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Cultivating a Living Education: An Anthroposophic Approach to Teaching Overtones

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COLLEGE OF MUSIC

CULTIVATING A LIVING EDUCATION:
AN ANTHROPOSOPHIC APPROACH TO TEACHING OVERTONES

By

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For my students

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ABSTRACT

The daily production of overtones is not typically thought of as an elementary exercise for young saxophonists; in fact, the subject of overtones does not appear in most widely used method books designed for the young student. There are a handful of books that have been written to facilitate playing in the altissimo register, and these books do in fact discuss overtones. However, these methods are aimed at the advanced player, not the young child, which is clear in the language that is used. Many collegiate saxophonists will be familiar with these texts as they are arguably the most three prominent works written on the topic of overtones: *Top Tones for the Saxophone* (Sigurd Raschèr), *Saxophone High Tones* (Eugene Rousseau), and *Voicing* (Donald Sinta). Eighty years ago, the altissimo register was thought of by most saxophonists to be an extended technique, but today the idea of playing in this register is generally accepted if not unavoidable. It is troubling that one still encounters students of various ages and abilities opting to take passages down an octave in the works by Ibert and Glazunov. These pieces, along with many other notable works composed during the 1930's, form the basis of the saxophone repertoire, and require saxophonists to play over three and a half octaves. As early as 1842, the instrument's inventor, Adolphe Sax, demonstrated that the saxophone was capable of playing three octaves from Bb-Bb3.¹ While saxophonists have come to terms with the altissimo range and its musical necessity, many educators have still not reevaluated the way in which the student is prepared for this necessary fundamental skill.

Perhaps when this situation is viewed in the light of Anthroposophy, educators might glean insight into the importance of early overtone study. This treatise will examine some of the core principles that form the pedagogical philosophy of Waldorf Education as prescribed

¹ Léon Kochnitzky, *Adolphe Sax & His Saxophone* (New York, 1949; rpt. 1985) , 13.

by the Austrian-born philosopher Rudolf Steiner, as well as their application when applied to beginning saxophone pedagogy and the introduction of overtone study. The methods discussed in this paper are based on the author's first-hand experience.

CHAPTER 1

RUDOLF STEINER AND WALDORF EDUCATION

“The need for imagination, a sense of truth, and a feeling of responsibility; these are the three forces that are at the very core of pedagogy”

-Rudolf Steiner

Austrian born Rudolf Steiner (1861-1925) was a scientific, philosophical, and literary scholar. He was the founder of the worldwide movement known as Anthroposophy, which he described as a path of knowledge aimed at guiding the spiritual element in the human being to the spiritual in the universe. While Steiner’s “multifaceted genius”² led to innovations in the fields of medicine, science, religion, philosophy, economics, agriculture, architecture, drama, and speech, he is most widely known for his contributions to education.

Steiner introduced his new art of education with the opening of the first Waldorf School in Stuttgart Germany in 1919. The impulse for this renewal of education arose as a reaction to the chaos of World War I. In an effort to counter what he felt was an increasing materialistic nature in society, he developed a curriculum that would recognize the child as a threefold human being: body, soul and spirit. Steiner called this recognition “meeting the whole child.” Waldorf education-as it later came to be known-would respond to a child’s developing needs based on knowledge of the whole human being.

Teaching the Whole Child

One of the cornerstones of Waldorf Education is Steiner’s pedagogical indication of *meeting the whole child*.³ According to the Steiner School philosophy, the teacher that is trained

² Rudolf Steiner, *The Spirit of the Waldorf School* (Hudson: Anthroposophic Press, 1995) , 257.

³ Rudolf Steiner, *The Spirit of the Waldorf School* (Hudson: Anthroposophic Press, 1995) , 45.

to teach out of Anthroposophy must have a keen sense of observation. In order to gain the required longitudinal perspective, the teacher must understand 1) where the child *has been*, 2) where the child *is today*, and 3) where the child is *going*.⁴ When put into a slightly different context, most conscientious educators might tend to agree. While Steiner's indication is multifaceted, for the purpose of this, the example of *music teacher* and *student* will be used in the following scenario:

A mother has recently dropped off her child for his first saxophone lesson with a new teacher. The teacher has never met the student before; he only knows that he has played for a year and taken lessons with someone else. The mother chose the new teacher to help her son qualify for the All-State Honor Band. He has been unsuccessful in his previous auditions.

In the above scenario, it would seem quite appropriate to apply Steiner's observational technique; dedicated music teachers have done this for years. In the case of this particular student, the teacher should find out as much as he can about the student's *past* experience, i.e. *where has the child been?* Questions about the student's experience might include: Was the student taught to form the correct embouchure? Does he use the tip of the tongue or does the student anchor tongue? Can the student read music yet? When answered, all of these questions and others will begin to create a picture of who the child is, and what events led him to his first lesson with the new teacher. For example, perhaps the old teacher never properly worked on embouchure control or air support and as a result the student has a small airy sound. This fact alone could have prevented him from making the honor band in previous years. Then again, perhaps there are other reasons that the student sounds this way. Maybe he does not have a support system at home. The student may get admonished by his parents for playing the

⁴ Rudolf Steiner, introduction to *The Roots of Education* by Torin Finser (Hudson: Anthroposophic Press, 1997) , viii.

saxophone too loudly. In order to avoid punishment, the student has found a way to practice very softly, but has never gained full control over his dynamic range. Given the fact that his mother has switched teachers with the sole goal of winning the All-State audition, one could possibly assume that the student lives in a somewhat supportive environment. However, a good educator can never afford to rule anything out without proper investigation. This kind of knowledge regarding the student's past can be an invaluable resource in the way the teacher educates the child.

Having a clear picture of *where the student has been* is necessary in order to assess a child as they stand before an educator on the day of their first lesson. The observations made on *where the student is today* can be quite objective. For example, the child tongues rapidly, but his cheeks puff out; the child plays loud and soft, yet his embouchure doesn't seal, therefore he leaks air; at this moment, the child seems to struggle with basic rhythm. Once an assessment has been made on where the child is at the present time, the teacher can begin to think about *where the student is going*.

Sometimes it is not always clear *where the student is going*; there can be many variables that involve both the teacher and the student. It is not uncommon for a teacher to set goals for the student that the student has no intention of achieving. This sort of miscommunication could be resolved if the educator took time upon their first meeting to observe the student closely. Does the student seem ambitious, competitive, sleepy, bored, disinterested, etc. A student that appears sluggish and disinterested will more than likely not be excited about the idea of competing immediately, whereas an energetic, ambitious child might not want to be overloaded with "boring" exercises from a method book; he may want to play more challenging repertoire. This type of observation will prevent a lot of future negative feelings for both the teacher and student.

In the teacher/student scenario outlined earlier, the teacher is fortunate that a goal has already been set by both mother and child. A successful audition into the All State Honor Band is the task at hand. What work lies ahead for teacher and student to reach their goal? The lesson curriculum should be designed with this question in mind. This is one example of the teacher meeting the student and attempting to teach the *whole* child.

The method in which the educator uses to observe the child is of utmost importance. The teacher needs to gather the information regarding the student's past and present in a subtle way and rather quickly in order to know what needs to be addressed during the lesson. The student should not be aware that anything out of the ordinary is taking place. Below is a method in which many of the questions regarding the student's past and present can be answered in just a few moments. After introductions have been made, the teacher may say:

Teacher: *Let us start by playing a warm up scale. Do you know any scales yet?*

Student: *I think I know G?*

Teacher: *Wonderful, let's have you play a G scale in whole notes up and down.*

While the student plays the scale, the teacher may choose to reflect on the following questions:

- Did the student need to read the scale from a book or did they play it by heart?
- Did each note receive four counts?
- Was the tempo steady?
- Did the student use vibrato?
- Did the student slur or articulate?
- Was the sound fully supported?
- What does the student's embouchure and posture look like?

When a teacher is aware of what to listen for, the manner in which the student plays their scales can be very informative. However, much can be learned about the student that does not involve musical ability or even verbal communication. One can gain insight into the child's temperament by simply observing how they move through the world. When the child first enters a room, an observant educator may ask themselves the following questions:

- Does the student appear joyful?
- Does the student seem excited to be there?
- Is their head up or down?
- Does the student make eye contact?
- Did the student need to be asked to put their instrument together?
- Does the child move slowly or quickly?

Paying attention to all of these social cues can provide a tremendous amount of insight into the child's mood and where they are at the present time. Ideally, a good teacher will be constantly observing and tailoring the lesson to fit the student. This is, in part, what Steiner means by cultivating a *living education*; an education that is not fixed yet can bend, flex and grow as the student develops. ⁵After the first few moments of the lesson, if the teacher has truly made an effort to see the whole child, lesson plans can already begin to take form.

Teaching from the Whole

You see how the important thing for us in our endeavor to achieve teaching that is living rather than dead is always to start from the whole. Just as in arithmetic we start not from the addenda but from the sum which we divide into parts, so here too we proceed from the whole to the parts. The great advantage gained from this in teaching and education is that we are thus able to place the child in the world in a living way; for the world is a totality and the child maintains permanent links with the living whole if we proceed in the way I have indicated.⁶

The concept of teaching from the whole can be felt in every task that a Waldorf teacher brings to the students. In this way, music is no different. Continuing with the above scenario, an educator can begin to see how an entire curriculum can be developed for an individual student based on the concept of teaching from the whole.

It has already been established that the student wishes to do well at the honor band audition. The teacher can then address the situation as one would an algebra problem. The answer has been

⁵ Rudolf Steiner, *The Roots of Education* by (Hudson: Anthroposophic Press, 1997) , 15-16.

⁶ Rudolf Steiner, *Spiritual Ground of Education* (London: Anthroposophical Publishing Co., 1947) , 16.

given, now one needs to simply solve for x . Questions from the teacher might include: What will it take for the child to have a successful audition? How difficult are the excerpt? What skills must the student acquire to display proficiency over the material? A teacher that asks these and other questions upon the first meeting is attempting to teach from the whole, i.e. the macro to the micro. The above scenario is a typical example of a teacher confronted with a relatively short-term goal, and educators will often be asked to help meet these goals. However, an invested teacher will undoubtedly give more to the student if a longer goal is set- a greater “*whole*”. What would lessons look like if every goal for every student, regardless of talent and ability, were as simple as the following:

My task is to help this student become the best musician possible.

When a curriculum is cultivated out of this new *whole*, solving for x may look a lot different. What are the skills that the educator needs to impart to the student in order for him to become the best musician he can be? At this stage, talent is irrelevant. Shouldn't every student be given the chance to realize their full potential? In the same way that a child's own personal curriculum or path to knowledge can be designed out of the whole, the concepts which are brought to the child should also be taught from the whole. Saxophonist and pedagogue, Carina Raschèr, discussed the following in her *Guide Book for the Saxophone Teacher* in relation to teaching from the whole:

Regardless of what age the student is, it is my goal to teach first the concept of all subjects in its entirety and then proceed to the details and not the other way around...All too often I have experienced how a teacher gets lost in [SIC] details so that the pupil cannot develop an overview. In the case of music, this of course has an influence on the overall impression of a rendition.⁷

⁷ Carina M. Raschèr, *Guide Book for the Saxophone Teacher* (San Bernardino: Carina M. Raschèr, 2014) , 10.

CHAPTER 2

OVERTONES

“The production of an overtone is the result of a delicately adjusted embouchure coupled with a completely controlled flow of air.”

- Sigurd Raschèr

The production of overtones on the saxophone is a technique in which the saxophonist, while fingering a fundamental pitch, produces a natural overtone row. The exercise has been compared to what brass players know as a lip slur.⁸ Overtone exercises are usually played using the five lowest tones of the saxophone as fundamental pitches, e.g. Bb, B, C, C#, and D.

This exercise is used to improve the inner ear, tone quality, and intonation, in addition to strengthening the embouchure. Overtone production is also recognized as a preliminary exercise in the cultivation of a dependable high range on the saxophone.

For a number of reasons, overtone exercises are not given much consideration until later in a student's development-in most cases not until college. This is not ideal since the delay of such study can lead to unwanted complications as the student begins to explore the altissimo register. The author has witnessed college students encounter the following challenges during their four-year degree program if overtones have not been studied before entering the university level:

- Inability to play above F2 (2 ½ octaves short of the full range)
- Insufficient or complete lack of voicing skills
- Poor intonation
- Poor tone quality
- Lack of breath support
- Lack of dynamic contrast

⁸ Sigurd Raschèr, *Top Tones for the Saxophone* (New York: Carl Fischer, 1941) , 12.

It is not uncommon for students that study of overtones later in life to have difficulties with the concept of producing them and progressing through the exercises at a reasonable rate. Even if these students are able to produce overtones on the first four fundamental pitches, e.g. Bb, B, C, C#, they tend to plateau on the 5th fundamental (D) when trying to produce the 2nd partial (A1). This usually has to do with poor voicing habits. In this context, “voicing” refers to the modification in shape of the oral cavity, via the tongue in order to control the rate of airflow that enters the instrument. This alteration of the oral cavity has a few different applications in modern day saxophone playing. One is that of tone color variation; audible color changes can be discerned in the tone if the saxophonist moves his tongue to mimic different vowel shapes. This causes the muscles in the lower jaw to alter the pressure on the reed which in turn has a direct impact on the rate of airflow and embouchure pressure⁹, resulting in subtle color changes. Voicing is also the primary technique saxophonists use to correct the intonation of any given pitch by raising or lowering the tone with very slight adjustments. It is unlikely that a saxophonist would be able to develop a dependable high register without proper voicing technique.

Practicing overtones on the first 4 fundamental pitches (Bb, B, C, C#) are slightly easier and do not require the student to have such a high tongue position. (This high tongue position is achieved when one speaks the vowel “E” or says the word “He”). The student will gain many advantages by practicing overtones on these four fundamentals. The student will undoubtedly begin to see improvements in the following areas: intonation, tone quality, breath support, and dynamic contrast. However, until proper voicing is achieved the student will not be able to progress to the 2nd partial (A1) on D or the 3rd-16th partials on the first four fundamentals, thus

⁹ Ibid

making access to the altissimo register an impossibility. This can be frustrating for both teacher and student at the college level when, during their allotted time together, they are unable to explore most of the major works of the repertoire due to the student's lack of high register playing. Instead, the student is frustrated and has reached a lull in their overtone study. That is not to say that this is the fate of every student that failed to study overtones as a child; but experience has shown that most students reach the same plateau. The length of stagnation is different for everybody. A study of saxophone that could remove such hindrances would be preferred; one that would enable the students to be proficient in high register playing before even entering the university.

Nurturing Voicing Skills Using Steiner's Pedagogical Principles

Through the use of imagination, teaching from wholeness, and observation, an educator can be inspired to cultivate a truly living art of education. Drawing from the teacher/student scenario listed in Chapter One, and by using the following intention, the curriculum can begin to take form.

By unlocking their hidden potential and through the removal of hindrances I can help the student become the best musician possible.

With the above intention in mind, the educator can start preparing the young child from a very early age to take on all challenges that a saxophonist might encounter. Instead of seeing a seven-year-old child who does not know anything about music, he can view the child as a seed that already has in its innermost nature the ability to bear fruit. These hidden capacities just need to be awakened. Obviously, it would be foolish for a teacher to demand four octave scales from a seven-year-old, but a thoughtful educator can begin preparing the student from the time of their first lesson. The key is in the way concepts are brought to the child. According to Rudolf Steiner,

this is what is meant by a *living* vs. *dead* education. During the last lecture series he presented to teachers shortly before his death, Steiner stated the following (translated from German):

The ability to educate necessitates a sense of responsibility. The considerations I have presented to you strongly arouse one's sense of responsibility as a matter of heartfelt concern. If you take up educational work knowing what affects the young child and that it will continue through all of life as happiness or unhappiness, sickness or health, such knowledge may initially seem like a burden on the soul; but it will also spur you on to develop forces and capacities and above all, as a teacher, a mental attitude that is strong enough to sow 'seeds' of soul in the young child that will blossom only later in life, even at old age. This knowledge of the human being is what Anthroposophy presents as the basis for an art of education... we continually sin against children, we teach them to have clear, sharp ideas and become dissatisfied if their ideas are flexible and not sharply defined. Our goal is to teach children in such a way that they retain in their mind what we teach them, so they can tell us just what we told them. We are often especially gratified when a child can reproduce exactly what we taught several years later. But that's like having a pair of shoes made for a child of three and expecting them to fit when the child is ten years old. In reality, our task is to give children living, flexible ideas that can grow in the soul just as the outer physical limbs grow with the body...we must consider it a joy to give them something inwardly flexible and elastic. Just as their physical limbs grow, so can their ideas, feelings, impulses and soon then they themselves are able to make something new out of what we gave them...We have no use for pedantry or sharply defined ideas of life. We can use only active, life forming forces-forces of growth and increase...Much that is dead in our pedagogy and educational systems must be transformed into life. What we need, therefore, is a knowledge of the human being that doesn't say only that a human being is like this or like that. We need knowledge of the human being that affects the whole human being. This would be an art of education that springs from true knowledge of the human being, borne by love.¹⁰

Steiner goes on to speak about educational as well as social reform and the need for educators to unlearn or better yet, *relearn* what they have been taught and to find a new way to express it with the whole in mind. On occasion, one can see this when observing modern day saxophone pedagogy; even after confronted with the aforementioned challenges, a number of educators continually fail to grasp the whole in their teaching. The challenges that face the advanced player without proper preparation is not only a result of what *wasn't* received from his teacher, but could very well be a consequence of what *was* received.

¹⁰ Rudolf Steiner, *The Roots of Education* (Hudson: Anthroposophic Press, 1997) , 15-16.

For example, it has been asserted many times in a variety of pedagogical treatises that when one produces a tone on the mouthpiece and reed alone, the resulting tone *should* be A440.

The subsequent information is from *Alto Saxophone Mouthpiece Pitch and Its Relation to Jazz and Classical Tone Qualities* by Vanessa Hasbrook:

The technique of having a student play an A5 on the mouthpiece alone is commonly used in teaching classical tone quality. Frequently, a student who is squeaking randomly on the mouthpiece will be playing at a pitch level that is higher than the A5 desired for a classical tone quality... [the] student who is getting a pitch that is higher than an A5 is actually playing on the uppermost extreme of the mouthpiece range. Quite often, by lowering the mouthpiece pitch the student will put an end to the squeaks, and gain more control over the mouthpiece.¹¹

A popular resource on the topic of overtones is *Saxophone High Tones* by Eugene Rousseau. The author suggests that saxophonists should aim to produce a specific pitch on each saxophone mouthpiece, e.g. alto (A), tenor (G), baritone (D), and soprano (C).¹²

There are several issues with even the small assertion that the mouthpiece *should* produce any given pitch. It is only a partial truth that the alto mouthpiece alone produces the pitch A440. In fact, the mouthpiece and reed alone can produce the interval of a minor 10th from Bb4-Db5. “A” is just one of many pitches that can be played on the alto saxophone mouthpiece. In the preliminary exercises of *Voicing*, Sinta actually encourages the student to be flexible and play several different pitches on the mouthpiece. One can find several resources that speak clearly on the subject, but as mentioned earlier these books are not intended for the young. Therefore, it is up to the educator to be familiar enough with these concepts that he can distill the proper information while still maintaining a relationship to the whole.

Recently, the author observed several saxophone sectionals at local elementary and high

¹¹ Vanessa Rae Hasbrook, “Alto Saxophone Mouthpiece Pitch and Its Relation to Jazz and Classical Tone Qualities” (DMA diss., University of Illinois at Urbana-Champaign, 2005)

¹² Eugene, Rousseau, *Saxophone High Tones* (Saint Louis: MMB Music Inc., 1978) , 1.

schools. At one elementary school in particular, the band director (who was a saxophonist) was working with a group of fifth graders. One of the first exercises he had the children do was to remove their mouthpieces. He explained that they needed to play “Concert A”. He proceeded to get out his tuner and go down the line, requesting that each student attempt to play an A. If the student was unable to play an A or the A was out of tune, the student was admonished and told he/she was playing the “wrong note”.

When asked what the children learned afterwards, one of them said:

It's hard to play on the mouthpiece, I'm not really good at it.

Another shared:

I can't play in tune.

Already by the age of 10, these students were taught by their music educator that their saxophone playing was deficient. It was observed that the students did not share any knowledge that was *gained* in regard to music or the saxophone, only that they discovered their own “shortcomings”.

A very similar scenario was played out at the high school level, in which the sectional coach made fun of the students if they could not play an A on the mouthpiece. Aside from the obvious emotional repercussions these students may endure as a result of their educator’s lack of thoughtfulness, there is in fact a downside that in time can have adverse effects on their saxophone playing. By forcing the child to play just one note on the mouthpiece, the child will become less flexible and have difficulties voicing.

“Quite often, by lowering the mouthpiece pitch the student will put an end to the squeaks, and gain more control over the mouthpiece”¹³

¹³ Ibid

The above statement has elements of truth contained within it, but there are still other aspects that deserve consideration. While there can be many different reasons that a student produces a squeak, e.g. embouchure, reed, mouthpiece, or poor tone imagination, it is important to remember that a squeak is nothing more than a high tone. The student should not be scolded for squeaking. Instead an educator might choose to offer some words of encouragement:

Wow! That is a very high note! I think that was a high D!
(The teacher should identify whatever pitch the student played.)

The teacher may choose to subsequently play a D scale starting an octave below the high tone that the student accidentally played.

You can already play as high as me! Very good, but we should learn our lower notes first. Later we can learn to play high; first we will work on our fundamentals.

In this brief interaction, the student may walk away with the following observations:

- It is possible to play quite high on the saxophone.
- Someday I can learn to play with the same ease and control as my teacher.
- Playing high comes easy to me.

In an essay dealing with music education, classical saxophone pioneer Sigurd Raschèr, brings up another point relative to squeaking. He writes:

Never try to restrain the child from squeaking or overblowing. It is best that they hear these so as to be able to differentiate the bad from good sounds...How could you teach at all, if you would never tell the child what sounds good, what sounds bad! The above statement was prompted by my suggestion to ask a player to produce a squeak on purpose. This will often not come easily. The aim is to make the player conscious and aware of the condition and setting of his embouchure, both, as to producing a beautiful sound or squeak. The difference in his embouchure is very slight. After all a squeak is nothing but an involuntary produced overtone. After this experience, tone production will be much more dependable.¹⁴

¹⁴ Sigurd Raschèr, *The Raschèr Reader*, Lee Patrick (Fredonia: Sigurd M. Raschèr Collection, 2014), 93.

After meditating on what was written above regarding squeaking, an educator might view the following statement somewhat differently:

Quite often, by lowering the mouthpiece pitch the student will put an end to the squeaks, and gain more control over the mouthpiece¹⁵

Yes, the student should develop a clear tone imagination so that unintentional sounds can be avoided altogether. However, it is equally important that the student does not get “locked” into one specific voicing. He should realize that the mouthpiece can produce many pitches and it can be a fun and rewarding exercise to practice all of the possible notes. At this very early stage in the child’s growth one can either nurture a seed for flexible voicing or one can impede its growth.

Laying the Foundation: Guiding the Student Through Preliminary Overtone Exercises

Sigurd Raschèr’s *Top Tones* was published in 1941. It was the first book to provide a methodical approach for the attainment of the saxophone’s high register. In it, Raschèr discusses several exercises that when done correctly, result in the ability to play four octaves on the saxophone; the production of overtones plays a key role in this endeavor. In the forward of the second edition, published in 1961, Raschèr states the following:

The production of any overtone and/or tone higher than “top F,” depends on various factors: a clear aim (emanating from the player’s mind) for exact pitch, a flexible, well-developed embouchure, and a controlled air-flow. This process is much like the act of singing; the mind’s aim for a certain tone (pitch, loudness, quality, color, character) directs the vocal chords to function in cooperation with a certain airflow. Because the aim originates in the mind, it must be totally conscious. From here on however, the process becomes a bodily one and continues beyond the clear grasp of the mind. In like manner, the mind must direct the production of tone on a wind instrument. Provided the player’s embouchure is well developed, it will respond-below the level of conscious action-to the mind’s command. The next step-selecting the desired tone out of a multitude of possibilities - calls for recognition and decision. These again are activities of the mind. Thus, we have returned to our starting point, the mind, and our goal is reached, i.e., the predetermined sounds. Because we recognize the necessity to develop

¹⁵ Ibid

the inner ear, a flexible embouchure and a controlled airflow, the exercises on the next few pages are designed to develop them.

Raschèr makes a valid assessment: The successful production of overtones is dependent on the student's ability to form the correct embouchure, play with a controlled air stream and have a vivid tonal imagination. With this knowledge, the educator can use the following exercises (without the use of a book) to lay the foundation for overtone production. It is worth mentioning, however, that while ALL students learn at different paces, the author usually can have beginning students successfully produce overtones after just a few weeks to one month after lessons have begun. The preliminary exercises are very important, but should not be viewed as a stumbling block. Once a low Bb can be attained with the proper embouchure, overtones can begin. A vivid tone imagination coupled with a wide range of dynamics (controlled airflow) are skills that can begin taking form in lesson one, but will also be refined throughout the student's musical life.

Embouchure Formation and Air Control

Undoubtedly, the first few tones learned on the saxophone will manifest themselves as long tones. This is also true if one were to learn from instrumental method books such as *Essential Elements 2000*, *Standard of Excellence*, and the *Rubank Elementary Method*. (It should be stated that much can be gained from not using any written material during the early stages of playing and letting the child's ear develop naturally.) It is important for the development of a strong embouchure that the student practice long tones each day until he has learned enough notes to play an entire scale; G is usually the easiest to teach at this stage. Depending on the child, this might take one or two lessons to accomplish, at which point a number of songs can and should be learned. All the while the teacher shall teach new notes until the child can begin to play all the way down to low Bb.

Once the child can play a scale, tone imagination as well as Raschèr's *Terrace Dynamics* can be introduced into the warm up routine that begins each lesson. See exercise below:

"Terrace" Dynamics

In this exercise there should be no connecting *crescendo* or *decrescendo* between the tones. Each tone should be started according to the dynamic markings, kept "in level," and cut off sharply at its end. Nevertheless, a start in *ff* should never sound like a blast. It is important to practice all tones in all degrees, from *ppp* to *fff*.



Figure 1. *Terrace Dynamics* exercise from *Top Tones*

Obviously, the beginner student will be unfamiliar with some of the above concepts, the notation and dynamic abbreviations to name a few, but that does not mean that he cannot *do* the exercise. He will certainly be able to grasp "play as softly as you can" or "play loudly".

It would be advisable for the teacher to demonstrate how each exercise should be played.

For example:

Teacher: *Let's play our G scale together, 4 counts each note and let us get softer with each note. How many notes are in the scale?*

Student: *Eight*

Teacher: *That's right, eight! So that is eight different degrees of softness we can play!*

Then, the dynamics could be reversed, starting loud and getting softer. One could also crescendo for four tones and decrescendo; the possibilities for dynamic contrast are endless. Let the student make up his own exercise combining long tones and dynamics. The child will respond positively the more engaged he is in the lesson. By trying to match his teacher's evenness of tone and dynamic range while sustaining tones for several counts, the student will start building control over both his embouchure muscles as well as air flow.

Tone Imagination

It is of utmost importance that the player imagines the tones precisely in the presence of his mind before the acoustical tones are physically heard. This feeling of wanting the tones to appear must be kept alive at all times. Anything the musician would like to play, he should be able to sing. It is not necessary to sing beautifully, (“I can’t sing” or “I don’t have a voice!”) but rather that the intervals and expression are correct and played without inhibition. The capabilities of playing an instrument (embouchure, breathing, finger technique, etc.) are merely used to achieve the perceptible counterpoint to the inner sense of imagination. With the highest technical perfection one tries to come as close as possible to match the sounds heard spiritually.

-Sigurd Raschèr

Like most musicians, Raschèr spoke of the importance of having a clear perception of the desired tone before it sounds; many musicians refer to this as using the inner ear. According to Raschèr, the production of overtones, as well as tones above the top F on the saxophone, are impossible to reproduce without possessing a vivid *tone imagination*. There are numerous ways that this skill can be developed in children. Most of them can be introduced in the form of “musical games”.

After the student is comfortable playing up and down his scale in long tones with varying degrees of loudness, the teacher can begin cultivating the inner ear by incorporating singing into every lesson. A directive by the teacher might be as simple as, “I know what! Let’s sing the scale we just played!”

Singing the scale together with the student on a “La” syllable will give confidence to a shy student and provide a stable pitch source to follow. Next, the student could play the scale while the teacher sang, and vice versa. When the teacher is as involved in the exercises as the student, the mood is more playful and interactive - less “do this” or “sing that”. Once it is determined that the student can sing the scale confidently, a new “game” can be played: “I’m going to play part of the scale. When I stop, let’s see if you can sing the next pitch!”

This game has dozens of different permutations, and will help sharpen the student's aural skills. The student may alternate between playing and singing pitches, he may play the first pitch then silently sing the next three pitches *inwardly* in time and vocalize the fifth, or the teacher and student can alternate singing the pitches of the scale. If one is teaching with imagination there is no limit to the exciting curriculum that can begin to take form.

Playing by Ear

Even if the teacher has decided to use a method book or other written material from the very beginning, playing by ear should be incorporated into every lesson; it helps the child develop a sense of phrasing as well as a strong inner voice. In addition to playing simple tunes the child already knows by ear; the teacher can try one or more of the following suggestions in an attempt to have the student play away from the page:

- The teacher plays a tone, the student plays it back
- The teacher plays an interval, the student plays it back
- The teacher begins a familiar tune, the student finishes it
- The teacher asks the student to play one of their favorite tunes, then requests the student to begin on a different pitch and play the same tune
- The teacher plays a phrase in a variety of different characters, the student imitates

The author has found that children respond in a joyous way to the above suggestions.

They are often viewed as games and anxiously anticipated.

Introduction of Overtones

When it seems as though the child has developed enough finger dexterity and the proper air support needed to play low tones, the teacher can begin introducing overblowing on the fundamental pitches of Bb, B, C, C# and D. If the student has had relative success with the preliminary exercises, but their hands are too small to finger a low B or Bb, the teacher should not feel the need to wait for them to "grow into the saxophone". Instead, overtone exercises may begin on C and D. By following the steps listed below, the teacher will be able to introduce

overtones in such a way that will seem like a natural progression for the child. To be clear, the student should not be aware of any *steps* that are being followed. These are merely a set of guidelines for the teacher to be used as a checklist. The way in which these concepts are brought to the child will depend greatly on the specific relationship between the teacher and student. It is up to the educator to bring each concept in a living way that will be inspiring. The teacher should make sure that the student is capable of completing each step with ease and comfort whether it takes a few moments or even a week. What follows is a list of suggestions; the student should be able to complete each step before moving onto the next:

1. Play the following low tones slowly for four counts at a loud dynamic; Bb, B, C, C#.
2. Play Bb, Bb1, F1 slowly for four counts at a loud dynamic- play ascending and descending.
3. Sing the exercise above, assigning the following syllables to each tone: TA(Bb), TU (Bb1), TI (F1) (These syllables mimic proper voicing needed to produce overtones).
4. Repeat and practice steps 2 and 3 for homework until the next lesson.
5. Play step 2 while fingering low Bb.
6. After student completes step 5, teacher and student may play step 5 together.
7. Teacher and student repeat steps 2-5 for the remaining fundamental pitches of B, C, C# and D
8. Student and teacher incorporate step 5 into every lesson. It is assigned as daily study and practiced at home. The production of overtones on the five fundamental tones becomes the student's new warm-up and replaces the long-tone scale.

If the above steps are carried out in the right manner, the child will notice that overtones are nothing more than an extension of his long tones, and that within each note there are over and undertones, i.e. higher and lower partials. On a subconscious level, the child will begin to recognize at a very early age that there is a hidden quality to music, something that cannot be expressed in words.

It is important to remember that the age group of most beginning saxophonists belongs to

what Steiner would have considered the *second phase of childhood*.¹⁶ This stage of child development at 7-14 years of age is marked by the appearance of the second set of teeth. In Waldorf schools this is commonly referred to as “the change of teeth” or “the seven-year change”. This stage of life should be of particular interest to educators as it is believed that during this time the child assimilates information in a different capacity than in earlier years. Throughout the first phase of childhood, children learn mostly from imitation. This is still thought to be true during the first few years after the change of teeth, however a mood based in feeling rather than thinking often permeates the child. Children will be more inspired if what is taught to them uses imagery and evokes feelings for what is good and what is beautiful. This age yearns for a strong authority figure that already has a sense of what is good, moral and right.¹⁷ An invested educator would serve their students well if he used this knowledge as a basis for his teaching. It has already been stated that for most of the child’s life up until the point of music lessons, they have learned a great deal through imitation. When teaching the young, there is no better way to introduce the music fundamentals of tone, vibrato, phrasing, articulation, and rhythm than through imitation. This idea is not new. Over fifty years ago, Japanese violinist Shinichi Suzuki introduced his method for string playing based on his very similar “mother-tongue” approach. The saxophone teacher should demonstrate everything he wishes the student to play in a beautiful manner; this will have a profound effect on the student’s ability to internalize the concept of beautiful. Also, when introducing concepts the teacher should do so in an imaginative and pictorial way. This will reach the student on a much deeper level.¹⁸

¹⁶ Rudolf Steiner, *The Roots of Education* by (Hudson: Anthroposophic Press, 1997) , 4

¹⁷ *Ibid*, 56-62.

¹⁸ Rudolf Steiner, *The Spirit of the Waldorf School* (Hudson: Anthroposophic Press, 1995) , 78.

In addressing the subject of overtones, the teacher should explain what overtones are, but in a pictorial way that makes sense to the child. The educator could tell the well-known legend of the Greek mystic and thinker Pythagoras and how it came to be that he developed the monochord based on his experience walking past a hammering blacksmith. One could continue and talk about Pythagoras' theory of Music of the Spheres and how he thought of the universe as a giant lyre with each planet vibrating at a certain pitch, and that when the student plays overtones he is participating in the symphony of sounds already in existence in nature. When taught this way the subject matter has the ability to awaken the child and engage him fully in the lesson.

Supplementary Exercises to Overcome/Avoid Hurdles

Regardless of age, there will undoubtedly come a time when the student will reach a plateau while on their path to the high register. The principal difference being that this lull may arise while the student is in sixth grade as opposed to his junior year of college with a senior recital looming in the not too distant future. However, when the child is this young there is still time to make even the most difficult task unfold in a relaxed and organic manner that encourages rather than discourages the student. As mentioned earlier, this plateau will usually occur when trying to produce the second partial off of the D fundamental. Until this point, a vivid tone imagination would have been sufficient enough to reach the first two partials on the lower four fundamental pitches. What must be activated now are the necessary voicing skills required to proceed to the next stage of development.

Once overtone production has become a regular part of the lesson, the teacher may find it helpful to start incorporating a few curative voicing exercises into the lesson. Most of the subsequent exercises have the intention of working with proper vowel formation and correct airflow and should be practiced long term simultaneously with overtone studies.

Exercise 1: *Can you whistle?*

There are many similarities between whistling and saxophone playing. When one whistles a tune, the tongue movements that occur in order to change pitches closely resemble the different voicings needed to play the saxophone.¹⁹ The teacher should have the student whistle pitch bends, a scale, and a song. If the student cannot yet whistle, the teacher may decide to teach him. A connection can be drawn between students that are not able to whistle and those that struggle with the high register. This author has successfully taught students to whistle between the ages of 7 and 9; however, this task gets more and more difficult the older the student becomes.

Exercise 2: *Mouthpiece Practice*

As discussed earlier in this chapter, over an octave can be produced on the mouthpiece and reed alone. The subsequent list of exercises can cultivate the voicing needed to play an entire scale.

1. Demonstrate a pitch bend starting with the highest pitch possible (approximately Db5 concert) and bend slowly to the lowest pitch (approximately B4 concert). Ask the student to attempt the same, evaluate their voicing ability.
2. Alternate between any two pitches, sounding like an ambulance siren. Have the student try. If the student found the pitch bend impossible, this will seem easier. The main objective is to stimulate movement in the oral cavity while producing a tone.
3. Once it seems as though the child has an octave range in their pitch bend, they should attempt a major scale. It will be easiest if the student aims for the highest “tonic” then slurs slowly down stepwise while making a crescendo in order to blow through the break in sound that usually occurs around the tones E4 and F4, this break will usually manifest itself in a squeak. The student must “blow past” this squeak. Demonstrate.
4. After a scale can be produced, the child can attempt many songs that they already know on their saxophone, such as *Mary Had A Little Lamb* or *Hot Cross Buns*.

¹⁹ Donald J. Sinta and Denise C. Dabney, *Voicing, An approach to the saxophone's third register* (Radford: Sintafest Music Company, 1992) , 7.

In addition to these remedial voicing exercises, the teacher should feel comfortable playing the overtones with the student somewhat frequently especially on the ones that provide the most amount of frustration for the student. When played together - as a result of sympathetic vibrations - the desired tone will indeed come forth. This activity is only useful so that the student can begin to *feel* what is happening in their oral cavity when these higher tones are reproduced. While there are a number of *tricks*²⁰ that can be employed to help the student produce the desired partials, few of these have a sustainable impact and do little to develop the necessary skills needed. The previous exercises are not intended to become the focus of a lesson, merely a supplement to enhance the warm-up and strengthen the voicing skills. When the student can accomplish these supplementary exercises, an improvement in overtone production, tonal control, intonation and overall flexibility will be most noticeable by the teacher and student.

²⁰ Carina M. Raschèr, *Guide Book for the Saxophone Teacher* (San Bernardino: Carina M. Raschèr, 2014) , 21.

CHAPTER 3

STRENGTHENING THE WILL: THE THERAPUETIC NATURE OF MUSIC EDUCATION

According to Steiner, all education can be thought of as therapeutic, i.e. having a balancing effect on the whole child.²¹ The Waldorf curriculum is divided up into what might be referred to as a daily rhythm, with each subject being assigned a time of day, and carefully curated to bring balance to the threefold human being. In Anthroposophy, this *threefoldness* is expressed in the distinction of three aspects of human activity known as thinking, feeling and willing. Art classes such as painting, drawing, sculpting, music, woodworking, handwork, and eurhythmics are all used to help strengthen the will forces of the child.²² Anthroposophic medical doctor, Armin J. Hussmann describes the *will* in his book entitled *Human Hearing and the Reality of Music*:

What we are calling “will” here must not be confused with its conceptual reflection, which we call “intention,” “purpose”, or “motivation”. “Will” is the largely unconscious energetic layer of our being, at work when we accomplish actions. In everyday life, we experience it as an inner readiness to act.

While Steiner believed that all of the arts could in fact help strengthen the child’s will, he, like the German thinker Arthur Schopenhauer, held music in the highest regard. Both men viewed music as being unique to all other arts. Their reasoning was based on their belief that unlike the pictorial and sculptural arts, music was an expression of the will itself and not merely a copy of the archetype. In his central work, *The World as Will and Representation*, Schopenhauer writes:

²¹ Rudolf Steiner, *The Roots of Education* by (Hudson: Anthroposophic Press, 1997) , 71.

²² Rudolf Steiner, *The Spirit of the Waldorf School* (Hudson: Anthroposophic Press, 1995), 91.

Music is by no means like the other arts, namely a copy of the Ideas, but a copy of the will itself, the objectivity of which are the Ideas. For this reason, the effect of music is so very much more powerful and penetrating than that of the other arts, for these others speak only of the shadow, but music of the essence.

Through analogies, Schopenhauer goes on to depict how the ideas of thinking, feeling and willing are all part of the inner workings of music, and the planet as a whole. It is by no accident that Schopenhauer uses the concept of overtones to depict this hierarchy:

I recognize the deepest tones of harmony, in the ground-bass, the lowest grades of the will's objectification, inorganic nature, the mass of the planet. It is well known that all the high notes, light, tremulous, and dying away more rapidly, may be regarded as resulting from the simultaneous vibrations of the deep bass note. With the sounding of the low note, the high notes always sound faintly at the same time, and it is a law of harmony that a bass-note may be accompanied only by those high notes that actually sound automatically and simultaneously with it through the accompanying vibrations. Now this is analogous to the fact that all the bodies and organizations of nature must be regarded as having as having come into existence through gradual development out of the mass of the planet.

In Steiner's collection of musical lectures, *The Inner Nature of Music and the Experience of Tone*, he echoes Schopenhauer in many ways and asserts that each of the capacities found in the threefold human being are also found working harmoniously in the musical realm through the aspects of melody (thinking), harmony (feeling), and rhythm (willing).²³

As Sigurd Raschèr suggests, one could use this knowledge in an attempt to bring balance to the student via their musical education, e.g. a teacher may choose to cultivate a stronger sense of rhythmic pulse within a student, thereby working directly with the will forces of the child.²⁴ It is next to impossible to separate the capacities of thinking, feeling, and willing in the human

²³ Rudolf Steiner, *The Inner Nature of Music and the Experience of Tone* (Hudson: Anthroposophic Press, 1983) , 64-68.

²⁴ Sigurd Raschèr, *The Raschèr Reader*, Lee Patrick (Fredonia: Sigurd M. Raschèr Collection, 2014) , 147.

being since they do in fact work together. Since Waldorf education demonstrates that one can find ways of enhancing each capacity, perhaps the same can be said for music. Often melody, harmony and rhythm are working together in a musical composition. To a certain degree anything the child plays will undoubtedly be calling upon all three concepts.

Hungarian philosopher Georg Kühlewind wrote extensively on the topic of the *Gentle Will*. In it he describes the gentle will as being different from what he termed the “hard” will:

The gentle will is relaxed, receptive, expressive, creative, soft, light and playful. The gentle will is not rigid or cramped. We use the gentle will in artistic activities such as playing a musical instrument, writing a poem, or painting a picture...The gentle will is free of “me-feeling” and egoism. In this way, it differs from the “hard will”, which works through egoism.

In most meditative and inner schooling practices, the gentle will can be cultivated through the connection with the breath and presence of mind.²⁵ Kühlewind has outlined a number of exercises that allows one to develop the gentle will through thinking and feeling. In many ways, these meditative exercises mirror the production of overtones. As stated earlier, rarely can one separate and examine the concepts of thinking, feeling and willing individually through music. However, it is possible for the musician to work and develop these three capacities in a meditative way while producing overtones. In the author’s opinion, there is no other musical endeavor that allows the musician to work with all three capacities in such an intimate and reflective way. The proper production of overtones is impossible without the correct balance of thinking, feeling and willing. When viewed in the light of Anthroposophy, Husemann describes this act as “mental imaging”²⁶:

²⁵ Georg Kühlewind, *The Gentle Will* (Great Barrington: SteinerBooks, 2011) , vii-x.

²⁶ Armin J. Husemann, *Human Hearing and the Reality of Music* (Great Barrington: SteinerBooks, 2013) , 54.

Musicians alternate between future-oriented development of new themes and the retrospective listening and recollection of “recapitulations,” which also resound physically...The living basis of our experience with intervals is that one note persists within while the next note sounds. Conversely, the retrospective repetition of a new theme gives rise to increasingly willed demand for further development. Thus, musicians continuously experience the “twofold flow of time” outlined in spiritual science. The will to move, which lives in the blood, urges forward, while the astral body looks backward in the neurosensory process of hearing. The “I,” which holds these two processes in balance, alternates between spirit presence and physical mastery of the instrument. It takes hold of the etheric stream in imagining what is to come and the astral stream in recalling the past...The process indicated above lives in felt, willed, shape-giving *mental images* that are also reflected in outer sounds. All musicians are familiar with this “mental imaging” as the anticipation of their inner intentions. They experience thought movements, submerged in feeling, in the presence of mind and spirit that exists between intentional anticipation and reflective recollection...Musical feeling experiences the movement of mental images in the shaping of will.²⁷

During the practice of overtones, one will encounter much of what Husemann describes above. Unlike the performance of a composition however, the musician is able to shift focus to each of the three capacities separately.

While connecting with the breath and sustaining the fundamental pitch, the musician with a clear imagination must form a mental image of the desired tone (*thinking*). *Thinking* then turns to *feeling* when the tone imagination becomes strong enough to hear the harmonic interval of the resounding fundamental against the tone produced inwardly. *Feeling* turns to *willing* through the outward manifestation of the higher partials, provided that *thinking* and *feeling* are working harmoniously. Since this exercise is usually done in the absence of strict time, one can meditate on each step. The author usually has the student play each note (fundamental and subsequent partials) on one full breath so the student can take time to complete these inner contemplations.

Through an Anthroposophic approach to education, a teacher can make a substantial impact on the character development of a student. According to Steiner, the main goal of

²⁷ Ibid

education should be, “to develop free human beings who are able of themselves to impart purpose and direction to their lives.”²⁸

²⁸ Sigurd Raschèr, *The Raschèr Reader*, Lee Patrick (Fredonia: Sigurd M. Raschèr Collection, 2014), 147.

CONCLUSION

The dependable production of higher tones (altissimo) and higher overtone partials cannot be *executed* through brute force using the *hard-will*. This approach often utilizes frustration as a catalyst. A student that attempts in this manner will often find himself more exasperated than before. Instead, these tones need to be called upon through a number of steps that involve the clarity in thinking, feeling and willing that has been described throughout this document. Sigurd Raschèr was well aware of this when he introduced his *Top Tones* book in 1941. As a graduate of the first Waldorf School in Stuttgart, it should come as no surprise that Anthroposophy and the teachings of Rudolf Steiner had a profound effect on Raschèr as a person, artist and teacher. One can draw many parallels between the Anthroposophic notion of inner development and the attainment of the high register as introduced by Raschèr. Both rely heavily on patience, the gentile will and perseverance.

When introduced during the early stages of development, an educator can make the attainment of the altissimo register a successful journey full of self-discovery with few obstacles. It should be a teacher's privilege and responsibility to help guide their students on a well-rounded path to knowledge that is based in truth, observation, imagination and social awareness.

“Every thought and feeling is a reality...There can be no progress, however, on the path to higher knowledge unless we guard our thoughts and feelings in just the same way we guard our physical steps in the physical world.”

-Rudolf Steiner

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BIOGRAPHICAL SKETCH

Michael Hernandez has been heard in concert halls throughout Germany, Switzerland, Poland, France, Holland, Austria, Italy, the UK, Canada, and the United States. He has also been broadcasted several times nationwide on *NPR's Performance Today*. Recently Hernandez has appeared with the Lubbock Symphony Orchestra, The San Jose Chamber Orchestra, Echo Chamber Orchestra, the Phoenix Symphony Guild, The National Music Festival Orchestra, The Hot Springs Music Festival Orchestra, The Santa Cruz Symphony, The San Jose State University Orchestra, New Century Chamber Orchestra, and The Monterey Symphony

As founding soprano saxophonist of the critically acclaimed Mana Quartet, Michael has been invited to hold residencies at dozens of music festivals and universities including *Bravo! Vail Valley Music Festival, Hot Springs Music Festival, National Music Festival, Music in the Mountains, The Taneycomo Festival Orchestra, The Festival of New American Music, Ethos New Music Festival*, and the *Oklahoma State Contemporary Music Festival*.

Hernandez is a Key Leaves endorsing artist, a D'Addario Performing Artist, and performs on an historical saxophone built to the acoustical specifications of the instrument's inventor, Adolphe Sax. He holds degrees from the *State University of New York College of Fredonia* (BM), *Syracuse University* (MM), and *Florida State University* (DMA). Michael's primary teachers include Dr. Wildy Zumwalt, Dr. Ronald Caravan, Professor Patrick Meighan and Carina Raschér. Michael has served on the faculties of *Grand Canyon State University, SUNY Fredonia, Florida State University*, the *Marin Waldorf School*, and was the Music Dept. Chair at the *Desert Marigold Waldorf School* in Phoenix, AZ. Hernandez currently serves on the faculty of *San Jose State University*, and is Principal Saxophonist of the *Santa Cruz Symphony*.