

Smith, Andre, "Notes from Northwestern Masterclass", 1992

My next instrument was a small trumpet bought by my father. Although he did not approve of a career in music for his son, he agreed that if music was to be studied it must be studied well and done so on a good instrument.

I grew up in California with Herbert L. Clarke as one of my idols. My mother was an accomplished musician in the studios on California. With her as my accompanist, she was my introduction to a great variety music of a high quality. She would play the piano of theater arrangements and I would play the melody line. I learned to do it because no one told me that it was hard.

My first prize in music was a silver plated bugle.

My next instrument was a small trumpet bought by my father.

Without an instruction book I had no guide to distract me from the cultivation of my ear. My connection was directly from the ear to the brain without an intermediating interference of the page.

Jake played Carnival of Venice and ...green velvety sky for his audition. the auditioners laughed. They gave him the Flying Dutchman to play. He missed the high note, tried again, and was accepted. After Jake was accepted at Curtis at age 16 he was rejected at Curtis after his required physical examination because he was underweight. His father immediately took him to soda fountains to taken in milk shakes, egg floats, etc. to put on weight. He gained about ten lbs in two weeks.

A master class is the forum for the pursuit and refinements of musicianship and interpretation of specific compositions. Jake's seminars are essentially designed for physiological analyses and pathological diagnostics.

Jake began teaching in 1934

In teaching I like to consider myself a teacher of tuba. I was well equipped to teach all the brass students. Some of my colleagues on the wind instruments then began sending me their students. And also singers and singing teachers sent me their referrals.

The artist must prevail.

If a musicians can conceive of a sound in the brain then the resultant sound will be a response to brain stimuli that is given but it can always remain a problem for brass players.

The attempt to feel what one is doing while playing is the asking of a question. Forget the feeling and simply realize externally the tonal conception (the song) that is in the head. Mentalize music by statements, not by questions.

I do not prepare the meat of my embouchure for what it is about to be required of it. I prepare my sound in my mind.

A message in the head must be delivered as though it is that sound that is to be produced.

The instrument in the hand should be a mirror (reflection) of the one in the head.

Attaching a text to a music phrase with minimal awareness of function is an ideal to which a musician should aspire. A voice in the head as a prelude to a concern only with the music task at hand.

Wind is the result of an impetus for a purpose. Sound is the resultant story of wind supplied to produce it. Song is the result. Song should be ascribed at 85%, wind at 15%.

Song is the major, wind is the minor, let all the other phenomena go!

Song and air pressure may be confused with song and wind.

The ends of phrases must be protected, more so than the beginnings, which are begun with full breaths.

I began trying to understand the component parts of the playing of wind instruments by contriving explanations about myself for the use of myself.

Constriction of the thoracic contents to achieve endurance and a high register are ideas that originated during the nineteenth century. The ideas prevailed until dislodged in the 1930's by Cimera, Schlossberg, Horner, et al. and following the World War II by Jacobs and some other interested in this problem. Most of the principles of respiration in relation to wind {brass} instruments were defined by large males. Many of the problems related to smaller males and to women result from the misapplication of the techniques of larger males to all others.

Studies of structure and function should be confined to anatomists and physiologists. The subject is complicated and should be studied in writing to be fully understood.

Strain gauges can be used to show that the body is constantly falling in all directions. The body is constantly adjusting to allow it to remain standing. Our bodies are constantly producing changes. Parts of the tongue are always moving about to compensate for a section of the tongue that is constricted.

During an isometric constriction of the thorax the sense of effort is deceptive, producing nothing but an isometric constrain (conflict).

The size of the tongue is important, which should be a consideration in the study of the passage of air through the oral cavity. Any attempt to control the tongue as muscle there will be disappointment. Hyperventilation, the washing out of the CO₂ in the blood stream. Proper balance of CO₂ can be restored with rest or by some artificial mechanism.

Oropharyngeal crowding from the presence of tonsils may require a small opening of the embouchure to approximate to that of the oropharynx. Therefore, the caliber of the oropharynx should determine the opening of the embouchure.

Answers continue to lie in simplicity, not in complexity. No one could function trying to control muscles, either as groups or as individuals.

The lower part of the brain is the source of autonomic muscle control.

With the presence of tonsils and a large tongue can contribute to an obstructive oral crowding.

The focus of air should be a level of the lips and not in the respiratory apparatus.

The rhythm of breathing should be coordinated with the rhythm of a musical line, more so in the line that does not have a great deal of movement.

The brain is the primary source of all musical ideas, hence, all musicianship, and it will be the final arbit. The ability of lips to close is far greater than the ability of the air to open the study the low note and simply copy it an octave higher. Pinching, fighting the tone, restriction of the thorax all contribute to a

destruction of ability.

There is a frequent tendency to blow and finger and overlook the need to provide infuse (provide) the sense of purpose based on the song (e.g, phrase, text) in the brain. In teaching lung volumes, Jake works with the extremes of maximum and minimal extremes.

Jake lost his 50 from 230 lb top. A large lung capacity can be a decided handicap because shallow breaths, which are hard to cope with on a high pressure instrument (trumpet) on which a performer can play or a low pressure instrument (tuba)

Energy can be conserved by not using muscles that are not needed for a given purpose at a given moment.

A misused term for lungs is "lights", because they would float in water. This term was known to Jake as late in time as his childhood. [Explain why brass and woodwind musicians are overtly so much more concerned with the principles of physiology than are string musicians.]

The liver has no inherent pain receptors. The capsule in which it is encased is profusely laced with pain receptors.

Suction of air is the signal to the brain to lower the diaphragm. Rebreathing air directly back from the instrument is a way to avoid hyperventilation in passages requiring great quantities of air in a relatively (?) short period of time and without respite.

Respiration cannot be felt, the stretch receptors in the lungs notwithstanding. Pseudobreaths? Nasal breathing as the primary respiratory route is ill-advised. Nasal occlusion from colds would force one to breath through the mouth, which could be an uncomfortable process if resorted to without prior experience.

A respiratory sequence may need to be practiced for a year before its conditioning becomes a reflex.

A quivering of tone will most likely result from an insufficient quantity of air near the ends of phrases.

22-30 seconds may be required to empty the lungs with the presence of a restrictive degenerative pulmonary disease. Emptying the lungs in a normal person may take only 4 seconds. Diagnostic curves produced in pulmonary function tests are revelatory of pulmonary pathology. Quantity, volume, and velocity are the diagnostic features of respiratory diagnostic tests. 80% of air should be dischargeable within 1 second.

A replacement breath should be as great in quantity as was the initial breath. Merely holding an instrument in the posture for blowing it may revive respiratory inhibitions.

The diaphragm as a movable partition!

Wind differentiates the air from mere air that serves no purpose other than physiological replenishment.

Can pulmonary capacity be increased, or merely rendered more efficient?

Blow from the embouchure, not from the diaphragm.

Nerves for position sense do not exist in the diaphragm.

Wind musicians very often mistakenly attempt to call on the air left in the remaining residual air reserves. The big danger of playing at the end of the breath is that it is essentially high pressure with low flow, the reverse is what is needed on a high flow instrument.

The yoga attempt to breath in pulmonary segments has its place in yoga but is detrimental to the respiratory functions needed in wind instrument playing.

There is no full breath without diaphragmatic descent and costal ascent.

A loaf of bread has the same ingredients throughout. Each slice, regardless of size, retains the same ingredients. Respiratory capacity on inhalation should be the same -- will be the same -- in maximal

respiratory efficiency. Review the multiple purposes of the diaphragm other than respiration.
Review the piston principle of the use of the diaphragm as a piston, e.g., flit gun.
Pressure on the abdomen during expiration will result in an inefficient expiration. Do not be concerned with where one blows from, but only to one is blowing to.
Collateral activity of secondary muscles can be called upon to provide the function of primary muscle groups.
The message from the brain is that air should be "sucked" in.
Air is compressible even in the lungs.

Height, age, and weight are factors determining vital capacity. The literature of somatotyping is a source of information on the subject. Greater vital capacity is a rough equivalent of a longer bow. Persons with a lower vital capacity should concentrate on their musical attributes and not remain frustrated by attempting to achieve that which cannot be achieved (i.e., which is beyond their capacity).

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Air volume to the lip is more important than lip pressure, a common error.
Song and air pressure may be confused with song and wind.
In nature, there is no wind without pressure. There can be however pressure without wind, both in nature and in the human body.

Air is the fuel.
Lips are the engine being propelled without an attempt and sound must prevail.
I do not prepare the meat of my embouchure for what it is about to be required of it. I prepare my sound in my mind.
An air column sent to the embouchure for its use in blowing is a fuel. Buzzing is a use of this air as fuel.
Low notes should be the "teacher" of the upper notes. A low note is nothing more than a slow vibration.
A high note is nothing more than a fast vibration.
The embouchure should be conceived of as beginning in the middle of the lips and radiating to the periphery and not the reverse.
Length, thickness, and tension must be in proper proportions to achieve an embouchure.
The sound is controlled to control the meat, not the reverse.
Size, length and tension are three contributing variables (factors) to tone, volume, etc.

Multiple tonguing should be seen as an extension of speech patterns. Speech first, supplemented by the use of an instrument, e.g., tu ku tu tu ku etc.

Persistent pain --if not pathologically based -- is the result of either overuse or misuse.

The relationship of lactic acid depletion, calcium depletion, and muscle exhaustion.
Pulmonary capacity decreases noticeably with the advance of age.

Define isometrics, aerobics, stridor, relaxation pressure curve, etc.

Review the Bernoulli principle applied to the sequential structures of lung, pharynx, oral cavity, lips.

An over concern about what may be occurring may not result in any corrections whatsoever.
Some levels of the brain are concerned with the relationship to the body with the external environment.
Other levels are concerned with the internal environment of the body. the story of music is contained within the so-called natural is nothing more than a musician whose brain is suffused with sound.
The brain should not be concentrating on an analysis of the production that comes from the lips. The brain should be concerned only with communication, not with interrogation -- a form of doubt expressed at the time of production -- of the product as it is being produced.

Pursue the principle of minimal motors.

Responses will follow stimuli as a matter of course, assuming normal tracks between two points. The parts of the brain that control volition -- the external environment -- do not control physiological function (motor activity), which is controlled involuntarily by the more primitive parts of the brain.

An old habit cannot be discarded, it can only be bypassed by the development of a new habit. Retaining the older habit may keep it on reserve for use in a special context.

Out of crudities come refinements.

The sense of sight is a powerful teaching supplement. Jake's diagnostic devices are applied for visual reinforcements.

Practice a passage on the mouthpiece. Then play the same passage on the instrument while conceiving it as playing only the mouthpiece.

Rebreathing from a breathing bag can be done repeatedly for about 20 seconds without discomfort.

Vibrato will show on an oscilloscope as pitch averaging. On a decibel meter it will show as volume averaging. Pitch and volume variations in combination produce the resultant desired tone quality.

Don't play louder in the high range unless there is a good musical reason to do so.

Don't lip up. Always find the point at which the instrument resonates maximally, then push a slide in to

the point of proper intonation..

The "two shades of gray of tone" are divided into black and white for clarity of understanding of the component parts of tone.

Good luck or bad luck are not a basis for setting a standard. This standard should be defined and sought as such. Most missed passages are a result of lapsed concentration, if other abilities are developed. It is more important that one sound good, rather than play everything correctly. Learning is an excuse for the missing of notes and other defects but it is not an excuse for poor playing.

Stage fright in its most extreme form is hysteria. Slow quantitative breathing is a good counteract to this condition.

Vibrato will show on an oscilloscope as pitch averaging. On a decibel meter it will show as volume averaging. Pitch and volume variations in combination produce the resultant desired tone quality. Vibrato should be more a conceptual thought than the realization of specific physiological functions coordinated for the purpose.

Begin each day with the finest tone in the easiest manner. Then spread the tone into other registers. The first notes of a day should be as good as the best of what one finished with the day before.

Practice is not simply repetition, but the recapturing, reliving, and the cultivation of an ideal. Establish high standards in the brain, regardless of what comes out of the instrument. The absence of an interpretation is a clear sign that one may be sight reading or simply passing through a mechanical repetition.

Low notes should be the "teacher" of the upper notes. A low note is nothing more than a slow vibration. A high note is nothing more than a fast vibration.

The better tones are the teachers of the lesser good ones. This usually means that the lower tones are the teachers of the higher ones.

Motor function, source of vibration (pitch), a source of resonance must produce all music sounds. Piano has all three built in. A wind instrument does not have these three built in.

Unlike the other instruments, brass musicians must be continually concerned with the production tone as other musicians need not be, because brass musicians are the source of their own sound as string players, for example, are not.

Most tuba playing is in the mid range and upper range. Not as much in the low register. Tuba flow rates may vary from 7 liters/min in soft playing to 104 liters/min in sustained loud playing in the low registers.

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The artist must prevail.

It is easy to convert a bad sound into a good sound. It is impossible to convert silence into sound of any kind.

Air cannot move itself; it must be moved.

Body language, facial expression, etc. are among the principal means of communication.

Look for simple answers, not for complicated answers.

Credit for achievement should be given to the result; not the to process.

If we try to play by a sense of feeling we invite disaster. Feeling is immaterial. Performance of a wind instrument does not need to feel good to sound good.