month are on bass, I'll put the tenor away. When I go back to tenor, the mouthpiece feels so small, I can't do anything, and it hampers my playing somewhat. The other way around, going from tenor to bass doesn't bother me as much. Psychologically it used to be terrible, that feeling. Now it feels better. I remain current on both horns. I've noticed that a larger bass trombone mouthpiece has a narrow, cookie cutter rim, other players have commented. You have your inner rim dimension, I referred to earlier. But there is also the diameter of the outer rim of the mouthpiece which does affect how players feel. I know one player from Northern Illinois University, played on a Schilke 60, but had it made with a wider rim, so it looked like a tuba mouthpiece. Also, I've known some players that had their tenor mouthpiece rim widened

out to make it feel more like a bass. By adjusting the cookie cutter or thin rim factor could make it feel more comfortable.

Do you buzz on your mouthpieces, and what do you get out of it? Are you referring to mouthpiece practicing?

Yes, playing on just the mouthpiece without the horn.

Yes, it is a workout, and I enjoy doing it. I got one of these from a mute manufacturing company, a practicing aid that has an adjustable tube with a little flare like a bell. If you have a tube with a flare it allows you to get fundamental pitches and harmonics on a mouthpiece. This has a telescopic tube to hit a pitch, and you can buzz away and play tunes. I keep it in the car and practice etudes or excerpts. I enjoy mouthpiece practicing and find it very beneficial.

As a brass player, you get mouthpiece rings, callouses, etc. Do you have two sets of rings?

I don't feel like I have two sets, both feel normal to me. Maybe if they do an autopsy, they'd find them, but as far as what is apparent to me, I don't think there are two.

Warm-up routines for tenor and bass, are they similar or dissimilar?

I have a routine that I've worked out. I always do my initial practicing on tenor trombone. Then I go to bass trombone, to augment the practice. I do like to go through the etude book after I've warmed-up and play one page on tenor, one page on bass. I always initially warm-up on the tenor, I think because it is a solo instrument. The mechanics of playing are easier to work on in tenor playing.

This may or may not apply to you: If you have to do tenor and

bass on the same job, do you warm up on both?

I have had a few situations where I've done something like that. I find that I don't make a big deal out of warming up. In fact, I think that what most people would call warming up, I think of as daily practice. Getting out on the job, if I have not had an opportunity to warm-up much, I am not too disturbed by it.

During performance, if you had 3-5 minutes to transition between tenor and bass, what routines would you do?

If I was in a situation like that, I wouldn't put a lot of thought into it, maybe briefly rehearse the instrument I was going to be doing on stage, just to get used to it.

Breathing-do you use any specific exercises on a regular basis? What do you think you are gaining from these?

I do quite a bit of breathing exercises. Initially I do long tone warm-ups every day, and that works in the breathing. I do what Kleinhammer always suggested I do, take in a full breath, then a quick second breath to expand the lungs slightly, so I am up to my full capacity. I work that into some long tone drill for a few minutes. I also like to remain physically agile, as a point of maintaining general health, but also to help the breathing. If my body is stiff and sore, it affects my breathing, the rib muscles get cramped up. I usually alternate playing drills with calisthenics, or light free weights. As a diversion, I have a couple inhalation therapy things that make the ball rise up in tubes. I always work in a little variety like that every morning when I pick up the horn.

Differences/similarities in the amount of air required on tenor and bass, besides the obvious for range and dynamics?

I don't really notice a whole lot of difference. Of course on the bass trombone, in the low range, the wind is used up pretty rapidly. As far as the responsiveness of the horns, the air needed to get the horn to speak, I don't feel a lot of difference between the two. Something I've noticed is that when I have the opportunity to put a lot of time in practicing the horns, if I have a couple weeks with a lot of gigs and time to practice at home, I find that the horns in general use less air. It is a matter of embouchure efficiency, requiring less air. If the chops become weaker, when I only have time for maintenance playing, the air efficiency declines. It isn't so much endurance, but air efficiency. I have worked on demanding passages, demanding on the air supply, and I may put it aside for awhile, and it seems like I don't have that air problem anymore. As far as the differences between the two horns, I don't see any.

Besides breath capacity, do you do anything for breath control?

I do a lot of pianissimo practicing, and I feel that is very beneficial for breath control. Years ago I heard all kinds of Kleinhammer folklore.

Back when I was in the Army in Washington, D.C. all of the trombone players had taken a trip to Chicago to take a few lessons. They all had their stories to tell. I don't know if he just was having fun with them.

Supposedly, he would do breath control exercises where they'd try to pin a piece of tissue paper to the wall or lay the candle flame down without blowing it out. I've never tried that. Maybe he just suggested that they try that. Then the stories became elaborated, where he actually got up at 3:00 a.m. to do these exercises, but I never quizzed him on this. For my own breath control, I do the pianissimo playing, in fact if I can end my practice day with that, I like to. Playing an adagio etude is

demanding on air supply.

Release of the airstream, the point of changing from inhale to exhale? Do you feel a difference between tenor and bass?

Not really, the way I function is about the same on each instrument.

In tone production, how would you characterize tenor and bass, in relation to tone/overtone?

I use the image of a concept a lot. There is a difference between the bass and tenor concepts, I think of them as two totally different instruments. I make no attempt to blend my sound concept on the two. There are some tenor and bass players, not anyone I know of recently, but they have the same tonal concept on both horns. A lot of this has to do with the type of playing that I do. In general, I think the player's concept of sound depends on the kind of gigs they do. I make an effort to keep the horns separate. Bass trombone, I think of as strictly orchestral style. There is a lot of solo literature for bass trombone, but I don't pursue that at all. I use the tenor trombone to pursue solo style playing. There might be some overlap in the music, but as far as the instruments go, I keep them as two distinct instruments. In my practice, I maintain that.

How about models for playing, do you have any role models or did you have any when you were a young player?

When I was younger, the recorded material that was available, there was a lot less than now. I was a Tommy Dorsey fan, definitely. Also in our household, we had recordings of the old virtuosos. I listened to classical trumpet recordings. More currently, Christian Lindberg, I use him as a current model. On bass trombone, Chicago Symphony, Reiner

recordings, Kleinhammer, I recall a trombone journal interview with Vernon from a long time ago. He was saying that he listened to Chicago Symphony Reiner recordings, what a sound! Years ago I started collecting Chicago Symphony recordings. The trombone section was my model of an orchestral trombone section. I started listening to those in high school. Currently I admire some contemporary players. Have you heard of Brett Baker from England?

No.

He plays solos. He plays on a small horn, a classical style of playing, like eighty years ago, I think it is a Chandos CD. He is outstanding on the small horn. There is something I've noticed, current players, Charlie Vernon, does a lot of playing on a small horn, as do some other guys, too. Joseph Alessi from New York plays both a large bore tenor, and other sizes of trombone. It seems to me that their concept of playing on the small tenor is more of a jazz style, a non-classical style of playing. I've been doing a lot of practicing on a small tenor, but I am pursuing a non-jazz, strictly classical style. That is one reason I mention this Brett Baker, because he is playing the classical with the small tenor.

Vocalizing in a practice routine. Do you do any vocalizing and what do you get from it?

No, I don't do any.

Do you find any differences on tenor and bass in tone centering?

There is a difference in the two horns. At this point, after several years, it becomes less and less. Are you speaking about accuracy? Like if accuracy would be impaired by switching between horns? As long as I remain current on both horns, I'm not affected at all. If I have to put

one away for a few weeks, there may be a little centering problem.

Vibrato-similar or different between the two horns? What type do you use?

I use the same vibrato on both horns. Of course on the bass in the orchestral setting, there is not much call for vibrato. I use a jaw vibrato. In the quintet, I use that quite a bit. In orchestral playing, if I have a soloistic passage, I would use the same form.

What exercises or techniques do you use to improve the openness of your oral cavity, and are there any differences between tenor and bass in this area?

I think each instrument calls for the same openness. I have not analyzed myself much. I don't think about it, I just put the horn up to my face and play it.

Pedal registers- do you anything to isolate that shift from registers?

That definitely has to do with the embouchure shift I was talking about. You have to deal with it.

Tonguing-the approach tenor/bass, legato. Any differences?

The tonguing does change a little from one register to another. Of course on the bass trombone, you are playing down in the lower end of the range, where you use a pretty soft tongue. I think that the tonguing is similar to what we said before about the embouchure changing, and I think the tonguing is more range specific than tenor/bass trombone specific. Tonguing in general, you have to have a toolbox of articulations to be a trombone player, so playing both instruments you need a little bigger toolbox.

On bass trombone, do you tend to play as much as you can on the slide, or use your valves as much as possible?

It seems simple, but it comes to mind every day. I kind of make things more interesting from day to day, like if I'm working on a certain etude, and different days I'll try different ways. Certainly having technical mastery of using the trigger is mandatory for bass trombone. On certain drills when I can choose, I'll do it different ways for variety.

There are certain etudes that require the use of the trigger. I do a lot of tenor trombone practice on a horn without a trigger, so I get accustomed to playing a horn without a trigger. Then when I pick up the bass trombone, I concentrate on trigger work.

How do you know when you are playing in tune, and does it feel different on the two horns?

That is something I had a problem with. The harmonics on the tenor seem to be different than on the bass. It could have been because of the mouthpieces, too. It took me years to arrive at using a certain mouthpiece on tenor and a certain mouthpiece on bass. I had been trying to use the similar mouthpieces, and found that I had trouble playing in tune on the tenor after I'd been playing the bass for awhile. I would hit fl, and it was so sharp I couldn't stand it. That seemed to be problem, switching between the two horns. It has gone away now, maybe the two different mouthpiece sizes has helped.

When you are playing, do you try to hit the note at the correct place on the slide, or do you try to change your mouth or oral cavity to get to the note at all? Any difference on tenor and bass?

I do fine point tuning all the time. I don't take the attitude that every

time I put my slide and chops there it will be right on tune. I am always on guard and I incorporate that into my playing. Also, playing different trombones, I have several different horns. The slides are different, the sight reference is different. When I started doubling, it became easier to pick up a brand new horn and nail the intonation. The issue of having the positions slightly different on a new horn became easier when I started doubling. Maybe I became accustomed to the instantaneous tuning when I picked up the two horns. I'm not obsessed by it anymore, but I don't assume that it is going to be o.k.

Developing the second instrument, at what point did you feel that your second instrument was as comfortable as your principal instrument?

I would say it probably took a couple years.

In developing the secondary instrument, did you ever get discouraged with the lapses or less than professional sound?

There was a lot of discouragement, yeah.

How do you think of yourself- as a bass trombonist playing a tenor? A tenor trombonist? A doubler?

Whatever instrument I am playing, that is what I think of myself as.

I think you answered this question on programming, you'd prefer to go tenor then bass, in a recital. Would you ever switch more than once in a program?

It would depend on what I was playing in the program.

Did you ever have to perform on horns in an order that you were not comfortable with?

You mean on the same job? No, that has never come up.

When learning the bass, did you have a problem with your left-hand? Did you do any exercises for that?

Yeah, I had problems. Actually I would use an athletic wrap around it, maybe for carpal tunnel syndrome.

It is bass trombone claw. Vernon has a device he is working on with his sister who does hand therapy. It is a molded device, where you are holding the horn with your whole hand, to free yourself for the valves. So the bass trombones would be manufactured with a handle, like a glove to attach to it for more support. That was the worst thing for me, my horn was so heavy. Trigger ranges on the bass trombone-do you have your hand open or closed to where you are?

I've done a lot of bending on this. I like to have a nice grip holding the horn, and get the trigger paddles bent so that I can use them without compromising the support of the horn. This is something I am going to be getting into, the brass repair business.

I want to take a look at this, I saw Vernon's, he had wood, like a hard, cherry wood instead of metal on the paddle, I guess it would be less slippery. Then he had it dovetailed to fit his finger. I think the wood would be a comfort feature.

I'm going to get into doing valve conversions on bass trombone.

Thank you for your time and expertise.

APPENDIX 5

INFORMED CONSENT FORM **for research being conducted under the auspices of the** **UNIVERSITY of OKLAHOMA-NORMAN CAMPUS**

Introduction

This document serves as an Informed Consent Form in the research being conducted by Lawrence John Pearce. Signing this document signifies your willingness to participate in the study entitled "The Art of Tenor/Bass Trombone Doubling: An Examination of the Performance Philosophies and Practices of Three Selected Trombonists." This study is being monitored by a University of Oklahoma faculty committee which is chaired by Dr. Irvin L. Wagner.

Description of the Study

The study will involve personal interviews with three participants. Participants will be asked questions pertaining to their performance philosophies and practices. The individual interview will take approximately two to three hours of the participant's time.

Potential Risks and Benefits of Participation

The author can foresee no inherent risks associated with this study. The study will provide new information to the field of tenor/bass trombone doubling.

Conditions of Participation

The subject does understand that participation is voluntary and that refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled. The subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled. To participate, you must be 18 years of age or older.

Confidentiality

Participants will be identified by name and the institution where they are employed during the 2001-2002 academic year. Responses to the questionnaire during each participant's interview will be directly attributed to each participant. Prior to publication of the study, participants will be afforded the opportunity to review and correct or modify any information they contributed to the study during the interview.

Compensation for Injury

Due to the minimal risk to participants, there will be no medical coverage provided.

Course Credit/Compensation for Participation

Participants will be personally compensated by the author of the study.

Video/Audio Taping of any Research Activities

Participants will be video and audio taped during the interview process. The subject may reject either taping format without penalty or prejudice.

Use of Electronic Media for Informed Consent

No electronic media will be used for the collecting of survey data.

Contacts for Questions about Research Subject's Rights

Participants may contact Dr. Irvin Wagner at 405-325-5344 <iwagner@ou.edu> with any questions involving the study. Subjects may contact the Office of Research Administration at 405-325-4757 with any questions regarding participant's rights.

Please circle your responses to the following questions:

Participant agrees to be identified by name and employer- Yes / No.

Participant agrees to be audio taped during interview- Yes / No.

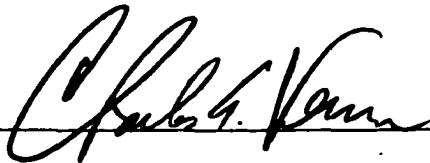
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Signed



Dated

3/28/02

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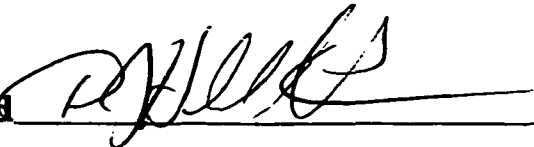
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Dated

2/26/02

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Dated 2-2-02