1975 CLINIC ADDRESS
by Prof. William A. Adam

In everyone's life, many obstacles present themselves. These have to be overcome by positive thinking and by positive approach to the problem at hand.

We need to make sure that our own self-image is true and honest. I should like to recommend to you a book written by Maxwell Maltz called Psycho-cybernetics. It contains "down on the farm" philosophy that can help a man create his self-image and give him a tremendous insight into his own life. Sometimes, we are acting and thinking positively, but not always toward our own fundamental goals. So we must work on our "true self-image."

I believe that playing the trumpet is one means of growing mentally and of continuing to grow, of seeking the truth, and of meeting all challenges that we have to meet. Basic production of a beautiful tone should be the goal toward which we always work. The basic problems of playing the trumpet need to be considered at all times.

Some of my approaches to problem solving may seem different to you. I believe that we maintain the sound, that we maintain our freedom of tone and our relaxation with copious amounts of air. The sound or tone should always float in the breath and be covered by the breath. As the air flows through, it supports the embouchure and is quite responsible for its position and its relaxation and for the resilience of the mouth. The flowing air is the means for the relaxation of the tongue and its articulations. The flowing of air is the means by which we can relax the tension in the areas of the glottis, the epiglottis, the back of the tongue, the larynx, and the abdominal wall. Truly the trumpet is a wind instrument and is dependent upon the breath as a source of motive power.

As I have matured, my thoughts have changed about the percentages in a well balanced sound system. Many years ago, I felt that the mind was probably responsible for fifty per cent of the playing of the trumpet, and the other fifty per cent was divided equally into twenty five per cent for the embouchure. A few years later I still had retained the thought that the mind was responsible for fifty per cent, but the breath had increased to forty per cent and the embouchure had decreased to ten per cent. Today I believe that ninety per cent of all playing is mental and the last ten per cent of the physical will be divided into nine percent breath and one per cent embouchure. I really believe that the acceleration of the air has tremendous value as to the releasing of the necessary tensions that make it possible for long time endurance and a beautiful sound.

The mind is the creator of concepts and attitudes that produce the physical activity necessary for proper trumpet playing. Wrong concepts can also make playing more difficult. We are capable of one thing at a time with considerable ease. When we have to be concerned with two things at a time, playing becomes more difficult, and when we are confronted with three things, it just literally becomes impossible. If we keep our minds on a beautiful sound, on accelerating the air through the sound, on not forcing the sound, and forget the embouchure, many problems will disappear.

The brain is divided into many different parts and many different lobes, and some of these sections are used as computers for recalling our feelings and sensations. We have to remember that any time we let our minds go completely into the analytical portions of the brain in the front lobes, we have all but stopped the activity of the breath. Our concentration is on analysis, and now the breath is second in importance and we have actually impeded the breathing apparatus. One famous trumpet player once said that through Analysis comes Paralysis.

Many diverse thoughts can upset one's concentration on his sound production, such as difficult reading passages, when one becomes so intent on reading the notes he has all but stopped blowing. Sometimes anxiety over a very high or a very low note takes our concentration from our blowing. Many thoughts can stop the activity of the motive power, which is the thing we are really after.

We know that the shape and length of the trumpet makes the trumpet sound possible. When the molecular action within the air within the trumpet takes place, the fundamental and certain overtones are activated at different intensities, and we produce what is known as "trumpet tone". Sometimes we think we blow the sound out of the trumpet, and we must blow through the sound and not "at" it. To illustrate, we can put our mouthpiece in a trumpet and we can tap that mouthpiece with the palm of our hand, and we can actually produce a pitch that is Pedal C. We can put the second valve down, tap the mouthpiece and get other Pedal tones.

We have seven different bugles. When we activate the air within the instrument we set up what is known as "nodes and anti-nodes." Nodes are points of maximum compression, and anti-nodes are the areas where no molecular activity takes place that creates vibrations necessary to make the trumpet sound. The sound stays within the instrument, and what does occur is the transfer of sound to the air. Sound travels about 1,120 ft. or 1,130 ft. per. second on a normal day and faster on a hot day. When you blow your horn in cold weather, you feel the pitch is flat. What really is happening is that the air is vibrating slowly because of the cold temperature. On a warm day, you feel the pitch is sharp, because the air is vibrating faster. The sound is not something that we are going to blow out of the horn, but something that we are going to blow through.

Now that we have discussed what sound is, I shall progress to our breathing, or the motive power of sound.

It is very important to move the air through the tubing and through the tone. When we take a breath, it is advisable to take a full one. This is in itself difficult if one has tried to analyze his breathing. Many books have been written about what muscles we move to take a breath and about when we should take a breath. I believe that any time we get our minds mixed up in analyzing muscle action, we're not concentrating on actually blowing the instrument.

So I have devised a little system that I use for the breathing apparatus, and I think it works very well. To illustrate, take a breath. Breathe naturally, just take in air. Most of us are lazy: we are not in the habit of taking a full breath, and so we do get into trouble. I ask you now to put your hands over your head - and imagine your mouth is between your hands and your hair. Take a breath, naturally, and notice that the air is quite high in your body.

Now place your hands under your chin, take a breath, imagining your mouth between your chin and your hands, and you will feel that your air starts lower in your body. Now put your hands down at the base of your sternum bone, take a breath, and note that just because of your imagination, your air has started to fill up further down, enabling you to take a full breath.

Books written about Yoga discuss full breath. If we practice Yogi, we always breathe through the nose. To attempt another illustration, each of you breathe slowly through your nose, just as slowly as you possibly can. Notice your air starts at the bottom, then comes high and higher and higher. Our breath, or air, fills up like a glass of water. I believe that the most important thing we have to do is to make sure that we get enough air in so that our chest is fully expanded.

Our breath fills higher and higher and then at the very top there is a recession of the abdominal wall. This is a natural thing, and I think should be left alone. In other words, we should not activate muscles in order to get our air in. We should do with the exercise what has to be done. Imagine now that the mouth is the terminal. When you take a quick breath, you can fill up completely.

Now the taking of the breath, of course, is one important facet, and we must remember that we have to remain very relaxed. If we have to muster strength to get our air in, we're getting into the area of strife, because tension sets in. Any time we have tension in our system we are running into problems getting that air out.

Now we shall go on to the embouchure. I am convinced that the most workable embouchure is one that has the area behind the mouthpiece in a state of resilience and quite relaxed. At the mouth area outside the corners of the mouth there is firmness, but not a real tightness, and this feels like a warm tension. The trumpet muscles, or the buccinator muscles, are the muscles we utilize when we are getting ready to spit. The muscles should form a passageway for the air to be accelerated through the lips and through the horn. If we can retain the resilience and relaxation of the embouchure, we make it possible for our air to get through the lips and the horn without too many restrictions. The more we can cut down on the resistance of the air stream, the better the tone will be, and also the easier the horn will play.

There has been much talk about buzzing the mouthpiece on the lips. I agree with some of these theories, when they do what they say they will do. However, I have often found that when we just buzz and purse the lips, the lips become too tense. If we can buzz the mouthpiece without getting tension behind the lips, we're in good shape. But more often than not, there is a tension behind the buzz, and I've tried to devise something that's more relaxed.

I have utilized old lead pipes. To try my exercise, first buzz your mouthpiece. Note that there is a certain amount of tension with that action. Now instead of buzzing your lips, just think of not pre-setting the embouchure in any way, shape or form, but just place the mouthpiece in the lead pipe and think of moving your air through that tube. Does that seem easier than buzzing the mouthpiece?

I know there has to be a certain amount of mouthpiece buzzing to warm up the resilience that we have to have here. But if we can set the mouthpiece and tube in vibration, the embouchure is much more relaxed. What we're trying to do is to get the air through that horn with the least amount of tension and the least amount of muscle.

If we can create the sensation that we are actually blowing the embouchure in place, this will take care of a lot of our thinking problems, such as "Is this or that muscle tight enough?" Sometimes the more we think about the embouchure and its position, the more difficult it becomes to produce a resilient sound. When a student is moving the air through the sound, I find that endurance and flexibility will follow.

With the buzzing apparatus, we get into reaching for higher and lower notes with the lips themselves, and this reaching causes tension that is difficult to get rid of. Trying to cure this reaching problem by studying the embouchure actually produces worse results than the problem we had in the first place.

I believe too that when we are reading notes, it is essential that as soon as we see these notes on the page, we actually hear the pitch and blow through the pitch. Do not think of the note name (F, for example), but concentrate solely on the sound. REALLY HEAR THE NOTE!

Some teachers endorse changes in the embouchure of many of their students. Bad habits can result from drastic embouchure changes. For example, to play the high register, I feel it is not wise to set the lower lip under the top lip. Nor is it wise to strengthen the mouth tremendously. These practices can lead us into problems with tense air which causes the static area to become tight and can cause the chest and the abdominal wall to get tight.

When we are ready to play the trumpet, we should be thinking of blowing. We should not be thinking of other ideas or methods that are supposed to make the blowing easy or correct. If we do, we won't get the air out.

As we practice, we will see that tension can be released through the mouthpiece. Release all the tensions, take a full breath, and just play, and learn to blow the embouchure into position. We can do a great deal to release the excess tensions that are connected with the embouchure.

Sometimes a student will see that, for example, he must play from G to C. He sees that the note goes up so he feels he has to do something with the embouchure. But if he will accelerate the air through the instrument, or through the sound that he's playing through the horn, to the point where the next note falls free, he will feel like that note is on the same level. He can let the air acceleration take care of the vibration of the lips.

Another source of tension is the mechanics of fingering. For example, imagine a cornet soloist playing in the park band. At the beginning of his solo, he will play a few warm, beautiful notes; but as soon as he gets into a technical passage, his sound diminishes. He has lost his beautiful sound because his mind is into the technical aspect of playing rather than on the blowing of the horn.

Any time we play Herbert L. Clarke exercises, it's a good idea to think of the acceleration of the air. Play the first note with a fermata, accelerate the air through the trumpet, and when you start to use the valves, continue to accelerate the air so the tone stays free. Go slow enough so the notes themselves are being blown and so that there is no muscle restriction that will diminish the sound: keep the sound good and full!

Several years ago I discussed embouchure with a member of the Berlin Philharmonic. He told me he compares it to the carburetor of an automobile. You cannot adjust the carburetor when the car is not running and gasoline is not flowing through it. Likewise, you can think about your embouchure and look at it in front of a mirror, but we cannot adjust the embouchure until we have the air flowing through it, until we have the sound. Then any necessary changes, which would help the embouchure, are made after we have the beautiful sound.

There are hundreds of problems that exist with the embouchure; I will discuss one, the easiest one to watch. Some people have a tremendous smile, with their muscles pulled back, as in a smile. It leaves the center of the embouchure without any resilience and without any relaxation. The mouthpiece is pressed against the teeth, and of course, the player would have a very poor sound and a tight range.

There are exercises that we can do to keep our minds off the embouchure. We can have a student play, for example, from G to F without any valves. Ask the student if his facial muscles want to "climb up" or "come in". Playing the notes can solve a problem. We have "adjusted the carburetor while the automobile was running."

There are many additional facets of successful playing that I shall discuss at a later time.

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