

Chapter II: Mental Controls

2.1. "Conceive, don't perceive."

The potential of the human being is enormous. We have great ability to acquire information through the receptors – sight, sound, touch, etc. We can also impart information through motor activity - speech, gestures, writing, etc. The nerves that send signals to the brain to gather information and learn are called sensory nerves. The nerves that send signals from the brain to affect motor activity are called motor nerves. Both the sensory and the motor nerves can send signals only in one direction – sensory nerves gather information, and motor nerves impart information. The external environment is observed using the sensory nerves and affected through the motor nerves. You learn through sensory nerves; you act through motor nerves. Most of our experience is dominated by sensory activity – gathering information and learning. Not so much attention is given to the ability to impart information. The ability to receive information is far greater than the ability to impart information. To influence the external environment you must use motor activity, not sensory activity. Listening to music is sensory activity. Playing music is a psychomotor activity.

Make statements; don't ask questions. Be a great artist in your imagination. Don't listen to the results, but imitate the sound in your head. When you ask questions about playing, you are no longer in charge. Take charge of the music, not how you feel. The phenomenon of feel is asking a question. Anytime a person is worried, he or she becomes analytical. Analysis won't help performance, since the estimate of what is needed is often wrong. Progress will be made by making statements; not by asking questions. A brain asking questions cannot intervene to get any improvement. When you ask questions, you'll get in trouble with an uncooperative body. Make statements and the body will cooperate. You can get worse by practicing while asking questions. Initial learning is sensory, but when you're practicing or performing, you're involved in motor activity. Analysis is a sensory phenomenon; playing music is a motor phenomenon. Whether it's imitative, or creative, the brain effort in making music is not taking in information, but giving it out.

A musician, like a singer or an actor, must train to be extroverted. Like an actor, communicate emotions and ideas to your audience. Music is part of life outside the body (conscious), not life inside the body (unconscious). Change cannot occur through the sensors, but through the motor nerves. The student who spends years and years in study is going through a sensory type of phenomenon. His or her senses are gathering all sorts of information to be brought to the brain for evaluation. There is a great danger that this young person is not learning performance – he or she is actually forming habits of learning – and, as a result, he or she has no message to deliver. However, a musician should be like an actor delivering a message to an audience. At least by pretense have an audience (see section 6.1.).

The intelligent thinking parts of the brain have to do with life around you, not within you. The unconscious parts of the brain keep you alive by regulating temperature, balance, digestion, etc. Use conscious thoughts for music, not meat. When you analyze bodily functions,

you study it after the fact. That is not creative thinking. Moreover, except for a few parts of your anatomy, like the fingers where there is a lot of feedback, the ability to analyze your own body is extremely limited, because of little or no feedback.

Analysis outside the body can use complex creative thoughts. Analysis inside the body can use only simple thoughts. In music you must show moods and emotions and tell a story in sound. When you play, you have to get rid of awareness of the body. Don't sit in the teacher's chair and listen. The sensors won't communicate what you want to sound like to the body, the motor nerves will. If you want a certain tone color, do it by mental concept and your body will make the appropriate adjustments. The major part of your mental activity, say 80% -90%, should be telling a story with the sound in the brain, and only 10% - 20% in feed-back, or awareness of your body. You'll hear yourself, but make that a minor. The major awareness is to play for someone else to listen.

Take charge of your thoughts. If the brain is asking questions, it interferes with making statements. Uncertainty or worry about what your body is doing can cause you to ask questions and disrupt musical statements. Problems in the airway, tongue, or embouchure can be best solved through bypassing them and going directly to interpreting music. If you're afraid of being wrong, you're in self-analysis. Worry, self-analysis, asking questions are all wrong! Tell a story! Nobody cares how you feel or whether you're doing things right or wrong! Go by sound! Go from massive sensory learning to psychomotor activity; express yourself. When you worry, you're doing sensory activity. Put a great artist in your mind. Correction is not in the tissue, but in the brain. You must think like a child about mechanics, but like an adult when making a musical statement. Give musical orders. **What you hear of your own playing is resultant, not causative.** Sensory awareness cannot be involved in performance. It is very important to separate the activity of researching the activity of the body from the study of music.

2.2. "Use the brain to control the body by thinking of song and wind."

The human brain is a magnificent tool. Everything that you do reverts to the control of the brain. The instrument provides only resonance. Instrumentation should augment the human intellect, not replace it. Pitch, or frequency of the vibration of the lips, is in the brain. The blowing signal is in the brain. When you go to the product of whatever you're trying to accomplish, you'll find the physical action required to do it is based in the computer activity of the brain. We establish what we want in the way of product with the thinking part of the brain. All machines have a set of controls. To drive a car we go to the simple controls in the driver's compartment, not the complex machinery under the hood. The structure of humans is extremely complex; we cannot control individual muscles. In nature we don't work with individual muscles, but with systems of muscles. If you had to control all of the parts of the body individually, you wouldn't be able to do anything. The thinking part of the brain does not fire the muscles, but programs the body to accomplish what is needed. Machine function is complex; psychological control is simple. Don't try to order the tissue; order the brain that can then signal the tissue to do its job.

So in playing a brass instrument, don't try to get results by controlling the complex systems of the body, but use simple controls of the bio-computer part of the brain. Don't find out what is wrong, by correcting individual muscles. By ordering product from the brain,

systems of muscles will function properly. Cooperate with nature. Think of what the tissues do in life, not the positions of tissues, or how to control individual muscles. Don't go into the tissues as a doctor would in an analytical and manipulative way, but go for simple results – sound. Don't order shape, or resistance of embouchure, because you get what you order; order sound! Forget anatomy and go to the control panel of the brain. Controls are in the brain, not in the lips, fingers, or body. The brain is central. The breath, embouchure, and tongue are peripheral. Sound results should be stabilized; the breath, tongue, and embouchure are variables. Memorize the sound, not the feel. Problems and solutions are in the brain, not in the tissue. Human intelligence is for analysis of phenomena outside of the body. Analysis won't work inside the body. You must use the control of the brain; you must never be second-rate in the brain.

Adult thoughts tend to be complex and get into self-analysis. Musical interpretation requires the complexity of adult thought. Imagination is needed to put the “story” in the brain. But in methodology, use the simple child-like thoughts of “song” and “wind.” Work at it from two directions. Produce “song” by thinking of the “buzz” of vibrating lips, as a singer would use vocal chords. Before you play, prepare the brain with song and external wind. Keep the sound in the brain going loudly, steadily, and continuously while you play; don't turn it off. Focus on song and don't adjust for convenience, but adjust to the musical requirements. Produce “wind” by thinking of blowing quantities of air after taking a full breath. In the automotive analogy, think of the buzz as the engine, and the wind as fuel. The car will not run without fuel, but fuel will not make the car go unless the engine is turned on and engaged.

The sound that comes out of the horn is an indication of what is in the brain. The horn is a piece of brass; it has no brains. You must conceive the sound you want, and then you listen to find out if you sound like what you want to sound like. When a note won't speak, the sound in the brain is lacking. There are two voices – one the head, and one in the horn. The one in the horn is the less important one. It's not important to play perfectly; it is important to think perfectly. If you have the sound clearly in the brain, notes will not be missed. Notes will easily be missed, however, if the sound is not in the brain. If there is a good sound in the brain, it won't be long until the sound coming out of the horn also sounds good. Advanced players will have conditioned reflexes that will take over and get the job done as long as they're “singing” in the brain with artistry. Develop song to develop tissue, not the other way around. Send a signal to each individual note; continue “singing” in the brain even during the length of each note. If you emphasize song and wind daily, you'll be able to perform under adverse circumstances. The worse you feel, the more you have to rely on the brain.

The first note after silence is the most important as far as establishing tonal concept. When the lip doesn't respond, it is not receiving a signal, and doesn't know what to do. Send a signal from the sound in the brain. The stimulus of the brain should not be taken for granted. Anticipate each pitch by hearing it loudly and clearly in the head ahead of time prior to playing each note. Order the product of a musical message, not verbal instructions. Convert verbal instructions into a stimulus of what it would sound like. We can't be aware of bodily mechanics, so be aware of artistry. You can't change reflexes without changing stimuli that cause reflexes. You must have a musical plan, not a mechanical one. If you figure “how to do it” you won't be using the efficiency of the bio-computer aspect of the brain. If you do order product directly from the brain, and concentrate on “how to sound”, you'll be free to concentrate on musical

interpretation, the body will respond using its unconscious reflexes, both natural and conditioned. Anything that is done repetitively becomes a conditioned reflex. So, make the work as simple as possible and establish conditioned reflexes that are helpful in playing by sending the most efficient signals from the brain – song and wind. Always come back to song and wind. Eventually, what you want to hear and what comes out of the bell will be the same.

15 minutes of practice at the beginning of the day should concentrate on mentalizing and testing mentalization of music both with and without the horn. Play by ear. You can't play by ear, if you don't have the "song" in your head. Go to the player piano roll, not the keyboard. Carry a pitch source with you. Zero-in on the pitch and check your memory of it, even at odd times. Can you sing the first note of a solo or etude before playing it? Will you remember the pitch more easily by silently fingering it on your instrument? The brain improves with study of the art form. **When you have controlled the sound, you will have controlled the body.**

2.3. "Fill your mind with sound."

When the horn is up to the lips, forget mechanics and be a storyteller of sound. Think of musical tone from the very first note; fill your head with sound. Imitate a "singing voice" sounding loudly in your head. **Think of a great performance, not what you're doing.** The brain should be flooded with a "hoo" sound (see chapter V) flowing continuously to the lip from the brain throughout the length of each note. "Sing" with imagined words or numbers to the music. Putting words or numbers to music helps with attacks. To change the pattern of response, change the stimuli (the "singing voice" in the brain). Song becomes the stimulus for all body movements. If the sound is in the brain first as a stimulus, the lips will immediately buzz. Don't blow first with silence in your brain; the note may not sound. You cannot just "blow" the lips. Formalize the study of sound through solfege. Make sure you play what is on the page with all of the printed nuances. "Hear" it and interpret. Don't just play the notes; "sing" with rhythmic interpretation. **Good musicians play what they hear and hear what they see.**

2.4. "Keep song dominant."

Make song dominant over physical maneuvers. 85% of your thinking should be song, 15% wind. Lyricism, connected with vibrato, is basic to brass playing, since it is the most easy and efficient form of tone production. Play by ear and from memory in order to concentrate on communication. Make each note tuneful; listen to your concept, not your horn. Don't just read; interpret. Hear what you want to sound like, and then compare that with what you do sound like. What you want to sound like should be dominant. Think of how the music should sound, not just a specific aspect of music (like tone). Think of an excellent product. Hear it loudly in your head, whether you're playing p, f, high or low.

To make music, use a musical stimulus. Know the music mentally. Study the style, the texture of sound, and the message to be conveyed. Listen to "ideal music" while playing; don't listen to yourself. Make this the first priority. The second priority should be the sensation of the buzz. The third priority is blowing. When you are blowing, concentrate on the sound and what you are doing with the music. Keep breath subordinate to song and buzz.

We must let our minds fill with the sound of our musical message and related emotions. Always program what you want the audience to hear. We must recognize that we play with a conditioned response to stimuli. Our thoughts must go to the stimuli (“songs” in the head) as we overcome the challenges of music and the physical phenomena of playing a brass instrument. Learn pitch recall in silence; then, let your instincts take over. Sing, hum, and/or whistle to challenge and develop your musical abilities. When thinking of the body, stiffness results. But, when thinking of the sound, relaxation can occur. Some performers play so effortlessly and naturally that they are sometimes referred to as “natural players”. **All you have to do is imagine that you are a natural player long enough, and you will become one.**

2.5. “Think product, not methodology.”

Information is good, but the application won’t be there unless the brain orders a product, rather than a method. Take charge of the product, not the method. Just sound great; don’t judge methodology in terms of right and wrong. Words will not bring about change, unless they are used to create images. Communicate to the body with images – of sight, sound, and motion. For example, what does wind sound like? What do things blown in the wind look like? The right answers are always simple, because the controls are simple. Body mechanics are enormously complex. So often a teacher makes the mistake of altering the machine activity rather than altering the product or what he or she wants accomplished. The instructor is giving machine methods of how to do it, but none of us can work that way. The main function of teaching is to develop artistry. The worst form of teaching is talking, unless the words can form helpful mental images.

You can’t play by knowledge of anatomy, but you do play by knowledge of music. All machines have controls, so go to the controls, not the machine. In driving a car, you use the simple controls like the steering wheel, accelerator, brakes, etc. to arrive at your destination, not by manipulating the complex machinery under the hood. If you want to change directions while driving, don’t look under the hood; just turn the steering wheel. Emphasize the mental work – sing, imitate, and don’t get bogged down in the physical aspects by turning inward. Speaking is a complex operation, yet we speak with ease. It is the same in playing. Awareness should be on the product (music), not mechanics. Just as in speaking, production should be simple, not complex. Play beautifully; genius is not required. The best answers are simple, not complex. We have to look for the easy answer all of the time. If you want a lot of breath, just take a lot of air. Don’t worry about where it goes. If you want to blow, just blow. Look for the simple answers that bring about the proper motor response. That idea belongs not in the realm of anatomy, but in psychology. So, when you deal with anatomy, you have to deal with psychology. No matter how elementary the music, focus on artistry. Accept the challenge of the art form before going into the study of the mechanics of the breath or embouchure. As an artist you go for the product – the product is tone, phrase and all the emotions in music

Approach playing as a person with a brain. Be a musician, not an instrumentalist. Memorize the sound, not the feel. Away from the instrument guess at a pitch, and check yourself using a pitch pipe. Convert printed notes to sounds as quickly and surely as you convert printed words into ideas. The word “run” stands for the idea “run”. The printed note

D stands for the sound D. There is a danger of converting notes into fingerings. Solfege converts written notes into sounds, not fingerings. It is a great mental/musical exercise and develops the brain. See the Kodaly, 333 Singing Exercises (Boosey & Hawkes) and also the Pasquale Bono, Rhythmical Articulations (Carl Fischer).

Convert verbal as well as written instructions into musical product. This is necessary for professional survival. Translate words of advice into sound. What would they sound like? You can't communicate to the body by verbal instruction; you communicate by thinking of a product. Verbal advice given is a minor; sound is a major. Use imitation and recall. Control sound to control meat; don't try to control meat to control sound. Don't study yourself or the instrument; study sound. Deliver a message to your audience, not to yourself. Don't try to think of the whole phrase at once. We don't play by phrase; we create phrases by building them with individual notes. For example, individual words make up the complete story we hear. **A creative artist must create each phrase note – by – note.**

Avoid being the physician. Don't analyze individual muscles; the body works in systems of muscle function. If you try to change some body part, your brain will signal a change somewhere else to counteract it. So, go by product, not methodology. Find what thoughts bring success. "How you want to sound" is the chief control. Simplicity, not the knowledge of the complexities of physiology, provides the precise physical control needed to perform. Don't correct the body; correct the sound.

Get the thinking part of the brain off of research, and on to music. Let the unconscious parts of the brain handle the motor functions. Move from product to muscle, not muscle to product. For example, to achieve the optimum tongue and throat positions, think of a deep, relaxed breath, like a yawn.

Order excellence in the musical product. Think of musical style and express emotions. You need to interpret. You have to find the end products. Become conditioned in the phenomena of sounds, phrases, emotions, and rhythms of music. Be an expert in music, not in the instrument. The art form should take dominance over physiology or methodology. Rather than the challenge of physical maneuvers, excellence in the art form should be dominant. If you communicate in the art form, you will develop the methodology.

Thinking about physical sensations can result in pseudo-paralysis, i.e. trying to blow against your lip as if it were an inanimate reed. No! You must "sing" with a flexible embouchure, similar to vocal chords. March around the room or do deep knee bends to let the body protect the large muscles. This will help loosen up the small muscles – the ones used in playing. You must relax when playing, so that the diaphragm can move up instead of being pushed down by tense abdominal muscles. Air must move freely up to the lips.

Work to accomplish excellence as a goal. Just as in walking, focus on where you're going, not on your leg muscles. Great music can be made without a specific knowledge of the body. Don't feel that you have to do something a certain way to accomplish a certain result. Don't set rules for the body. Set rules for results, not for how to do it. What you do is important, not how you do it. Find the psychology of good tone production, so that it will be repeatable, even though you won't understand the resultant physiology. A bad sound can be refined, but silence cannot. If you control the psychology of sound, you will have controlled the physiology.

Use body mechanics away from the horn to achieve breakthroughs and develop habits. Associate each physical maneuver with a desired musical result. When playing, forget mechanics and tell a story. Hear sounds in the brain from the very first note. Exaggerate sound and resonance. You have to recognize what you're trying to accomplish; the orders that come from various parts of the brain must be based on the sound of the instrument. You must be sure that you don't take the level of the brain at which we have volitional thought and try to take charge of the human machine through its individual components. We can't handle it. You've got to get out of the way and allow the body to function for you. The point is to try to sound great, not control the body in order to sound great.

Formalize product, not technique. Because of differences in anatomy, methodology may not be the same for everyone in order to achieve a similar musical result. Rules about tissue function are not appropriate, because of individual differences, what works for a large male may not work for a small female. There are large variations in potentials, for example, lung capacity, muscle development, and, tongue size. Forget "how to" and concentrate on "how you want to sound." Let things happen without knowing why or how. Generally, if it sounds good, it will feel good, but the body can lie. Feel phenomena are not reliable, since feelings change from time to time. Don't judge success by perceptions of effort. Match sounds, not efforts. Your perceptions of effort are not accurate. If you go by methodology, problems will keep coming into your playing. If you play by feel, aging will drive you crazy. Get methodology under psychological control. Since playing is based on prior conditioning, any problems are in the brain, not in the tissue. Play for an audience, not for analysis of your body. **What you sell to the audience is sound, not meat..**