THE NATURAL LEARNING PROCESS AND ITS IMPLICATIONS

FOR TROMBONE PEDAGOGY

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This thesis considers the natural learning process as defined by Timothy Gallwey and Daniel Kohut. This learning theory is examined and applied to trombone pedagogy while also considering physiological attributes to trombone performance. A brief synopsis of the history and lineage of the trombone is considered in order to understand the current setting of the trombone medium.
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CHAPTER 1
INTRODUCTION

Once, while I was observing a high school wind ensemble rehearsal, there was a young trombone player named Tommy who was having trouble creating a sound on his instrument. The band director asked Tommy to play a concert F by himself so he could make suggestions for improvement. When Tommy was unsuccessful at making sound come out of his instrument, the teacher asked me if I could instruct him privately in the other room. I gladly accepted. To my astonishment, the first thing that Tommy said when we were separated from the class was, "I think my mouthpiece is broken."

The implications of this statement were far reaching. Tommy seemed to misunderstand how a mouthpiece and trombone functioned together to amplify sound, and he might not have been aware of how the breathing system and embouchure worked together to create that sound. At that moment in time, I had a choice to make: I could try to impart all of my physical knowledge of creating a sound to Tommy, or I could simplify my instruction by creating achievable exercises that Tommy could grasp. I decided I would model an exemplary trombone sound and have Tommy imitate what he heard.

Before asking Tommy to play on the instrument, I reached over to the piano and played a concert F. When asked to sing that pitch, Tommy remarkably sang the concert F without much difficulty. After solidifying this simple task with correct repetition, it was time to create the sound on the trombone. I then played a concert F on Tommy’s trombone to show him that his equipment was not broken. Now that he had heard an aural example from which to imagine a trombone sound, I wondered if he would be able
to reproduce it on his own. I gave the instrument back and asked him to duplicate the sound he just heard. However, he was unsuccessful still. Instead of explaining how to fix the problem, I simply repeated the process; modeling the pitch and asking him to duplicate it while focusing on the sound in his head. Eventually, Tommy successfully created a sound in a consistent manner, and after a few minutes of imitation, was playing the pitch with a beautiful and resonate tone. I praised Tommy for his accomplishments and encouraged him return to rehearsal with the goal of imagining a beautiful trombone sound. He did so with a smile.

This experience raised many questions in my mind about how students learn to acquire performance skills. During my time with Tommy, I witnessed a transformation from his ability to simply create a sound to his ability to produce a consistent and resonant tone in merely ten minutes without ever explaining the physical process by which a trombone sound is created. I did not give Tommy any instructions on how to control specific parts of his body, nor did I tell him that anything he did was wrong. I simply modeled the aural goal in a way that would be achievable for his skill set at that particular time. I asked him to imitate my sound and led him through a trial-and-error process that helped him discover how to play a beautiful tone by himself.

My experience with Tommy left me to contemplate the meanings behind trombone pedagogy, how teachers and students interact during private instruction, and what new possibilities might emerge from such examination.
CHAPTER 2
BACKGROUND

This thesis explores the principles of the natural learning process, as espoused by author Timothy Gallwey in his book, *The Inner Game of Tennis*.¹ The natural learning process (NLP) is an organic path of learning described by Gallwey that utilizes modeling and imaging, among other techniques. Rather than distracting learning with an overabundance of detailed coaching (where to place the foot, how high to toss the ball, how far to bring the racket back, etc.), NLP allows the learning process to take place organically and with minimal. In tennis, the student would learn by watching, physically imitating, and using mental images to advance his/her technique.

This kind of physical and mental awareness is similar to when a baby learns to walk, a teen learns to drive, or even when an adult learns to cook. In Tommy’s case (described in Chapter 1), the starting point for a rich, full sound on the trombone began by listening to a model and reproducing what he heard. While important to the learning process, the details of posture, breathing, and embouchure were set aside so as to allow Tommy to initially learn naturally. The ways in which people learn “naturally” is discussed in Chapter 3 and serves as a foundation for examining additional strategies for teaching the trombone, with particular emphasis on intermediate students. The trombone is one of our oldest instruments, and, as such, many methodologies and theories of pedagogy have evolved over time. Therefore, before examining the natural learning process, it is important to understand the history of the trombone throughout Western music history.

History of the Trombone

The trombone has the simplest design of the brass instrument family, and its roots can be traced to the cornet, which was the first to be considered a brass instrument. Musicians were unsatisfied with the cornet’s limited capabilities and added a sliding tube to allow it to play in multiple harmonic series. German manufacturers took this idea a step further to create the Posaunein, the first trombone. This instrument had the same basic shape as the modern day trombone: a mouthpiece that connected to a ‘U’ shaped slide portion, which in turn connected to a bell with a flare. Aurelio Virgiliano’s treatise ‘Il Dolcimelo’ shows that this new instrument only utilized four slide positions.² During the 15th century a popular civic ensemble called the Alta Band played at outdoor functions. Alta provided dancing music, entertainment, street dramas, fanfares for royalty, and music at any occasion necessary. These small groups of traveling musicians consisted of shawms (a double reed instrument) and cornets, but eventually evolved to the instrumentation of two cornets and two trombones.³

The sackbut (Latin for trombone) became part of multiple 15th and 16th century ensembles throughout Germany, France, and northern Italy due to its adaptability. Composers took advantage of its loud capabilities for outdoor music. Furthermore, its ability to play softly allowed its use with different families of instruments within the broken consorts of baroque period churches and courts. Its ability to adjust intonation allowed composers to overlay choir parts with brass sonority. It was an important

³ Ibid.
instrument in the courts of England as well. His Majesty’s Sagbutts and Cornetts was an ensemble that was hired for daily services to play fanfares for royalty.⁴

Composers enjoyed the sackbut for its capability when played alone, as well as for its sonorous block of sound when used with multiple sackbut musicians. European nobility commissioned grand fanfares, music, and theater to celebrate the arrival of their guests. History’s first large mixed-ensembles accompanied the theater productions of these extravaganzas. Violins, viols, cornets, and trombones created large broken consorts to play polyphonic music called intermedii at these grand occasions.⁵ As these intermedii developed from short dramas into larger productions with stories and meanings of their own, they developed into operas. These became distinguished musical outlets in their own right and utilized the trombone within its accompanying ensemble. This very sonority created such a strong link with death that Claudio Monteverdi used a large trombone ensemble in his opera Orfeo to portray the underworld. Israel in Egypt and Saul, two of Frederick Handel’s famed oratorios, utilized the trombone as well. This would directly influence Christoph Willibald Gluck to include trombone in his operas; later his student Wolfgang Amadeas Mozart would do the same.⁶ These composers created a wave of trombone use in opera throughout Europe. While composers embraced the trombone in oratorios and opera, the classical era would not use trombone within the orchestra.

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⁴ Ibid.
⁶ Baines, Trombone.
The ability of trombone musicians to play a broad range of timbre and sonorities helped it become a mainstay of Baroque church music. Near the end of the Renaissance, composer Giovanni Gabrieli wrote music that split brass choirs into different areas of the church and then alternated phrases. This polychoral style, called *cori spezzati*, utilized the trombone in antiphonal brass choir compositions for St. Mark’s Cathedral in Venice, Italy. French composer Hector Berlioz stated that the trombone could characterize nobleness and grandeur. His excitement for trombone can be heard in *Symphonie Fantastique*, a pivotal work marking a shift into the Romantic era. Monteverdi’s stigma of death remained with the trombone into the Romantic period as well. Its solemn qualities were portrayed in Ludwig Von Beethoven’s *Tres Equali*. This funeral piece was composed for his very own death! Ferdinand David’s *Concertino* helped establish a solo repertoire for virtuoso players. This particular work was composed for Carl Traugott Queisser in Liepzig, Germany in 1837. Queisser also composed his own works that he used for solo performances.

The trombone saw many modifications throughout the 18th and 19th centuries. The most notable alteration was the switch from the key of A to B flat. This late 18th century development added three slide positions to the instrument, resulting in seven positions and creating a complete chromatic scale. German maker C.F. Sattler contributed the use of a large bore system to accommodate the symphonies of Richard Wagner, which called for loud, grandiose playing.

During mid-19th century England, symphonic wind ensembles and brass bands rose to popularity. These ensembles found new civic opportunities that had diminished

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7 Ibid.
during the baroque and classical eras. These amateur bands allowed more players to pursue trombone than ever before and for the first time the instrument began to be mass-produced. In America, composer John Philip Sousa used brass, woodwinds, and percussion to create a new civic band that played marches, waltzes, and serenades. Sousa’s featured trombone soloist, Arthur Pryor, helped raise the instrument’s popularity throughout the country. Pryor would later create his own ensemble for which he composed his own music. This continued the European soloist tradition practiced by Carl Traugott Queisser in which the soloist would write material based on his or her own musical strengths.

The trombone was an integral part in the development of jazz music in America. Felippe Cioffi, a European soloist who enjoyed a career in New York, moved to New Orleans and helped establish Dixie music between his symphonic and opera performances. Tommy Dorsey led jazz into a new era of swing music that was played solely for dancing and live entertainment. Swing music established the trombone as part of the big band ensemble, using three to four players in a section. From swing music developed Bebop, art music intended for listening only. Bebop required musicians to possess a high level of technical proficiency; J.J. Johnson was the first trombonist to excel in this style. The trombone can now be heard in all styles of jazz music. Latin music players enjoy its loud timber while soloists in America use its smooth and calm qualities to play with small ensembles. In the big band tradition the use of trombone has grown from three players to five, often utilizing two bass trombones to create a full

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8 Guion, “History.”
9 Ibid.
sound; this aesthetic is similar to the ideas that earlier composers had for the sonorities a trombone section could produce.

Since the inception of the sackbut in the 15th century, the trombone has played a part in most of Western music's ensembles. Its simple design allowed for quick intonation corrections that composers took advantage of in various ways. The timbre allowed the trombone to fit into many different ensembles to accompany voice and strings. Furthermore, its ability to play various characters of expression encouraged composers to include the trombone in their works. While every other brass instrument went through dramatic changes in design and function, the trombone maintained the same design from its humble beginnings to its current state, including only minor modifications.

The trombone has become a mainstay in modern musical activity. It is part of public educational ensembles and a vigorous area of study for numerous college level musicians. Present day orchestras continue to employ a section of trombone professionals, while composers rely on its compatibility to include it in their work. Since the trombone and its musicians continue to have a part in so many different ensembles over a long history with many geographical settings, various pedagogical approaches have been combined in order to teach new students. The Natural Learning Process (NLP), as cited earlier, is a holistic occurrence that might be a novel consideration for trombone teachers and their students, particularly at the intermediate level. The following section discusses in detail the facets of NLP and its connections to music performance.
CHAPTER 3

THE NATURAL LEARNING PROCESS

The natural learning process (NLP), in essence, is the brain’s and body’s ability to learn by example. This very phenomenon is what makes the story about Tommy (Chapter 1) so fascinating. Tommy was not given explicit pedagogical instructions, yet he learned to produce a resonant trombone tone by imitating his performance model. While NLP used as a single pedagogy would not be enough to teach trombone, there is nevertheless great value in understanding how NLP can enhance and facilitate student learning, particularly at the intermediate level.

An example that illustrates NLP may be found by noting how a child learns to walk. We all went through this process as infants, but no one taught us how to accomplish this task or provided a method book that outlined the importance of crawling before being able to stand up, balance, and walk. Instead, children observe their surroundings at all times, watching people walking about them, and therefore developing a clear mental image of walking. Without any instruction, children’s sincere desires to imitate their models lead to basic movements such as scooting, followed by crawling. It is important to note that the caretakers do not evaluate or criticize the slow development of the child. In fact, parents praise children for observed improvements and continue to encourage progress without giving detailed instructions. Eventually, after many months of observation, children learn to stand and take steps. This painstakingly slow sequence of skills exemplifies the fundamental components of the natural learning process. Because children have been allowed to observe a model,
create a mental image of that model, imitate the model, and use trial-and-error repetition, they are able to naturally walk like the people in their surroundings.

NLP in Trombone Applied Teaching

There are three main steps to address to understand how teachers of intermediate students can apply NLP within the framework of an applied lesson. The three main steps include discovering a model, imitating the model, and repeating what they hear. This process can be assimilated into a student's practice session, without instruction, or by the informed guidance of a teacher. The first and foremost necessity for NLP is a model of trombone performance that has been aurally developed into a mental image. This means that students have listened to high quality trombone playing enough that they can imagine the sound in their mind just by thinking about it. For example, recall a soloist or ensemble that you feel passionate towards; a recording that you spent months listening to because you could not stop enjoying it. Think about the beat that each musician adheres to and how the style or genre of this music makes you feel. How does the soloist or singer create inflection in their sound? How does the ensemble use dynamic contrast to place importance on specific phrases or climatic moments? When students who are passionate about trombone (or any other means of musical expression) listen to music with genuine enthusiasm for the art, they will naturally digest these musical qualities into their own musical understanding and thus create an aural image.

By employing NLP techniques, the need to focus on pedagogical details may be lessened. For example, there might be no need to help a drummer manipulates his hands and feet to create a visually hypnotizing beat, or there may be no need to discuss
breath control for the vocalist to sustain a phrase. Rather, intermediate students might learn these skills through nonjudgmental observation. Just like the baby who learned to walk by observing walking for many years, a young trombone player might acquire excellent performance/sound techniques by listening to fine models of trombone artistry.

Jazz is an area that seems to use principles of NLP, which reflects the origins of this American art form. For example, students of jazz trombone often listen to the language of jazz improvisation enough to inspire their own will to play. Later, when performing on the trombone, they will recall the mental imagery that was previously stored, imitating what was heard aurally. Imitation means mimicking the actions of another person. In regard to music making, it suggests an attempt to duplicate the performance of another musician via thoughtful practice.\textsuperscript{10} Of importance is the type of practice that the student partakes in.

The adage ‘practice makes perfect,’ albeit possibly true, may also be a misleading oversimplification. The natural learning process requires a special kind of practice beyond spending inordinate amounts of time playing with the assumption of progress. For NLP to work properly, intermediate trombonists must adhere to an approach of trial-and-error repetition. Recall Tommy’s challenge to create a solitary note on trombone. He was not successful for many attempts, but with repetition he slowly allowed his body to figure out how to match and reproduce the model he was given. While students put efforts into matching their aural image with the instrument, they must allow sensory feedback to tell their bodies what to change in order to match that image. It is critical that students do not consciously attempt to fix the problem with commands.

\textsuperscript{10} Kohut, Musical Performance, p. 6.
or verbal instructions. Instead, they must allow their bodies to make minor adjustments with every repetition until they achieve their goal. Kohut uses the example of an artillery crew firing a cannon at a distant target. With every missed shot, the crew makes minor adjustments until the target is eventually hit.\textsuperscript{11} When trombone players attempts to play certain passages, it is not likely they will master the passage to perfection on the first few attempts. Instead, they must repeat the process numerous times, like the artillery crew, allowing their body to make minor adjustments in the neuromuscular behavior while they consciously focus on the musical goal. Students must repeat the process until they can consistently reproduce their aural goal in a natural and easy manner. The Natural Learning Process places trust in our brain and body to unconsciously spark muscular function while the conscious mind focuses on the goal and gives the command to take action.

Kohut argues that many have lost our ability to allow NLP to occur. This may be why trombone teachers, in general, do not view NLP as a viable teaching tool. Children’s speech acquisition serves as an interesting example. Children who have not yet adapted to verbal cognition will learn to speak rather easily. They have yet to learn the meanings of words such as good, bad, smart, or dumb. Because they do not attach to these labels, their attempts to speak will not be impeded, and they will continuously make attempts until they finally reach their goal.\textsuperscript{12} These organic attempts allow the body to function without any muscular tension because they are carried out in a manner that is free of fear, social pressure, or judgment. In other words, children are not afraid

\textsuperscript{11} Kohut, \textit{Musical Performance}, p. 6.
\textsuperscript{12} Kohut, \textit{Musical Performance}, p. 7.
of making a mistake and not worried about social implications because of many failed attempts.

It is important to note that the caretakers of children do not need to understand learning theory, or even NLP, to aid in children’s growth.\textsuperscript{13} Parents will simply be happy for children’s improvement and will encourage them to keep trying. However, as Kohut explains, once we learn to communicate verbally we begin to lose our natural learning ability. Instead of allowing the body to match our model or mental image by focusing on the goals of walking (or producing a resonant trombone tone), we begin to think about the process by which these results are accomplished. To learn skills faster or more efficiently we attempt to master the individual components of a complex skill by focusing on how to move specific parts of our body. As described in the Introduction, Tommy’s simple task of playing a beautiful concert ‘F’ had morphed into infinite physical and mental technical challenges that were not only impossible to accomplish, but acted as an antagonist to his neuromuscular function.\textsuperscript{14}

The “final blow,” as Kohut states, is when children begin to attach their ego and self worth to the success and failures of their actions. Since verbally cognitive children now understand the meanings of good and bad, they might begin to label their attempts as such. This labeling causes muscular tension and anxiety that result in a garbled message within the neuromuscular system.\textsuperscript{15} The social pressures of success or failure, coupled with fragile self-images, causes children to try harder and find shortcuts instead of trusting the process of trial and error.

\textsuperscript{13} Ibid.
\textsuperscript{14} Fillebrown.
\textsuperscript{15} Kohut, \textit{Musical Performance}, p. 8.
When judgment is applied to a performance it results in divided concentration and interferes with the body’s ability to function properly on the following attempts.\(^{16}\) However, NLP is not something that simply declines with age, it is a lively part of every person’s perpetual growth. Instead of labeling a performance as good vs. bad, right vs. wrong, or even musical vs. non-musical, students (and teachers) must simply acknowledge what the performance is with a sense of nonjudgmental awareness.\(^{17}\)

Self-esteem is determined by our own assessments of our past performances and/or the judgments of other significant persons. If those evaluations are generally positive, it boosts our confidence and self-respect, which, in-turn, nurtures self-esteem. Alternately, if those judgments are negative, our self-esteem is stunted due to a lack of confidence and self-respect.\(^{18}\) In his book entitled *Psycho-Cybernetics* Maxwell Maltz states,

> The “self-image” is the key to human personality and behavior. Change the self-image and you change the personality and the behavior. But more than this. The “self-image” sets the boundaries of individual accomplishment. It defines what you can and cannot do. Expand the self-image and you expand the “area of the possible.”\(^{19}\)

We can now distinguish a link between self-esteem, confidence, and the teacher’s ability to motivate the positive self-image of a student. When the teacher allows the principles of NLP to be involved in their pedagogy (using modeling, imitation, trial-and-error, and successful repetition) the teacher will effect positive change in the student’s

\(^{16}\) Ibid, p. 8.


behavior. Acknowledgement of the current state of one’s performance without judgment will help to rediscover natural learning.

Summary

The tenets of NLP discussed in this chapter may be used as a way to facilitate natural playing beyond the physical demands. The following chapter discusses the primary physiological elements of trombone playing that can serve as a gateway to NLP when discovered properly by using David Vining's body-mapping technique. The diligent trombone teacher can use this physiological information to apply a system of task simplification that will allow the student to perform with minimal errors and repetitive success in a way that facilitates NLP, as chapter 4 discusses.
CHAPTER 4

ESSENTIAL PHYSIOLOGICAL ELEMENTS OF TROMBONE PERFORMANCE

Body feedback is a means of fine-tuning the movements during trial-and-error practice. The student should allow the senses to evaluate their performance and unconsciously make adjustments. David Vining, professional trombonist and studio director at Northern Arizona University, suggests that we expand our knowledge of our body’s physiology while playing trombone. Body mapping is a concept closely associated with Alexander Technique, a method of reducing tension in the body by letting the correct muscle and bone structures do the work of the intended act. This technique was applied to musicians by Barbara Conable’s text *What Every Musician Needs to Know About the Body*. After becoming a licensed body mapping expert, Vining used Conable’s example to further narrow body movements down to physiology during trombone performance. The cornerstones of Vining’s text include:

By teaching from a position of anatomical accuracy, not only do we avoid misunderstandings, but we also provide ourselves with a secure somatic foundation upon which we can make music… Concepts which do not cooperate with the reality of how we are built endanger our somatic foundation and cause confusion.20

Vining suggests that a somatic understanding is just as important as the musical understanding. Just like how an aural image of the musical goal is necessary for the body to reproduce it physically, a body map is of equal importance in the mind’s mental image because the body map is the brain’s understanding of how the body isstructured and how it should move when performing specific tasks. Vining states that a trombonist with an inaccurate body map will not move properly while performing; alternatively, a

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trombonist with an accurate map of the entire body will reap the benefits of proper movement.\textsuperscript{21} Kinesthesia is the ability of our senses to give feedback to us about our performance. This offers valuable information about the quality of movement, position of body parts, stress or tension, and the quality of the sounds we produce. As discussed earlier, body feedback is an integral element of trial-and-error practicing. A kinesthetic awareness provides us with more information on which to base our adjustments.

The embouchure is an element of trombone playing that carries much diversity in its definition and function. It is the most sensitive body part dealing with tone production on trombone because it must move to produce a sound. If there is no movement there is no embouchure. “An embouchure is a three dimensional entity in motion created by the flow of air past the lip tissue which results in vibration.”\textsuperscript{22} An embouchure only exists when there is a flow of air creating movement in the lips when sealed within a brass mouthpiece. If air is not moving, there is no sound, and hence, no embouchure. This results in a different embouchure for each individual player, an ideal that allows every individual a chance at the best resonance they can produce with their unique facial features. This definition also complements NLP with regard to tone quality. In traditional views of the embouchure, the tension created in controlling the muscle shape and size not only hinders an open and resonant tone quality, but also puts the focus in the wrong place. The student will potentially focus on the muscular process instead of the musical goal, inhibiting the body to organically form its own embouchure and weakening the musical message they wish to play.

\textsuperscript{21} Ibid, p. 4.
\textsuperscript{22} Ibid, p. 59.
Arnold Jacobs, former tuba player with the Chicago Symphony Orchestra and highly regarded brass pedagogue, states that he rarely finds problems with the embouchure. Rather, his students lack the respiratory skills to support the embouchure while playing. This supports Vining’s three-dimensional definition of the embouchure that it is only formed when air is blown through the lips. The lips cannot properly form an embouchure unless there is enough fuel, or wind, being passed through them. The embouchure changes throughout the range of the instrument necessitating different amounts of air at different times. This brings us to the next important element of trombone performance, breathing.

Breathing is an organic function that occurs without any mental effort. Trombone players attempt to increase their ability to breathe with exercises aimed at enhancing lung capacity and strengthening the ability to blow air out of the body. Based upon Jacobs’ statement that the amount of air necessary depends on the needs of the embouchure, and therefore the needs of the music, this approach of controlling the breath can be problematic to a trombone player. David Vining states that the breath is indeed the most important aspect of trombone performance, yet also the most misunderstood. The action of breathing is integrated into the entire body; as one inhales and exhales the body expands and contracts. Trombonist who attempt to control this movement in an effort to breathe ‘better’ or blow ‘harder’ are in fact stopping their bodies from achieving these critical movements due to tension they have created.

The mouth and nose are the first areas that air passes through when inhaling, although, this area is of little importance in the entire breathing mechanism. As the air

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travels toward the lungs, it next will pass through the pharyngeal space. This tube begins at the base of the tongue and extends down the neck until it splits into two tubes that travel to the lungs. The pharyngeal space is lined with muscles that surround it in a circular fashion. These muscles help move food and liquids down toward the stomach, having no involvement in the breathing process. It is important for trombone players to keep these muscles relaxed at all times. Not only will they hinder the air flow in and out of the lungs, they will keep the player from creating an open and resonant sound.  

Jacobs offers a simple solution to the problem of throat tension: simply imagine the word “whoooo” (as in who) when exhaling. This procedure creates considerable air volume flow while allowing the mouth and throat to relax.

The lungs are the organs that make use of the breath, but unfortunately there may be confusion about how they function within brass pedagogy. The lungs occupy the thoracic cavity, within the rib cage. They extend up above the collarbones and down behind the sternum. Many trombonists are mistaken to believe that the lungs lie low near the stomach. The lungs are actually held up above the stomach by the diaphragm, which plays a key role during inhalation and exhalation. The lungs are not muscles and cannot be controlled through physical effort. When we breathe, the lungs expand to occupy all the available space around them, like a balloon. Lung tissue cannot be strengthened or expanded by means of breathing exercises. They can only be allowed to fill up to their potential size by means of relaxation. The most important muscle that deals with breathing and function of the lungs is the diaphragm. This dome-shaped muscle creates the bottom of the thoracic cavity. Its arc like contour connects to the

25 Ibid. p. 40.
26 Frederiksen, Jacobs, p. 119.
bottom row of ribs. When we inhale, the diaphragm contracts, meaning it lowers downward. This flattening allows the lungs to expand by opening space downward and outward. The diaphragm relaxes as we exhale, springing back up to its neutral position. While the diaphragm is indeed a muscle that can be moved with physical effort, any attempt to do so while playing trombone will result in unnecessary tension. This tension will hinder the expansion and deflation of the lungs, causing a lack of airflow out of the body. Vining instructs musicians not to think of controlling the diaphragm, but allowing the diaphragm to respond to the sound you want to create. The musical necessity will determine the use of the embouchure, which in turn determines the amount of air needed, which then determines how much the diaphragm is needed.27

The tongue is a crucial part of trombone performance as well. This muscle dictates the style in which we play. When used properly it can serve as a tool to articulate sound and communicate a clear musical idea. The tongue consists of numerous smaller muscles that work together to move in whichever way necessary.28 It is vital that trombonists understand that the tongue is not one large muscle. Since it is comprised of many smaller muscles, parts of it can move in isolation of the larger whole. This action is necessary when speaking, swallowing, and playing an instrument. The back of the tongue is connected to the hyoid bone, this anchor allows for less flexibility in the back than in the front tip. When a trombonist attempts to articulate with the entire tongue, he/she will tire out quickly. In addition, the pharyngeal space will close due to the amount of tension he has created. Since the air is now blocked from flowing freely, this will result in a dismal tone quality. Arnold Jacobs used speech exercises to train

27 Vining, Every Trombonist, p. 51.
student’s tongues. By using syllables to give the brain a command to send to the tongue, Jacobs eliminated over usage of the tongue while playing. Using ‘Ta’ or ‘Da’ sounds to articulate with the tip of the tongue will train students that the entire tongue does not need to be used. Other syllables that may be used in the same fashion are: Toe, Doe, La, and Low. Since each student has a different physical make-up, the syllable needed to create a characteristic articulation may fluctuate, but the concept of using syllables will be of use to any trombone player.

Summary

An awareness of muscular function within the body while playing trombone is fundamental information that teachers should be aware of, yet for the purposes of this paper, it is information that should be limited to the student during the natural learning process. The next chapter presents ideas that teachers and their students can use when applying techniques based on the Natural Learning Process.
CHAPTER 5
SUGGESTED TECHNIQUES

What is the role of a trombone teacher if the student can accomplish goals through application of the natural learning process? After all, the child who learns to walk never had private lessons on the matter. To answer this question we must consider the magnitude of trombone playing. The action of playing an instrument is not natural, nor is it commonplace for children to be surrounded by it in the same way they are surrounded by people walking. By the time a musician is considered professional they have had years of practice and experience within ensembles, along with personal successes and failures. Playing the trombone requires extremely refined skills such as a developed sense of pitch and rhythmic accuracy and an embouchure that produces his or her unique sound. These skills take a lifetime of practice to develop, certainly more time than the child who learns to walk in a matter of 1-2 years.

The role of the teacher is to guide the student by creating goals that are reasonably achievable. Intermediate players may enjoy Ferdinand David’s Concerto for Trombone as played by celebrated musician Christian Lindberg. They may have the work memorized and are capable of singing along, but to expect an intermediate amateur to successfully play the concerto himself would be unrealistic. Like the metaphor of learning to walk, students must first learn to crawl before they walk. Similarly, teachers must create approximations of the target goal in a sequence that is achievable by the student.29 An effective trombone teacher will guide the student, breaking down passages of music into achievable exercises or excerpts that the student

has a chance of mastering. It is the teacher’s duty to consider the amount of these simplifications, the magnitude that each task carries, and the rate that they are presented. Furthermore, the teacher must then model these tasks for the student.

Whether students can achieve the target goal is dependent on their ability to master these simplified tasks. The teacher must present each task in a way that can be digested and reproduced by the student. For example, if the student is indeed learning to play the David Concertino, he/she will be confronted by a challenging section in the key of A flat major. This lyrical portion of the second movement challenges the player with large dynamic contrast. It contains over two octaves of notes with unique articulation requirements. In addition, the excerpt is musically demanding, requiring sensitivity to portray its emotional value. While this is a formidable undertaking for any trombone player, the teacher is charged with the simplification of tasks. Each simplification must be an approximation that will allow the student a high percent success rate. In order to progress there must be many smaller successes that add up to the final target.

Expert teachers should take their responsibilities one step further and teach their students how to devise such a series of tasks that will incrementally take them from what they can consistently do toward the instructional goal. If students understand that complex trombone music can only be played after first learning simplified and limited parts of the whole, he can help himself engage in NLP at a faster rate. If the task is too challenging for the student, successful repetition will not occur because he will not be able to play the task at hand to begin with. In this case, more simplification is needed,

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31 Ibid.
which is where NLP’s trial-and-error occurs. Each performance of a passage serves as a trial that the student or teacher may use to diagnose the degree of success. When the student can successfully repeat the passage many times, the next approximation of the final goal may occur. With patience and motivation to do so, a player can assess his ability on the instrument in real time, gauge the distance from that point to his musical target, and use trial-and-error practicing along with successful repetition to inch forward to his final aural image. Duke summarizes the teacher’s goals throughout the process into three simple tasks.

1) Each performance opportunity should produce mostly correct results. 2) Each performance opportunity must minimize errors. 3) Each performance must increase the habit strength of positive, productive behavior and thought.32

These three components imply that the task must be simple enough to be achieved at a high standard and on a consistent basis. The last of the three makes striking parallels with Kohut’s observations on self-esteem and self-image, which can aid or create barriers to an aspiring trombone player’s confidence during performance.

When teachers use this method of approximations, they will allow the students’ bodies to learn the physical requirements to accomplish the task. Instead of telling students to create a complex motion with the body, they will have simplified the task into an achievable standard that the student can accomplish while maintaining focus on the goal, not the process, thus allowing the Natural Learning Process to manifest within student.

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32 Duke, Intelligent Music Teaching, p. 94.
CHAPTER 6
CONCLUSION

The trombone has developed through hundreds of years of use in various western music ensembles. From its prototype as a slide trumpet and sackbut, to the classical era’s small trombone, ending in today’s highly refined craftsmanship, the trombone has consistently been useful to composers. Exceptional musicians such as Carl Traugott Queisser, Arthur Pryor, and J.J. Johnson have used the trombone to express profound musical statements. Many brass teachers try to define the muscular action that occurs while playing trombone. They verbalize these actions into methods of study, suggesting that if a student were to practice these components individually he would see progress in that specific area of performance. This creates tension in places that must remain relaxed. The natural learning process is an all-encompassing way to learn, practice, and perform on trombone. It requires the simple methods of assimilation with which we are born. While every individual’s body is different, the way it functions remains the same. Understanding body mapping and how the body functions while playing trombone can help us use kinesthesia to give ourselves feedback and determine the best course of action. Furthermore, a teacher can use NLP as well as kinesthesia to simplify tasks to a level that a student can successfully and consistently accomplish. These approximations of the final goal will allow for successful repetition that builds upon each other to accomplish the target goal. While the occurrence of the natural learning process can be applied to a solitary student, it has yet to be seen how NLP can be used in different scenarios. Can teachers of a large wind ensemble utilize NLP to create a unified musical gesture? Can a string quartet find ways to simplify a
difficult passage so that they do not lose time during a performance? Can a large high school marching band find use in body mapping to maintain a healthy physical condition? The natural learning process answers many questions about how students learn, although it also poses many more for music teachers of any level.
BIBLIOGRAPHY


